

Oslo, 26-27 October 2006

Entrepreneurship Education in Europe: *Fostering Entrepreneurial Mindsets through Education and Learning*



Final Proceedings



European
Commission



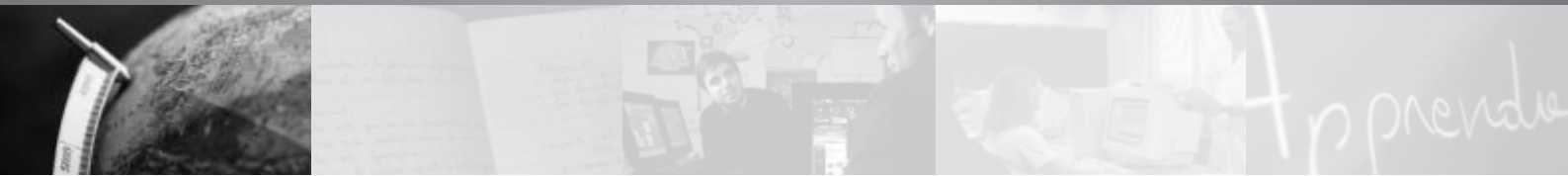
MINISTRY OF EDUCATION AND RESEARCH
MINISTRY OF TRADE AND INDUSTRY



**Entrepreneurship Education in Europe:
*Fostering Entrepreneurial Mindsets
through Education and Learning***

OSLO, 26 - 27 OCTOBER 2006

FINAL PROCEEDINGS



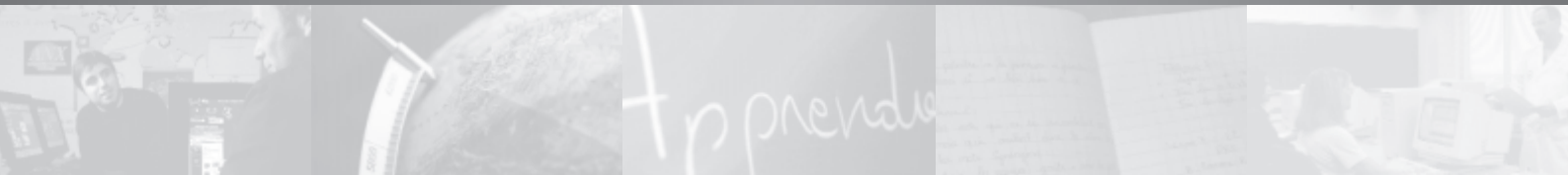
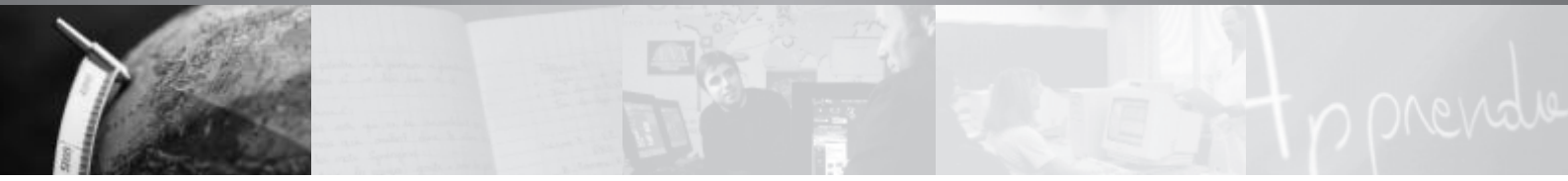


TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
1. THEMES ADDRESSED	6
2. PARTICIPATION	6
3. OPENING AND PLENARY SESSION ON 26 OCTOBER 2006	7
4. THEMATIC WORKSHOPS ON 26 OCTOBER 2006	25
→ WORKSHOP 1: ENTREPRENEURSHIP IN PRIMARY EDUCATION	25
<i>CONCLUSIONS WORKSHOP 1</i>	31
→ WORKSHOP 2: ENTREPRENEURSHIP IN SECONDARY EDUCATION	32
<i>CONCLUSIONS WORKSHOP 2</i>	38
→ WORKSHOP 3: ENTREPRENEURSHIP IN HIGHER EDUCATION	40
<i>CONCLUSIONS WORKSHOP 3</i>	46
→ WORKSHOP 4: MINI-COMPANIES AND STUDENTS' ACTIVITIES BASED ON PROJECT WORK	48
<i>CONCLUSIONS WORKSHOP 4</i>	55
→ WORKSHOP 5: FOSTERING QUALITY AND IMPACT ASSESSMENT	56
<i>CONCLUSIONS WORKSHOP 5</i>	62
→ WORKSHOP 6: BRIDGING POLICY MEASURES AND PRACTICE	65
<i>CONCLUSIONS WORKSHOP 6</i>	71
5. PLENARY SESSION ON 27 OCTOBER 2006	73
6. INFORMAL NETWORKING SESSIONS ON 27 OCTOBER 2006	85
7. SUMMARY OF CONCRETE PROPOSALS FROM THE CONFERENCE: THE "OSLO AGENDA FOR ENTREPRENEURSHIP EDUCATION"	86





EXECUTIVE SUMMARY

The European Commission together with the Norwegian government held a European Conference on Entrepreneurship Education in Oslo on 26-27 October. This Conference was a follow-up to the **Commission's Communication** on “Fostering entrepreneurial mindsets through education and learning”, adopted in February 2006¹. It aimed to exchange experiences and good practices, and to discuss how to move forward in promoting entrepreneurship education more systematically, based on concrete evidence and recommendations presented by the Commission's Communication.

The Conference covered policies and practices in fostering entrepreneurial mindsets of young people through education at all levels, **from primary school to university**. It included 6 thematic workshops, and presentations of 38 cases of good practices from across Europe. Available **EU financial instruments** to support entrepreneurship education projects - through the LLP, ESF and ERDF - were also covered in the programme.

Focused discussion taking place within the thematic Workshops and in the final panel of discussion highlighted a wealth of **concrete proposals** for all the actors involved: the European Commission, national and local governments, educational establishments, NGOs, businesses, students.

A **better integration of programmes and activities in the established curriculum** was advocated, but contents and participation should remain flexible. Entrepreneurship can be integrated into curricula either as a horizontal element in all fields of study (for instance in primary and secondary education) or as a subject in its own right (especially in higher education). In any case, innovative pedagogies should be introduced into all courses, as a necessary basis for building an entrepreneurial spirit.

It was commonly agreed that **the scope of entrepreneurship education** is much wider than training on how to start a business, as it includes the development of personal attributes and horizontal skills like creativity, initiative, self-confidence, among many others.

In this respect, the need for a common **European platform** of existing projects and teaching material has been stressed, in order to help sharing and dissemination. **The EU should support curricular reforms**, and facilitate comparative analysis. Also, the **mobility of educators** across Europe should be encouraged.

Mentoring or coaching from people with business experience should be a basic element in all entrepreneurship training. There is a need therefore to increase **public-private partnerships** by involving more the enterprises as part of their corporate social responsibility. Businesses should donate at least a tiny part of the working time of their staff to participation in activities within schools. To this extent, **an award** could be given at European level to acknowledge enterprises that distinguish themselves.

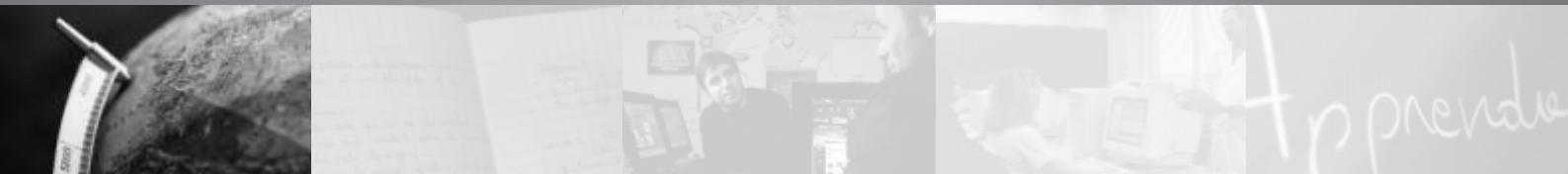
However, it is not sufficient just to bring entrepreneurs into the classroom: **students should be directly involved in enterprise projects**.

One important step to make progress is **to set up steering groups at national level**. As a complement to those, a **European Observatory** should be also created where all the different stakeholders involved in entrepreneurship education can be represented (public administrations, businesses, educational establishments, students, etc.). The Observatory would have among its objectives that of setting targets for entrepreneurship education, taking into account its various elements and objectives.

The European Commission should also take the lead as regards the **evaluation of programmes and activities**, in order to ensure comparability of results. In particular, research should be developed at European level on the impact of activities based on students running concrete enterprise projects and mini-companies.

The high number of ideas advanced during this Conference results in a detailed catalogue of proposals for action (the “Oslo Agenda for Entrepreneurship Education”).

¹ COM (2006) 033 final



1. THEMES ADDRESSED

The Conference covered policies and practices in fostering entrepreneurial mindsets of young people through education at all levels: primary and secondary schools, vocational secondary education, higher education. It included 6 thematic workshops, and presentations of 38 cases of good practice from across Europe. The 6 thematic Workshops focussed on the following topics

- ➔ Workshop 1: Entrepreneurship in Primary education;
- ➔ Workshop 2: Entrepreneurship in Secondary education;
- ➔ Workshop 3: Entrepreneurship in Higher Education;
- ➔ Workshop 4: Mini-companies and students' activities based on project work;
- ➔ Workshop 5: Fostering quality and impact assessment;
- ➔ Workshop 6: Bridging policy measures and practice.

Available EU financial instruments to support entrepreneurship education projects - through programmes like Comenius, Erasmus and Leonardo da Vinci, the new Lifelong Learning Programme, the European Social Fund and the European Regional Development Fund - were also covered in the programme. The conference was concluded by a panel discussion on next steps to be taken to move forward in this area.

This event made it possible to analyse in depth critical issues relevant to entrepreneurship at all levels of education, with concrete conclusions and recommendations on how to follow-up to the Commission's Communication.

Selected cases of good practice showed European experiences that could be disseminated and transferred to other countries. For instance, Norway was indicated as a model as regards setting up a national strategy for entrepreneurship education, while the case of Scotland was recommended as an example in training the teachers. But more generally, the various experiences presented have provided ideas and possible solutions to serve as an inspiration to stakeholders across Europe.

Moreover, informal contacts developed made it also possible to exchange personal experiences and to identify potential partners for joint initiatives. To help reaching this objective, the afternoon of 27 October, after the official closing of the Conference, was dedicated to the organisation of 10 thematic networking sessions, with topics selected by the participants themselves. Information stands from organisations involved in entrepreneurship education and from students were also accessible during the whole duration of the Conference.

2. PARTICIPATION

The conference attracted around 320 participants from 33 countries, representing national, regional and local governments, business associations and entrepreneurs, organisations promoting programmes and activities, teachers and university professors, students, experts and researchers in this field, and ranging from a 7 year-old mini-company student to a 70 year-old serial entrepreneur.

Overall, there were - from each Member State - typically one representative of the national Ministry of Education and one of the national Ministry of Economy or Industry, while Norway was represented by the two Ministers themselves. Participants included as well some 50 representatives from regional and local authorities, 50 from other public and international organisations, 30 representatives from businesses and business associations, 50 university professors, teachers and headmasters, and around 100 promoters and facilitators of entrepreneurship education programmes, which were the most represented category of stakeholders.



3. OPENING AND PLENARY SESSION ON 26 OCTOBER 2006

Summary of discussions and presentations

After the welcome to participants by the Dean of the BI Norwegian School of Management - which hosted the event - Mr. Tom Colbjørnsen, the Conference was open by Dag Terje Andersen, Minister for Trade and Industry of Norway, and by Øystein Djupedal, Minister for Education and Research of Norway. A Key Note speech followed, by Maive Rute, Director at the Enterprise and Industry Directorate-General of the European Commission.

After the opening speeches, perspectives from different stakeholders involved in entrepreneurship education were presented by Christiane Schönauer-Gragg, Head of Realschule Rockenhausen, Germany; Brynhild Vinskei, student and Project Manager at Young Enterprise Norway; Vladimir Sirotko, entrepreneur, Slovakia.

The activities of the European Commission in favour of entrepreneurship education were briefly presented, and a description of the Commission's Communication on "Fostering entrepreneurial mindsets through education and learning" by Mr. Christian Weinberger followed. The Commission started already 5 years ago a series of projects carried out together with the Member States, and also with other countries like Norway, under the "Best Procedure". The "Best Procedure" was set up, following a mandate from the Lisbon Council, to promote the exchange of best practice and to encourage policy change at national level. The Commission coordinated three of these projects: on education and training for entrepreneurship; on entrepreneurship in primary and secondary schools; and on the use of student mini-companies in secondary education.

Four presentations followed showing concrete examples of how Norway and some Member States are successfully addressing key issues identified in the Communication.

Adopting a comprehensive strategy for entrepreneurship education:

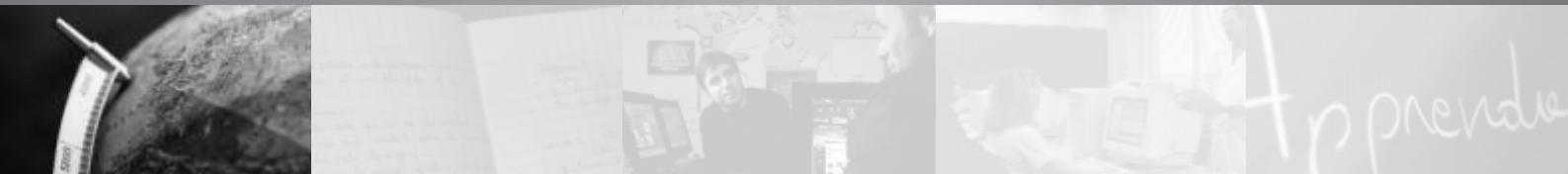
- ➔ "Norwegian Strategy Plan for Entrepreneurship in Education", Ms. Inger Karin Røe Ødegård, Adviser, Directorate for Primary and Secondary Education, Norway.

The Norwegian strategy for Entrepreneurship in Education 2004 – 2008 was recently revised. The Strategy has been prepared in collaboration by three Ministries: Ministry of Research and Education, Ministry of Local Government and Regional Development, Ministry of Trade and Industry. The purpose of the strategy is to motivate and inspire educational institutions, municipalities and county municipalities to plan and firmly establish education for entrepreneurship, in collaboration with industry and other relevant players in the local environment. A revised curriculum for primary and secondary education was introduced in August this year, and entrepreneurship is included in many of the syllabuses. The responsibility for implementation of the strategy plan for entrepreneurship in education lies with owners of the educational institutions. The responsibility for coordination lies with the Ministry of Education and Research.

Including entrepreneurship in national or regional curricula:

- ➔ "Entrepreneurship in Secondary Education", Ms. Fiona Kindlon, Regional Development Officer, Second Level Support Service, Ireland.

In Ireland, Enterprise Education has been included in the curriculum of upper secondary education (Transition Year, Leaving Certificate Applied and the Leaving Certificate Vocational programmes). Students engaging in these programmes have an opportunity to consider enterprise in the wider context of personal, community, social and business enterprise. Enterprise Education in these programmes is frequently explored through participation in a range of activities including a combination of classroom teaching, analysis of case studies, out of school investigations and invited visitors to the classroom. Students are also encouraged to plan, set up and run their own enterprising projects. Examples include: setting up a mini company to sell a product or provide a service, charity fund-raiser, publishing a newsletter and organising a school event.



Ensuring support to schools and teachers:

- ➔ “Enterprise Education for 14-16 year-old students”, Mr. Patrick Shipp, Enterprise and School Business Links Unit Department for Education and Skills England, UK.

The Department for Education and Skills has successfully completed an enterprise education strategy. In two years until September 2005, 258 pilot projects (“Enterprise Pathfinders”), were set up involving over 700 schools. From that experience in schools, national guidance was drafted on Enterprise learning, made available for teachers and introduced to all secondary schools. Enterprise is now referred to explicitly in the guidance for Office for Standards in Education inspection, and for school self-evaluation; and is a key part of statutory work-related learning. The Qualifications and Curriculum Authority (QCA) has found that it is now written into most School Development Plans. Phase 2 was launched in September 2005. Schools received funding for a new focus on enterprise education. Also, the creation of a new Schools’ Enterprise Education Network was announced.

Systematic use of student companies and activities based on project work:

- ➔ Student company programme “Empresa Joven Europea”, Mr. Iván Diego Rodríguez, Valnalón Ciudad Tecnológica, Principality of Asturias, Spain.

The government of the Principality of Asturias is currently at the forefront of the promotion of entrepreneurship education in Spain. It has set up an ambitious and extensive plan for the promotion of entrepreneurship, which includes a set of actions focused on all levels of education. Empresa Joven Europea (European Junior Enterprise) represents the first mini-company program to be included in the curricular framework of secondary education in Spain.

A video produced by the European Commission on student mini-companies in Secondary Education was also shown to better illustrate the concept.



WELCOME FROM MR. TOM COLBJØRNSEN, DEAN OF THE BI NORWEGIAN SCHOOL OF MANAGEMENT

Ministers, EU representatives, other distinguished guests and conference participants,

It is with great pleasure and pride that I welcome you to this conference on Entrepreneurship Education in Europe, and to BI Norwegian School of Management. We are extremely pleased to host this conference, as it fits nicely into the mission of this school, which is to perform research based management education, performed in close collaboration with the business community as well as government.

Some people may ask: What does entrepreneurship has to do with education? Should not it be better to separate the two? Does not education make students better bureaucrats than entrepreneurs? Some successful entrepreneurs often emphasize their lack of education, and claim that it is the lack of education that has made it possible to succeed. Education is too formal, too rigid, too systemized, and too equalizing, to allow people to be themselves, and will therefore kill and destroy their entrepreneurial spirit. And the media loves this argument!

There may be some truths in this, several roads lead into Rome. However, I strongly believe that education has several things to bring to the entrepreneurial party:

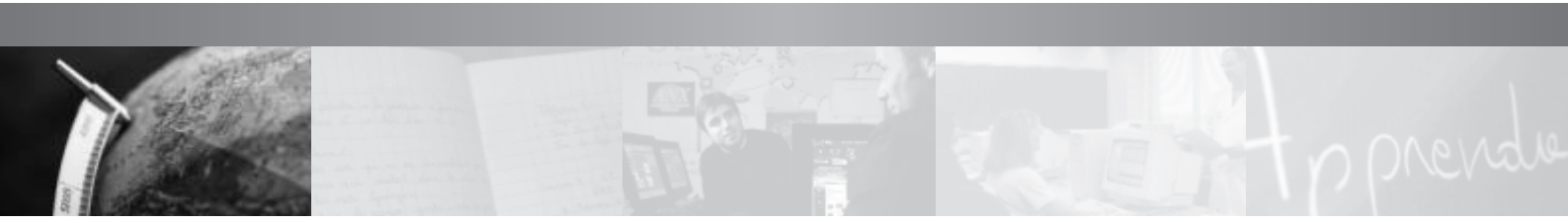
First: By presenting systemized knowledge, summary of entrepreneurial experience, you may learn from others, not only from your own mistakes, which would be very costly!

Second: Entrepreneurial success requires knowledge of social, economic and technological influences. Education will help you get that.

Third: Education gives you networks that could be hard to get access to on your own.

Fourth: Contrary to some popular believes, I think education may stimulate a kind of personal growth that generates entrepreneurial activities.

Then we are back at the theme of the conference: To discuss how education and entrepreneurial activity may stimulate each other, not the opposite. Important topics will be covered on the agenda. I feel sure the conference will be successful, and wish you two productive days.



KEY NOTE SPEECH, MR. DAG TERJE ANDERSEN, MINISTER OF TRADE AND INDUSTRY OF NORWAY

I would like to welcome you all to Oslo. It is a great pleasure for The Norwegian Government to host this conference in cooperation with the European Commission. We would like to thank the Commission for its initiative. This conference will bring attention to, and emphasis on, the important subject of entrepreneurship in education.

Entrepreneurship in education is important for the future. In order to make efficient use of our knowledge today and in the future, we need entrepreneurs that see the opportunities and make them work. Human capital is the most important factor in Norway's wealth creation. Human capital constitutes 80 percent of Norway's national wealth. Today's pupils and students represent tomorrow's workforce and hence the foundation of our future welfare.

It is paramount that Norway establishes a strategy for ensuring future entrepreneurial activity. This will strengthen people's ability to identify and apply opportunities in economic, social and cultural context. Promoting entrepreneurship has several long-term benefits:

- ➔ It drives personal development,
- ➔ it strengthens our ability to innovate and adapt, and hence our ability to make efficient use of our resources,
- ➔ and it contributes both to increased equality among individuals and to necessary diversity in business life.

The Norwegian Government nourishes a positive attitude to entrepreneurship, adaptation and innovation in education and in society as a whole. The education system plays a vital role in fostering attitudes and behaviour that enhance cooperation, creativity and innovation among children and young people. Students must believe in their capabilities and ability to spend resources in order to create wealth and jobs.

The Norwegian Government encourages extensive cooperation between authorities, educational institutions and businesses. This brings mutual benefits, at local, regional, national and international level.

Pupils and students will benefit from taking part in establishing companies, such as through Junior Achievement-Young Enterprise (JA-YE) Norway's Company Programme. This will give them practical experience and know-how in addition to the theoretical knowledge they otherwise obtain at school. In our opinion, entrepreneurship should be part of basic training in schools; providing for a better understanding among pupils of how society works.

An important initiative in this regard is the Norwegian Government's partnership with the organisation Junior Achievement - Young Enterprise (JA-YE) Norway. This organisation is working to make entrepreneurship in education accessible for students at all levels of education. And for increased interaction between learning institutions and businesses. JA-YE Norway also develops programs to help promote positive attitudes toward important issues such as sick leave and black economy.

Companies established by pupils and students constitute an important part of entrepreneurship in education in Norway. Flush is a good example of a successful company that was created as a result of their activities through Junior Achievement-Young Enterprise (JA-YE) Norway. Flush was in Maastricht this year proclaimed to be the best student company in Europe. I encourage everyone to visit their stand during this conference.

The Norwegian Government aims to be a driving force and partner in the work on entrepreneurship in education. Our goal is deeply agreed in the Government, and several ministries are working together in the same direction. This week, we have published a revised strategy on entrepreneurship in education, "See the opportunities and make them work!". The Minister of Education and Research will present the main points of this strategy shortly.

The European Commission gave several recommendations in its report "Fostering entrepreneurial mindsets through education and learning". We follow these recommendations:



- ➔ As already stated, we have an overriding approach for entrepreneurship in education and we cooperate with stakeholders internally and externally.
- ➔ We will support schools and teachers, by including entrepreneurship in the syllabus and by providing teachers with training on the topic.
- ➔ Educational institutions and the Government cooperate with private stakeholders and businesses at different levels.
- ➔ We foster entrepreneurship in higher education by enhancing its quality. We support networks for teachers and trainers. Such networks will enable the exchange of "good practices". We encourage mobility of teachers between the education sector and business. This will pave the way for mutual exchange of competence and knowledge.

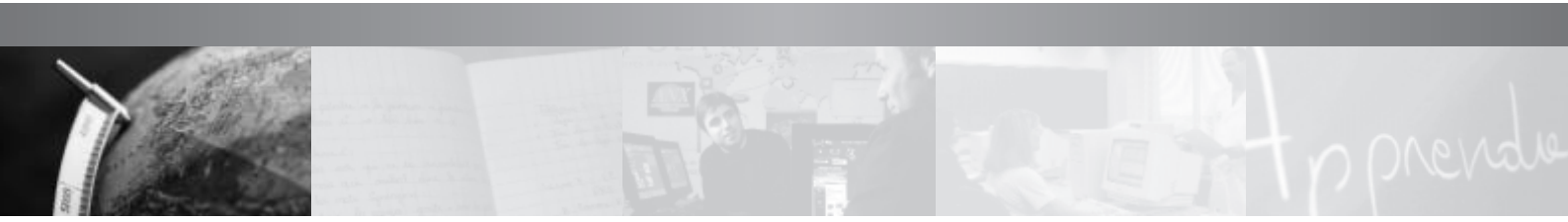
Our efforts show encouraging results. However, there are still challenges. Studies indicate that although Norway has many entrepreneurs, the number of female entrepreneurs is modest.

Nord-Trøndelag Research Institute has undertaken two national evaluations of Junior Achievement – Young Enterprise (JA-YE) Norway's Company Programme. They indicated that:

- ➔ Pupils and students who have taken part in the Company Programme tend to establish businesses more often (17 %) than the population in general (7,5 %).
- ➔ 75 % of the pupils think that the Company Programme has made school attendance more interesting and exciting.
- ➔ 80 % percent of the teachers have positive experiences teaching in the Company Programme. A somewhat larger proportion would like to continue this form of teaching. Although a great proportion found it demanding. Many believe that the Company Programme increase cooperation among pupils.
- ➔ As many as 40 % of the leaders of the companies were female. In the long run, this may increase the numbers of female entrepreneurs, leaders and board members.

Finally, I would like to emphasise the importance of entrepreneurship in education. In order to enhance tomorrow's welfare, it is essential to invest in our children today!

Thank you for your attention. I wish everyone a good conference



KEY NOTE SPEECH, MR. ØYSTEIN DJUPEDALS, MINISTER FOR EDUCATION AND RESEARCH OF NORWAY

We are, as you have noticed, two ministers present here today. This is because we find the topic of this conference important, and our two ministries work together with these issues. My colleague Mr Dag Terje Andersen has already mentioned the most important perspectives within entrepreneurship in education. That is why I choose to try out my creative and innovative skills within the area of opening speeches, and give you a glimpse of four young enterprises here in Norway. Before I go to this part of the speech, I want to present three perspectives stressing the importance of entrepreneurship in education for Norway.

The question being asked is: *Why entrepreneurship in education?*

First of all the human capital in the form of competence and workforce makes out the main part of Norway's national fortune. It is the pupils and students of today who are supposed to create the values and the workplaces of the future. It is of major importance to develop knowledge, not only to understand, but also to change and further develop our society.

Secondly we have the regional and the local perspective. Through young enterprises a foundation is laid for future entrepreneurship, innovation and productive work in the whole country. We want to motivate and inspire training institutions, municipalities and county municipalities to plan and anchor entrepreneurship as an educational tool.

Stimulating entrepreneurship is a central dimension in the development of business and industry in our society. Newly established workplaces can contribute to strengthening the local labour market because these new workplaces are often situated where the entrepreneurs are living. New workplaces offer young people a greater possibility of choice with regard to where to settle down.

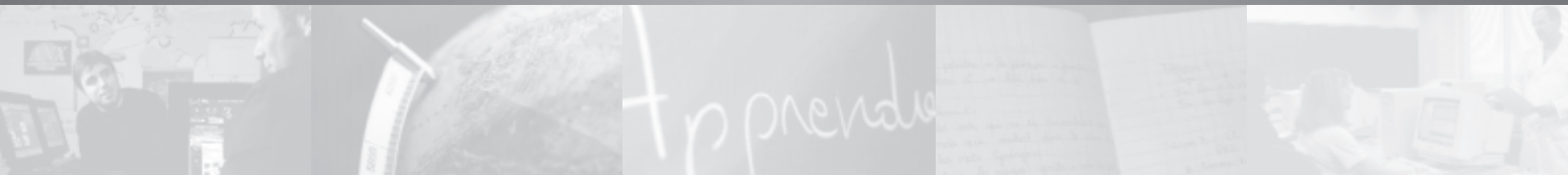
Thirdly we find that the education system has a role to play in stimulating attitudes and behaviour which promote the capability to be creative. This must take place through long term work with good progression. Young people must be given a strong belief in their own creative forces and the ability to see and apply local resources as a basis for creative values. With this belief in themselves, young people can be productive, develop workplaces and take responsibility in their local community.

We all know that there are even more perspectives on what we gain from entrepreneurship in education. I have not even mentioned what young people learn about democracy, about how they learn to cooperate or even understand the complexity in a modern society through entrepreneurship and innovation.

Today we launch a new strategy on entrepreneurship in education. This strategy is intended to serve as an instrument for the strengthening of entrepreneurship education. The strategy covers the entire education sector and has concrete objectives that are measurable. One of these objectives is the strengthening of international cooperation at all levels of education. This conference is a concrete example of our intentions put into practice. I believe this conference can be an arena for the initiation of new cooperation projects at European level. The Directorate for Education and Training will give a more detailed presentation of the strategy in the next session.

I could continue on the "why", but I would rather show you a glimpse of some of the creative young people of Norway. I also know that you will discuss these issues amongst you these two days, so let me tell you about:

1. "Den levende skogen", or "The living forest". They organized their Kids Business as a theatre play about their local municipality. They invited parents and friends to discuss environment and how important the forest is, and they will give the pupils in their school and the community a better insight to the place they live.
2. If we move a little up in age, the mini company "HotSolution" represents an innovative idea, where they suggest a solution to a problem many parents have seen:



The mini company has developed "Therby" a product that heats up the baby's milk without using electricity.

On their web-site we can find their own statement: "Dream product for baby-parents! You can now warm up your baby's milk, any time, anywhere, with the newly developed baby bottle heater "Therby". The product consists of two heat pillows that can be activated when you want to use your "Therby", in addition to the heat insulating bag.

The product is very easy in use and can be used at anytime and place. The mini company got several awards during the National Competition for the Company program.

3. "Laptable mini company" is another young enterprise, and they are located in Bergen. They have invented a laptop table for youth. It helps you to sit in a proper position and protect you from the heat from the computer.

The mini company won the award for best innovative product at the National Company competition. They have taken advantage of their network in Bergen, and have invited several businesses to take part in the development of the product.

This autumn, they will take part in a competition on one of the national TV stations in a program about new products and new ideas (Skaperen på TV2).

4. Finally, we have the young enterprise "Flush SB". This is a student-company located in University college of Telemark. This is the advanced example of a entrepreneurship in higher education.

The four students from engineer-studies in Telemark have invented a new, environmental system for cleaning toilets.

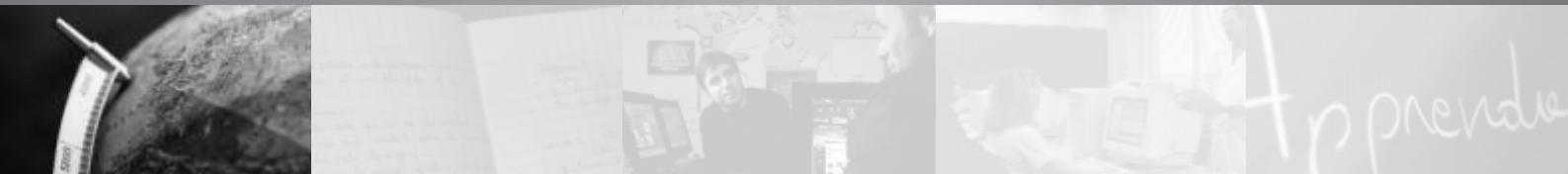
They have recently established their own "real" company in order to bring the prototype into production.

They won the European competition in Maastricht this summer.

If you are interested in these four "soon to be multi-national companies", I can inform you that they will be present tomorrow with stands.

Ladies and gentlemen,

With this presentation of four young enterprises I wish to thank you for your attention, and wish you all good luck with the conference!



KEY NOTE SPEECH, MS. MAIVE RUTE, DIRECTOR, ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL, EUROPEAN COMMISSION

Europe needs to focus its efforts on the factors which can generate more growth and employment. There is a positive correlation between entrepreneurship and economic growth. Sustainable growth based on innovation requires an increasing number of start-ups, which are likely to provide more and better jobs. Europe needs more economic growth, which means more new firms, more entrepreneurs willing to embark in innovative ventures, and more high-growth SMEs. The Lisbon Partnership for Growth and Jobs stresses the importance of policies promoting knowledge, education and skills. Fostering entrepreneurial mindsets among young people will contribute importantly to achieving our goals. The 2006 Spring European Council fully endorsed the Commission's view that Member States should reinforce entrepreneurship education at all levels.

In that context, the recent Commission's Communication on "*Fostering entrepreneurial mindsets through education and learning*" is a major policy initiative. It follows projects carried out by the Commission in cooperation with the Member States, and also with Norway.

Why entrepreneurship education is considered today a key competence for all young people? Of course, not all youngsters who are exposed to entrepreneurship programmes will decide later on to start their own company. However, by taking part in entrepreneurship programmes and activities, students become more willing to take responsibility and to use their initiative, better at developing their own ideas and at channelling their creativity. Therefore entrepreneurship helps young people to be more creative and self-confident in whatever they undertake. It relates to managing one's own life; to being creative in any working activity; and to establishing and expanding a business successfully.

The definition of entrepreneurship education adopted at European level stresses that this concept is much wider than just training on how to start a business. Entrepreneurship is firstly a mindset. As attitudes take shape already at an early age, school education can greatly contribute to fostering entrepreneurial mindsets, starting from primary school.

In fact, the objectives of entrepreneurship education in primary school will include nurturing those transversal skills and those attributes that support entrepreneurial attitudes. This, through active learning methods based on children's natural curiosity. Especially in secondary education it is important to raise students' awareness of self-employment and entrepreneurship as viable options for their future career. At this level, entrepreneurial mindsets and skills can be best promoted through learning by doing and experiencing entrepreneurship in practice, by means of concrete projects and activities. At university level, entrepreneurship education has of course a stronger focus on generating business ideas, technology-based activities and innovation.

Coming back to experiencing entrepreneurship in practice, mini-companies run by students at school are particularly effective in stimulating the creativity of youngsters. Through mini-companies run at school, students develop an authentic economic activity on a small scale, or simulate realistically the operations of a firm. The development of links with the local community and the use of mentors and advisers from businesses are key elements of successful programmes. Some of these mini-companies are so successful that they become real companies when students finish their activity in school. But even disregarding direct and measurable results, such as start-ups and innovative ventures created by former students, these activities, when they take place from early education, provoke a cultural change. And this is what we especially need in Europe.

A Commission's project has recently delivered an overview of mini-company programmes in secondary education in the EU, with the objective of further promoting these activities. It is estimated that more than 200,000 secondary school students take part in these programmes in the EU 25 and Norway every year. However, in most countries the



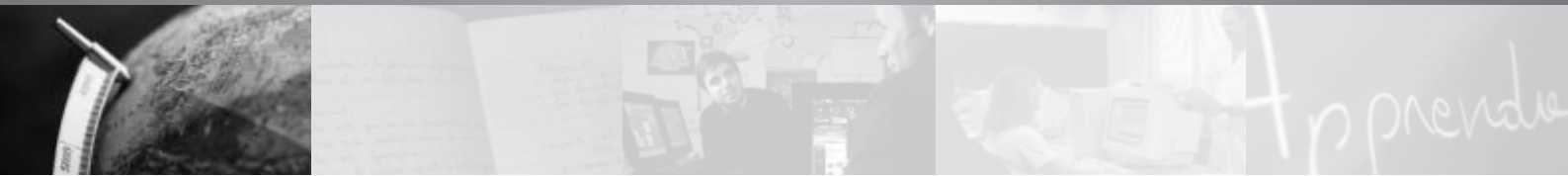
number of secondary schools offering these programmes represents less than 15 % of the total. This percentage should be increased as well.

A survey recently made here in Norway shows that around 20% of participants to these programmes create their own company afterwards. Students who participated in a mini-company activity are 4 times more likely to create their own company than the others.

The Commission is strongly committed to the promotion of entrepreneurship education at all levels. Most of the action in this area needs to be taken at national and local level, by public authorities, business associations, non-profit organisations, schools. However, the Commission has an important role to play in coordinating and stimulating national policies, promoting the exchange of experiences and good practice between the Member States, raising the general awareness. Success in creating a more entrepreneurial culture in Europe will be obtained only thanks to a common effort from all actors.

In particular, strong cooperation between the different Ministries, like here in Norway, is an essential factor of success for any strategy. Good examples of policies and programmes can be found in many European countries: they need to be widely disseminated.

I really hope that this Conference will make it possible not only to exchange experiences and good practice, but also to decide together about next steps that should be taken, at different levels, to make real progress. The outcomes of this Conference should be a concrete instrument to be used by all involved stakeholders. At the European level, they may also influence the distribution of funds through the Community programmes.



PERSPECTIVES FROM A SCHOOL HEADMASTER AND TEACHER

Christiane Schönauer-Gragg, Head of Realschule Rockenhausen, Germany

Importance of entrepreneurship education embedded in career education:

- Present a realistic image of an entrepreneur (in theory and through hands-on)
- Increase numbers of graduates who choose the career of an entrepreneur (who then become employers)
- Thus decreasing unemployment, in an area of Germany stricken with high unemployment

Experience / Success Factors

- Continuity (8 years of mini-enterprise “Flotter Euter” = “Smart/Racy Udder”)



- Hands-on experience must complement theory
- Real-life competition (neighbouring school)
- “Going public” motivates
 - within school environment (selling stock, having special sales etc.)
 - within community (positive press, town administration support)
 - dissemination as good practice

Obstacles

- Regulatory landscape (minor)
- Problem-based learning through “trial and error” is tedious and requires time, but is exactly what enhances students’ capacity for entrepreneurship and their personal/social and methodical skill



HOW THE JA-YE MINI- COMPANY CHANGED MY LIFE

Brynhild Vinskei, student and Project Manager at Young Enterprise Norway

Sometimes in life, you might experience something that changes your life, life takes a new direction. Five years ago that happened to me. I was a graduate student at Askim Upper secondary school. One of my subjects this year was marketing, and a part of this subject was to establish and run our own mini- companies.

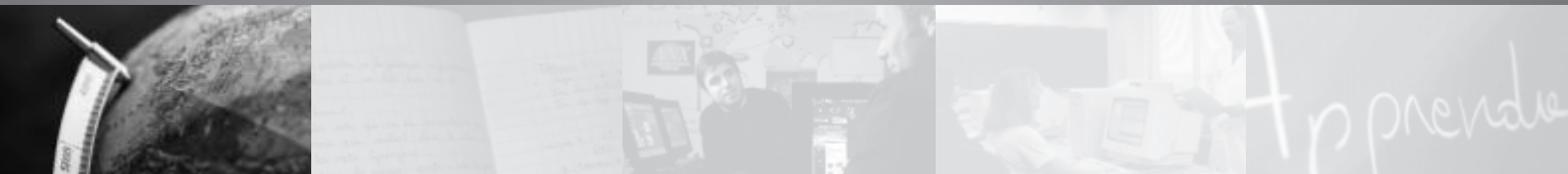
The JA-YE mini company provided us with hands-on experience in the life of enterprise, economics and business. We, my mini company that consisted of 3 girls and 3 boys, had to work together as a team with all the challenges and obstacles it implies

We had to manage finances (real money!). We had to sell and market our mini company product, we got the chance to be creative, we had to be leaders, we had to solve and deal with a lot of problems that came up... and sometimes we even really got to learn hard way. By working like this, in a mini- company, we brought all the things we learned in various subjects in practice and we felt as if we got the real world into our classroom. An experience that showed us how companies work and are established in real life. The JA-YE mini- company experience gave me much more than the skills and knowledge to be an entrepreneur. It gave me self-confidence, self development, responsibility, open-minded, independence, motivation for studying in all the other subjects I had to learn more and I got to develop a better relationship with my classmates and our fantastic engaged teacher. I know that this is also the case for so many others. To become equipped at such a young age with the fundamentals of business, enterprise and economics has taught me a lot of business and people skills and made me see that my potential in life reaches even further than I thought.

How it has affected my life? It gave me direction, made it easier for me to make a choice of career, made me see where I wanted to go, what opportunities I have and what I wanted to do. Before this experience, my plan in life was to become a nurse, which is a great profession. But with this mini-company experience I discovered that I – little me – can start my own company and am not afraid to do so, cause I have been there and know what it takes and I have been taught the skills to get there. Today, I'm not a nurse. Now, after my experience from the JA-YE mini company, I got hungry for more knowledge, for more education, so today I'm a student here at BI Norwegian School of Management, studying PR, communication and leadership.

I owe my experience and what I have learned to my eager teacher who believed in us and allowed us to be independent and learn things the real way; to our mentor from the business life who shared his own experiences with us, gave us advices and helped us see the real world by bringing it to us; to JA-YE who provided us with the programme and framework of the mini- company; to the Norwegian government who supported both JA-YE and the school owners. I owe them this unforgettable and valuable experience with the mini-company. But in the meantime, I believe that the main challenges is to get more engaged teachers, like mine, more involvement and support from the local and national business life and the government. Bring the real world even closer to the students by creating more partnership between schools and businesses.

I have learned that anyone can learn how to be an entrepreneur, and thanks to JA-YE, my school and awesome teacher, I know I have learned to be, and I will be... an entrepreneur.



PERSPECTIVE FROM AN ENTREPRENEUR

Ing. Vladimír Sirotko, Project manager of education at Slovak Association of Small Enterprises.

I will try to focus on some problems related to small entrepreneurs in my country. Based on my own experiences I can say that graduates, especially high schools graduates are not properly educated for performing their job in SME. This is especially the case for managerial knowledge; economy, bookkeeping and accounting; existing technology equipment in companies and international technology transfer; conditions of new owners; modern methods of human capital development; partnership in international networks focused on new knowledge, production, sale, and cooperation, specially in EU area.

I am speaking about it, because it appears that a graduate from the University of Economy who studied company management is not familiar with the practical level of accounting. He then attends the re-qualification course organized by employment registry office where he completes his education in accounting.

It is similar with graduates from certified professional education who study to be cooks or waiters. Sometimes they don't have enough practical experience to perform the work by themselves in a small company. I am speaking from my own experience.

Small entrepreneur doesn't have enough time and possibilities to complete his education. This situation causes lower interest from entrepreneur in such employee and, usually, the first steps of these graduates lead to the employment registry office. The employment registry office then organizes special re-qualification courses for graduates who are considered as a risk group.


It is a paradox that education, which in my opinion should be provided by school in 4-5 years, is being replaced by 3-6 months courses. Therefore it is necessary to bring the education process closer to SME practical requirements and enable schools to leave room for graduates' practical preparation in cooperation with SME.

But it is also an issue of financing, which is quite significant.

Well, If we want to improve education process, I think, that we must do the following:

1. Improve Partnership between universities and SME sector.
2. Improve Partnership between regional government, high schools and SMEs.
3. Enable students to achieve practical experience in small enterprises during their study.
4. Involve successful entrepreneurs in education process for example on basis of guest speakers.
5. Create conditions for establishing practical teaching centers at small enterprises (SME companies).
6. Bring education closer to the real life

What is the most important is investing into human resources of SME, which is the source of SME development. This is really a generally valid statement.



COMMISSION COMMUNICATION “FOSTERING ENTREPRENEURIAL MINDSETS THROUGH EDUCATION AND LEARNING”

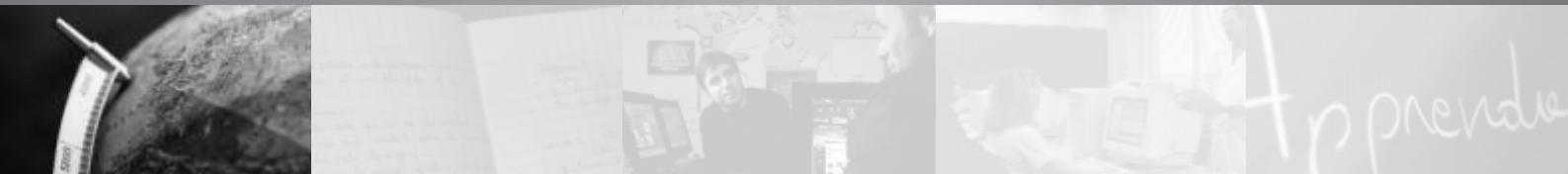
Mr. Christian Weinberger, European Commission - Directorate General for Enterprise and Industry

The Commission’s Communication on “Fostering entrepreneurial mindsets through education and learning” is based on evidence gathered through these projects. It aims to support Member States in developing a more systematic strategy, based on good examples in Europe. Coherent entrepreneurship education initiatives are still too few. However, good practice can be found in Europe. The challenge lies in spreading further the existing positive examples.

Most of the action needs to be taken at national or local level, however the European Commission has an important role of coordination and support.

The Communication proposes a number of recommendations for concrete action, such as:

- ➔ National and regional authorities should establish cooperation between different departments, leading to developing a strategy covering all stages of education.
- ➔ Curricula for schools at all levels should explicitly include entrepreneurship as an objective of education.
- ➔ Schools should be given practical support and incentives to encourage take-up of entrepreneurship programmes.
- ➔ Special attention should be given to training teachers and to raising the awareness of heads of schools.
- ➔ Cooperation between educational establishments and the local community, especially businesses, should be encouraged.
- ➔ The use of student mini-companies at school should be further promoted.
- ➔ Higher education institutions should integrate entrepreneurship across different courses, notably within scientific and technical studies.
- ➔ Public authorities’ support is especially needed to provide high-level training for teachers and to develop networks that can share good practice.



LEARNING FROM GOOD PRACTICES, CONCRETE EXAMPLES OF IMPLEMENTING THE COMMISSION COMMUNICATION RECOMMENDATION

Adopting a comprehensive strategy for entrepreneurship education

NORWEGIAN STRATEGY PLAN FOR ENTREPRENEURSHIP IN EDUCATION

Inger Karin Røe Ødegård, Adviser, Directorate for Primary and Secondary Education, Norway.

The Norwegian strategy for Entrepreneurship in Education “*See opportunities and make them work*” 2004-2008, was recently revised. The Strategy has been prepared in collaboration by three Ministries: Ministry of Research and Education, Ministry of Local Government and Regional Development and Ministry of Trade and Industry. The Norwegian Government has submitted the revised strategy and spoken this vision:

Entrepreneurship in the education system shall renew education and create quality and multiplicity in order to foster creativity and innovation.

A strategy for entrepreneurship in education is a strategy to strengthen the individual’s ability to see and exploit opportunities in an economic, social and cultural context. Thus, the way will be paved for future entrepreneurship, innovation and reorientation throughout Norway.

The educational system has a role to play in stimulating attitudes and behavior that promote the capacity for collaboration, creativity and innovation in children and young people. This must take place through long-term work with satisfactory progression. The young must be allowed to believe in their own creative powers and the ability to see and utilize local resources as a basis for creating values, developing workplaces and taking responsibility in their local community.

The purpose of the strategy is to profile entrepreneurship as an educational objective and training strategy. The wish is to motivate and inspire educational institutions, municipalities and county municipalities to plan and firmly establish training in entrepreneurship in collaboration with trade and industry and other relevant players in the local environment.

The target group for the strategy is primarily those who are responsible for education at all levels of the educational system. Various players who support entrepreneurship in their sectors, in this strategy will find a comprehensive plan and overview of the work. The responsibility for implementation of the strategy plan for entrepreneurship in education lies with owners of the educational institutions. The responsibility for coordination lies with the Directorate for Education and Training and the Ministry of Education and Research.

Entrepreneurship in education has a broad definition which includes economic, social and cultural factors. The definition used in the Norwegian Strategy rests on the definition submitted by EU’s Expert Group in 2002. “*Entrepreneurship is a dynamic and social process where individuals, alone or in collaboration, identify opportunities for innovation and act upon these by transforming ideas into practical and targeted activities, whether in a social, cultural or economic context.*”

Entrepreneurship in education includes development both of personal qualities and attitudes and of formal knowledge and skills, together these two main elements will give pupils/students competence in entrepreneurship.

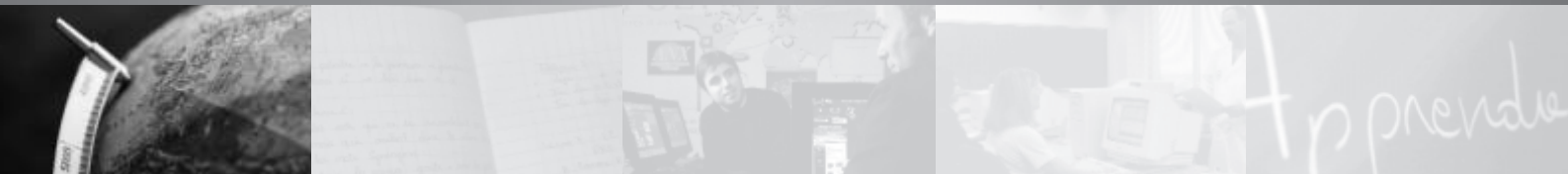


- ➔ Personal qualities and attitudes increase the probability of a person seeing opportunities and doing something about them. Work on entrepreneurship in education must primarily place emphasis on development of personal qualities and attitudes. In that way a basis is laid for later utilization of knowledge and skills in active value creation.
- ➔ Knowledge and skills concerning what must be done to establish a new enterprise, and how to be successful in developing an idea into a practical, goal-oriented enterprise.

In order to be able to concentrate on the objectives of entrepreneurship in the education system, there are four factors that apply to all levels of the education system:

1. Entrepreneurship as an integrated part of instruction: Entrepreneurship must be defined as an objective in education, and be included in the instruction strategy.
2. Collaboration with the local community: Instruction in entrepreneurship preresquires close collaboration between schools and the local business and social sector. There is therefore a need for more arenas for contact between educational institutions and various players in society. In such arenas educational institutions and the local social and business sectors will get to know one another better, and cultural barriers may be dismantled. This will result in mutual benefit inasmuch as it will increase the quality and relevance of education and strengthen recruitment to the local business sector and development of competence.
3. Teachers' competence: Teachers are important role models. A positive attitude among young people in schools toward entrepreneurship, innovation and reorientation requires that teachers have knowledge of this. It is therefore important to focus on entrepreneurship in teacher training, and also provide courses in competence development to working teachers.
4. The attitudes of school-owners and school managers: School-owners must follow up the focus on entrepreneurship in curricula and management documents, and build competence and insight among school managers. It is important that educational institutions are given legitimacy and motivation to work on entrepreneurship. School managers must be able to follow up, encourage and motivate teachers to be good role models and disseminators of knowledge. Both school-owners and school managers must take the initiative in collaborating with the business sector and other agencies in the municipality.

Developing Entrepreneurial attitudes and Entrepreneurship-competence has to be a task for ALL areas in every local society.



Including entrepreneurship in national or regional curricula

ENTREPRENEURSHIP IN SECONDARY EDUCATION IN IRELAND

Fiona Kindlon, Regional Development Officer, Second Level Support Service, Ireland.

In Ireland, Enterprise Education has been included in the curriculum of Senior Cycle Programmes including Transition Year, Leaving Certificate Applied and the Leaving Certificate Vocational Programme. Students engaging in these programmes have an opportunity to consider enterprise in the wider context of personal, community, social and business enterprise. Enterprise Education in these programmes is frequently explored through participation in a range of activities including a combination of classroom teaching, analysis of case studies, out of school investigations and invited visitors to the classroom. Students are also encouraged to plan, set up and run their own enterprising projects as vehicles of learning. Examples of enterprising projects include: setting up a mini company to sell a product or provide a service, a charity fund-raiser, publishing a newsletter and organising a school event. The form of enterprise project selected will depend on the aptitude and interests of students, as well as the resources available to them in school and in the locality.

The key elements of successful Enterprise Education Programmes in Second Level Schools in Ireland include teaching methodologies utilised, training for teachers of Enterprise Education, resources which support the teaching of Enterprise Education and the importance of developing links with the local community and with the business world, in addition to the active participation of business partners as mentors and advisors to students engaging in Enterprise Education Programmes in Irish schools.

As regards Mini Company Programmes in Ireland, the 'Get up and Go' programme has become the most widely used student company programme in schools, offering mini companies as part of the Transition Year Programme. The 'Get up and Go' Mini Company Programme is a curricular activity, which may run as a 10-week module, but best practice would be a full year.



Ensuring Support for Schools and Teachers

ENTERPRISE EDUCATION FOR 14-16 YEAR-OLD STUDENTS

Patrick Shipp, Enterprise and School Business Links Unit Department for Education and Skills England, UK.

Phase 1 of the Department for Education and Skills' Key Stage 4 enterprise education strategy has been successfully completed. In the two years to September 2005, we set up and coordinated 700 secondary schools in 151 Enterprise Pathfinders, costing £15m; and from that direct experience in schools, drafted national guidance on Enterprise learning; made that available on teachernet, and introduced it to all secondary schools through 69 conferences.

We defined, to partners' agreement, enterprise capability as "creativity, innovation, risk-management and risk-taking, and a can-do attitude and the drive to make ideas happen"; and enterprise education as "enterprise capability, supported by better financial capability and economic and business understanding". Our concept of enterprise embraces future employees, not just future entrepreneurs, and also social enterprise.

Enterprise is now referred to explicitly in the guidance for Office for Standards in Education (Ofsted) inspection, and for school self-evaluation; and is a key part of, and outcome from, statutory work-related learning. The Qualifications and Curriculum Authority (QCA) has found that it is now written into most School Development Plans.

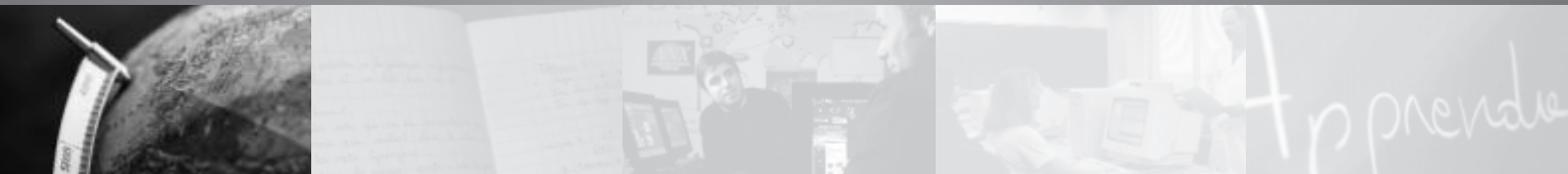
We worked with a very wide range of external partners, in many cases helping them to focus their support for schools on enterprise education; and with other Government Departments, as a key part of the 'enterprise culture' agenda.

We launched **Phase 2** in September 2005. First, all schools with KS4 pupils received funding for a new focus on enterprise education. Funds - total £60m for each of 3 academic years and are not ring-fenced. We believe that to embed enterprise in schools, teachers must be persuaded of its value and importance.

The Chancellors Budget in the spring of 2006 announced the launch of a new Schools' Enterprise Education Network (SEEN), managed by the Specialist Schools and Academies Trust (SSAT), and based on 50 expert 'hub' schools. All other enterprise specialist schools will support too, and the network will embrace all secondary schools helping them to deliver enterprise education.

We are also networking nationally the many support bodies such as EBPs; continuing to develop the national guidance; supporting enterprise summer school pathfinders; we have commissioned research into learner outcomes, assessment and accreditation in enterprise education; and we will continue dissemination through conferences.

Our website guidance gives more detail and best practice examples on delivering enterprise education www.teachernet.gov.uk/enterpriseeducation.



Making a systematic use of student companies and activities based on project work
STUDENT COMPANY PROGRAMME “EMPRESA JOVEN EUROPEA”

Iván Diego Rodríguez, Valnalón Ciudad Tecnológica, Principality of Asturias, Spain.

The government of the Principality of Asturias is currently at the forefront of the promotion of entrepreneurship education in Spain. It has set up an ambitious and extensive plan known as “Plan de Fomento de la Cultura Emprendedora” (Plan for the promotion of entrepreneurship). The plan includes a set of actions focused on all levels of the education system and allocates an annual budget until 2008. Proper funding and even more importantly, a medium-to-long term vision and strategy by public authorities, are critical factors of success in this particular case.

So far, Empresa Joven Europea (European Junior Enterprise) represents the first mini-company program to be included in the curricular framework of secondary education in Spain. As a consequence, regional and national authorities have shown an interest in this pioneer experience. Some of these contacts bore fruit and have led to implementation agreements with public authorities from other regions such as Basque Country, Andalusia & Canary Islands.

From its very beginning, students and teachers have been considered as the main actors in this particular project. Subsequently, a set of teaching resources were designed in order to facilitate implementation in the classroom. Books are delivered at no cost at the beginning of every school year. Moreover, additional support measures are included in the pack: On-site and online training courses, additional teaching resources online and a 24/7 helpline service are highly valued by teachers and mini-companies alike when facing such a challenging task.

Undoubtedly word-of-mouth among teachers and students represents the best marketing tool for the project. On the other hand low dropout rates among participant schools and a continuous increase in the number of schools joining the project may well indicate that we are in the right track.

The involvement of external stakeholders both from the public and private sector are proving crucial to widen the array of viewpoints and expertise as concerns the project. City councils, banks, local suppliers and other institutions lend a helping hand to mini-companies whenever needed.

Yet major challenges to entrepreneurship education remain to be overcome mainly as regards the following aspects: rigidity of framework curricula, excessively tight school routines and above all, popular misconceptions about the world of business deeply ingrained in all levels of society and particularly in the world of education.

As regards Empresa Joven Europea, there is still considerable room for improvement and all stakeholders involved should have a say. However, the goals accomplished so far with this particular strategy will surely inspire others and pave the way for further action in the field of education for enterprise.



4. THEMATIC WORKSHOPS ON 26 OCTOBER 2006

WORKSHOP 1: ENTREPRENEURSHIP IN PRIMARY EDUCATION

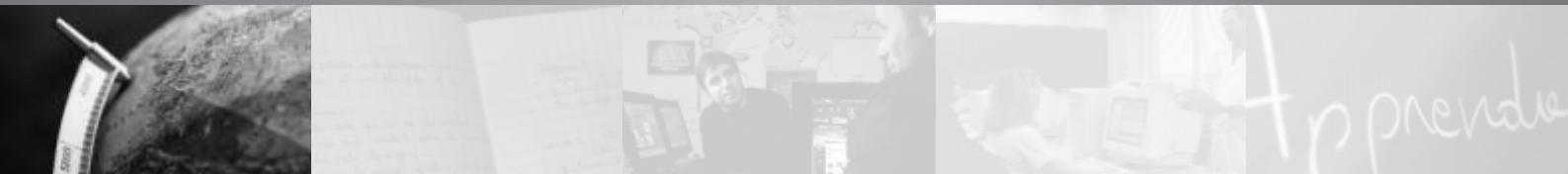
Workshop 1 explored to which extent, and how, can primary education contribute to fostering creativity, initiative and an entrepreneurial attitude in children. Issues such as contents of programmes and teaching methods were discussed, as well as concrete support to schools and how to encourage an early contact of pupils with the world of enterprise.

The following good practice examples were presented:

- ➔ Cap'Ten programme, Ms. Laurence Lievens, ICHEC-PME, Belgium.
- ➔ Cartoon « Bill et Boule créent une entreprise », Mr. Jean Schram, Ministry of Education, Luxembourg.
- ➔ Junior Achievement K-6 programme, Ms. Stefania Popp, JA-YE Europe.
- ➔ Entrepreneurship in kindergarten and primary schools in the county of Telemark, Ms. Kerstin Laue, Confederation of Norwegian Enterprise (NHO), Norway.
- ➔ Strategy for enterprise in primary education: Ms. Sandra Ewen, Determined to Succeed, Scotland, UK.

Workshop moderator: Ms. Gry Ulverud Hoeg (Ministry of Education and Research, Norway)

Workshop rapporteur: Mr. Volkmar Liebig (ifm - Institut für Fremdsprachen und Management, Germany)



CAP'TEN PROGRAMME

Ms. Laurence Lievens, ICHEC-PME, Belgium

Because, we are deeply convinced that entrepreneurship spirit is made of behaviours that can be stimulated from the early age, Cap'Ten develops behaviour skills like curiosity, creativity, organisation, autonomy, initiative, team spirit...

Cap'Ten consists of a method and educational tools, enabling young people (10 to 12 years old) to dream and undertake a long ambitious personal project, at school. It was thought and developed in partnership with a group of experts and tested during one year.

Each participating pupil receives an individual tools kit and is guided during the project by Zurk, the mascot ant. Each participating teacher receives a tools kit, a teaching book, and a CD.

Some figures concerning Cap'Ten:

R&D and pilot phase took place in 2003-2004. Then came the launching in the schools in October 2004. Cap'Ten impacted 26% of the age grade concerned ! Within 2 years, 21,000 children from the Frenchspeaking part of Belgium took part in Cap'Ten project.

Some strengths of the program:

1. Enhances personal skills: manual, sport, artistic skills
2. Gives to every child a project within his reach
3. Contributes to stimulate entrepreneurship spirit
4. Fitted to all children, whatever the school level or the socio-economic environment
5. Fitted to children not conversant with national languages

Cap'Ten is a program that makes children being actors in their education; they become actors of their life, they can act on their environment and become conscious of that.

Cap'ten is free for schools and exists thanks to private and public partners financing the action.



CARTOON “BOULE ET BILL CREENT UNE ENTREPRISE”

Jean Schram, Ministry of Education, Luxembourg

“Boule et Bill create an enterprise” is an original cartoon featuring the well known heroes Boule and his dog Bill by Jean Roba.

In 1986, the association of young “chefs d’entreprise” offered to the Ministry of education the right to use an especially written and designed comic related to the world of entrepreneurship in primary school.

In this episode Boule and his friends create an enterprise: Boule needs some ready money to buy a new bicycle. The only way to earn money is to produce and to sell some goods. The child orientated cartoon explains the steps leading to the creation and function of an enterprise: start-up capital raising, investment, design of the goods, production of the goods, market and necessity of good communication, diversification of the production.

The elementary mechanisms of the financial activities of an enterprise in order to survive are also introduced.

Finally, after the assembly of shareholders, Boule and Bill and their comrades get their reward and can enjoy their holidays.

The cartoon thus introduces the reader to the basic vocabulary of economics and finance; also, the mechanisms of a (small) enterprise are explained. By doing so, the pupils are acquainted with the function of their surrounding business world.

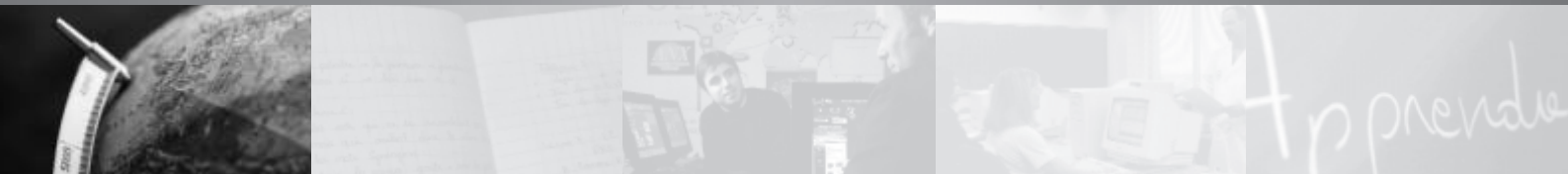
The cartoon is part of the official programme in French for the pupils of 6th classes in primary school in Luxembourg. Each of the about 6,000 pupils in the 6th primary class learns about entrepreneurship during her or his primary education, in a way that is attractive to them.

The same theme appears also in mathematics in the 6th class, where the children solve some problems in the context of the Boule et Bill cartoon: especially they follow the financial transactions of the enterprise through the productive process, from capital raising to the final (financial) output.

The cartoon and the treatment of the theme in maths are part of a strategic action to trigger changing mindsets in education, to revalue the image of the entrepreneur and to enhance the orientation of the pupils leaving primary school at the end of the 6th classes.

This cartoon has developed inspired some classes to imitate Boule et Bill and to get a mini-enterprise running in their own school as a school project, some of which have been awarded a price by the Minister of Education as good pedagogical project.

Finally, the department of primary school of the Ministry of Education is represented at the Conseil d’administration des “Jonk Entrepreneuren” (young entrepreneurs) and so completes the strategic actions taken to promote entrepreneurship in primary school.



JUNIOR ACHIEVEMENT K-6 PROGRAMME

Stefania Popp, JA-YE Europe

Economics: What is it? Economics is the Science of Choice

Education: What is it? Education is teaching on How to Make Choices

The presentation introduces a concept and a case study on how Junior Achievement K-6 programs can improve the **quality** of a regular program and help students to **learn faster** how to do it.

“It’s never too early to start preparing young people for their futures. Students entering school today face the significant challenge of preparing for a rapidly changing economy. They need an early start to be ready to meet society’s demands. So no matter what their path in life, they will be ready and eager to learn, take risks, overcome the fear of failing and charge into unknown territory.

Through carefully designed programs that reflect our business today, and evolving needs of the world tomorrow, Junior Achievement helps young people learn about every aspect of business by doing. (...) Junior Achievement brings business people face to face with kids for the simplest of human interaction... sharing. A volunteer in the classroom, a mentor to a job shadow, a supporter on a local JA program, a leader in corporate sponsorship... Whatever the choice, they can make the difference!”

The JA-YE programmes develop economics concept through 6 programmes: Ourselves, Our Families, Our Community, Our City, Our Region, Our Nation, Our World. Junior Achievement uses hands-on experiences to help young people understand the economics of life. In partnership with business and educators, JA-YE brings the real world to students, opening their minds to their potential. The elementary school programs include six sequential themes for kindergarten through fifth-grade students and a new core programme and experience (Our Europe) . Students learn the basic concepts of business and economics and how education is relevant to the workplace.

The sequential activities build on studies from each preceding grade and prepare students for secondary school and lifelong learning. The six program themes also teach students that people assume roles as individuals, consumers, and workers in an expanding cultural environment that extends from the self and family to global relations.



ENTREPRENEURSHIP IN KINDERGARTEN AND PRIMARY SCHOOLS IN THE COUNTY OF TELEMARK

Kerstin Laue, Confederation of Norwegian Enterprise (NHO), Norway

Cooperation between partners from private and public sector

After 4 years of cooperation different organisations from private and public sector, like the County council and government, The confederation of Norwegian enterprise and the university college, signed a partnership agreement which defines the common objectives, and where each partner brings inn not only resources, but - even more important – their networks.

Local projects

The entrepreneurship programme is anchored locally. Each region or municipality has its own project. In this way the request to integrate entrepreneurship in schools comes from the Municipality as school-owner, and not from an outside organisation.

Common understanding

We have invested a lot of effort in creating a common understanding of entrepreneurship as a key competence for all, not only for creating new businesses. This was crucial to motivate Heads of schools and teachers, especially at primary level.

The progression model

We have developed a progression model – teacher guidelines that not only define the content of the entrepreneurship – competence, but show how each level can contribute, based on the national curriculum. The progression model was published by the Norwegian government in 2002, and will soon be available in English.

The tool-box

There are more ways in promoting entrepreneurship than mini-companies. The teacher needs a tool-box, designed to fit within the curriculum, and based on the progression model. The tool-box for primary schools contents activities promoting creativity, management skills, project work and good ideas of how to cooperate with working life.

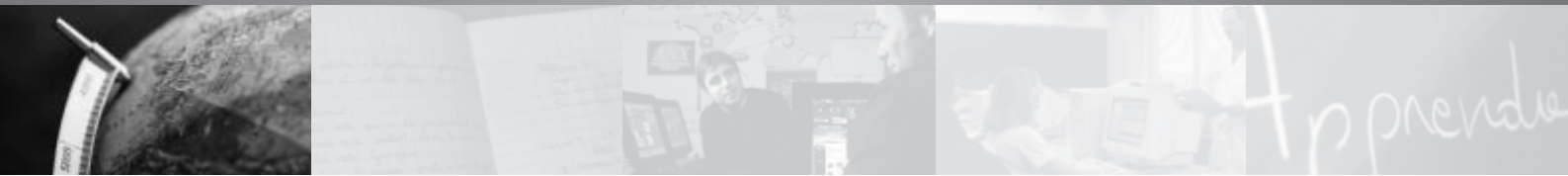
Teacher training

We have a 3 step programme: step 1: in-service teacher training to create a common understanding; step 2: teacher networks and benchmarking; step 3: longer university programmes for local “facilitators”.

School-development

Entrepreneurship education is not only new activities – it is school development.

The key issue is a flexible organisation and teachers who change focus from teaching to learning, and look at their pupils not as empty glasses to be filled, but as a resource.



STRATEGY FOR ENTERPRISE IN PRIMARY EDUCATION

Sandra Ewen, Determined to Succeed, Scotland, UK.

Background and Education landscape

There is no statutory curriculum in Scotland. Scotland's 32 local authorities have autonomy to decide on the shape of local education which should aim to meet local needs. Nevertheless, the Scottish Executive – devolved administration for Scotland, which has the power to make decisions on most issues affecting Scotland's people – has identified 5 National Priorities for Education which provide a framework for all pre-school, primary and secondary education: Achievement and Attainment, Framework for Learning, Inclusion and Equality, Values and Citizenship, and Learning for Life. Scottish education is currently undergoing radical reform, along with 3 pillars. One of them is *Determined to Succeed*.

Entrepreneurship Education in Primary Schools

Entrepreneurship Education has featured in Scotland's schools for many years and has traditionally involved pupils in creating a mini-enterprise and developing and marketing a product or service for profit. Whilst this approach has been successful in giving pupils a practical awareness of entrepreneurship and enterprise, the Scottish Executive recognised the need for a more holistic approach to developing the sort of enterprising young people who would fuel Scotland's long-term economic growth. A review of Education for Work and Enterprise was undertaken in 2002 and resulted in *Determined to Succeed* – the Scottish Executive's strategy for enterprise in education. *Determined to Succeed* aims better to prepare young people for the world of work by developing in them the skills, knowledge and positive attitudes they will need as future employees, employers - and entrepreneurs. It goes well beyond entrepreneurship education by bringing together under a coherent framework, enterprise and entrepreneurial experiences, work-based vocational learning and appropriately focused career education. Partnerships between schools and employers and collaboration with a wide range of education and business partners are central.

The Scottish Executive leads and funds *Determined to Succeed* centrally. Scotland's 32 local authorities have ownership for local delivery who are making good progress in bringing *Determined to Succeed* to life across all Scotland's schools. This is done primarily through the funding of programmes delivered by Young Enterprise Scotland, Careers Scotland (career guidance organisation) and other providers. *Determined to Succeed* encourages local authority education departments to embed such programmes within the curriculum, thereby targeting all pupils. But, as there is no statutory curriculum in Scotland individual authorities have discretion to deliver provision to meet local circumstances.

This presentation sets the scene on the need for enterprise in education to be delivered as an economic priority rather than an educational one from a very early age. Set in the context of current educational reform it will attempt to share the Scottish Executives vision of a more successful and prosperous Scotland where young people are *Determined to Succeed* and where innovation, wealth creation and entrepreneurship are valued. The presentation will include some case studies of successful entrepreneurial activities in Scottish Primary Schools where children as young as 5 are learning the principles of running their own businesses and developing a 'can do – will do' attitude and where money is no longer a bad word in educational circles.

WORKSHOP CONCLUSIONS

Rapporteur: Volkmar Liebig, ifm - Institut für Fremdsprachen und Management, Germany

This workshop deals with projects which develop entrepreneurship skills in primary schools. Günter Verheugen, EU-Commissar, says: „Entrepreneurs are the economic DNA which we need to build Competitiveness and Innovation in Europe”. The key questions discussed on the workshop are:

- ➔ Can you learn entrepreneurial skills or are they in your genes?
- ➔ What does it take to be an entrepreneur?
- ➔ Why do fewer Europeans have what it takes?

In the US the culture of entrepreneurship has a high social impact. The Americans are justly proud of a culture that allows individuals to create businesses. It's long been thought that Europeans, for whatever reasons, simply do not have the same mindset. Obviously there are a lot of differences between the American and European mindset. But there are few beacons in Europe – for instance the projects presented in workshop 1 “Entrepreneurship in Primary Schools”.

I. Proposals and Recommendations Workshop No 1

What we have:.

- ➔ A lot of Best Practise Projects
- ➔ Understanding Entrepreneurship is a Key Competition
- ➔ Entrepreneurship is a Topic in Primary Schools
- ➔ Entrepreneurship has different Aspects

What we need:

- ➔ A better Platform of Projects and Teaching Materials
- ➔ Better Transfer of the Processes of Best Practise Projects
- ➔ Better Integration of the Projects
- ➔ More PPP-Projects, less small firms

II. Remarks from the rapporteur

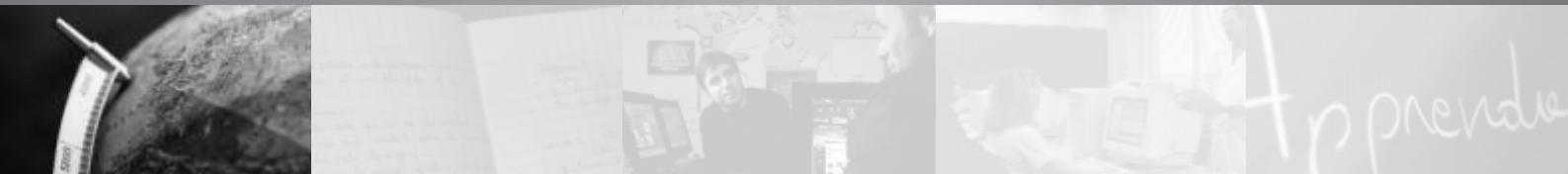
The presented projects represent all relevant aspects of entrepreneurship shown in the following figure.



© Prof. Liebig, Ulm

Everybody is an Entrepreneur

Source: Liebig, Volkmar: Intrapreneurship. Booklet for developing entrepreneurial skills in family, business and social environment, FernUniversität I Jagen, I Jagen/Germany 2005, S. 15 (german).



WORKSHOP 2: ENTREPRENEURSHIP IN SECONDARY EDUCATION

Workshop 2 focussed on teaching methods, and on how to support and encourage schools to introduce entrepreneurship activities and programmes. Issues such as the inclusion of entrepreneurship in the curriculum were discussed, as well as how to make adequate teaching material available, how to train teachers, how to enhance cooperation with enterprises and the involvement of business people in the classroom.

The following good practice examples were presented:

- ➔ The Entrepreneur-Skills-Certificate, Mr. Alexander Hofmann and Ms. Margit Moravi, WKÖ - Austrian Economic Chamber, Austria.
- ➔ «Entreprendre au Lycée», Mr. Robert Allemandi, Coopérative COPSI, France.
- ➔ Business strategy in administration, management and commercialisation in secondary education, Mr. Fernando Mur Alegre, IES La Llitera, Huesca, Spain.
- ➔ Teacher training in enterprise education, Ms. Linda Brownlow, University of Strathclyde, UK.

Workshop moderator: Mr. Anthony Gribben (European Training Foundation)

Workshop rapporteur: Ms. Anna Gethings (AG Services, Ireland)



THE ENTREPRENEUR-SKILLS-CERTIFICATE

Alexander Hofmann and Margit Moravi, WKÖ - Austrian Economic Chamber, Austria.

The EU Commission has called upon Member States to integrate entrepreneurship in all school's curricula and provide schools with proper support to allow them to put in place effective and high quality education schemes.

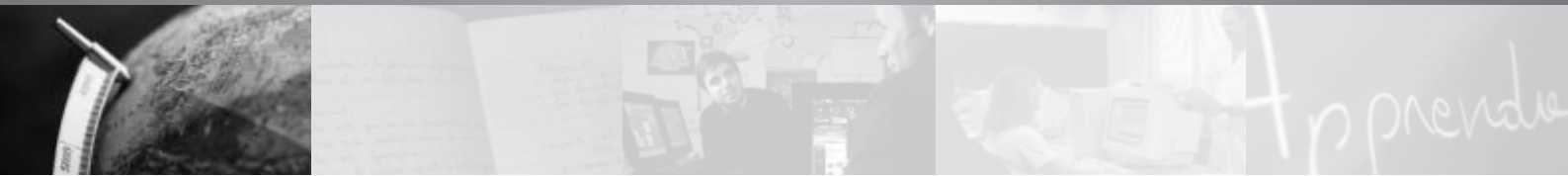
Nevertheless, there is a Status quo in Austria: So far, entrepreneurship education is anchored comprehensively only in the curricula of colleges of business administration and of business schools. So, there is need for action in other schools, especially in schools where the largest deficit has been observed: compulsory schools and general secondary academic schools

By creating the Entrepreneurship's Skills Certificate (ESC), WKÖ meets the demands of the European Commission. The ESC allows to provide considerable more school children with a high quality entrepreneurial education and a positive attitude towards the economy and encourages a fundamental entrepreneurial attitude among young people.

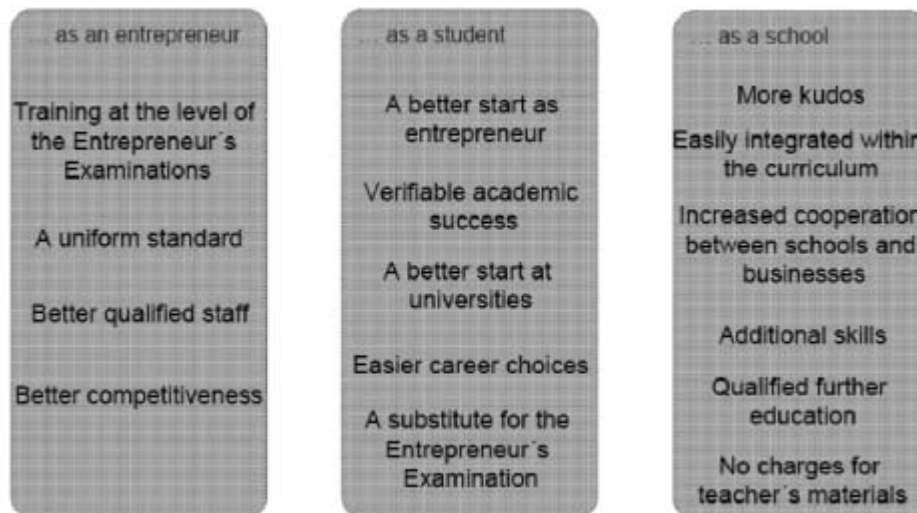
The Entrepreneur's Skills Certificate is...

- ➔ ... an additional qualification. Upon completion of the ESC, the entrepreneurial examination, which is one module of the final examination of regulated crafts and trades, is waived. But also in the unregulated trades, you have a much better chance of succeeding if you have a good entrepreneurial training.
- ➔ ... a didactic innovation. It allows the outstanding humanities based education to be supplemented by a sound knowledge of business and commerce. Unlike similar schemes, these courses also provide an explanation of the links between business and macroeconomics.
- ➔ ... based on voluntary participation and thus promotes commitment and motivation among learners and teachers.
- ➔ ... taught in modules and is transferable.
- ➔ ... an additional asset for young job seekers, since it leads to the awarding of a certificate.

Entrepreneur's Skills Certificate		
Modules	Content	Education at
A Examination	Fundamental Economic Know -How	Lower secondary school
B Examination	Key Aspects of Economics	Upper level secondary school
C Examination	Key Aspects of Business Administration	Upper level secondary school
UP Examination	Supplementary Knowledge of Business Administration at level of the Entrepreneur Exam	Upper level secondary school or adult learning establishment



The benefits of the ESC...



Some experiences

- more than 70 schools in Austria participate
- since 2004: more than 3800 examinations, 2000 modules tested each year (increasing tendency)
- easy integration in curricula
- teachers welcome materials provided
- students accept the certificate

Coming up next...

The Entrepreneur's Skills Certificate will be introduced in the EU. A first expansion phase will target Germany and Switzerland. A second expansion will disseminate the ESC all over the EU.



«ENTREPRENDRE AU LYCEE»

Robert Allemandi, Coopérative COPSI, France

Presentation and characteristics of the operation

"Undertaking at the high school" consists in gathering 15 to 30 students and putting them in situation to go through all the steps from the idea of the project to the sale of services or products to exterior customers. This activity is carried out within the framework of an association in which young people have operational and legal responsibilities.

Young contractors can come from classes of different levels and specialties from the "seconde générale" to the 2nd year after high school. The educational team is made up of at least 3 people of different disciplines including not-teacher staffs. It is not a proper exam; on the contrary, everything is organized to stimulate the collaborative emulation through coordinating meetings and a Forum facilitating exchanges and valorisation.

This activity is evaluated from a "sorter organizer" and the evaluation of acquired knowledge is done with the teaching responsible persons in charge of the high school and the "Academies". The stress is laid on creativity, collaboration, organization, communication, the commercial steps, autonomy and perseverance.

Contributions from participants

For high-school pupils and students, it allows to:

- ➔ Take initiatives and responsibilities
- ➔ Apply the acquired knowledge to a concrete situation
- ➔ Work in teams, to negotiate with customers and suppliers, to organize production and to manage the activity of a company
- ➔ Approach the reality of the world of work while make an organization function.

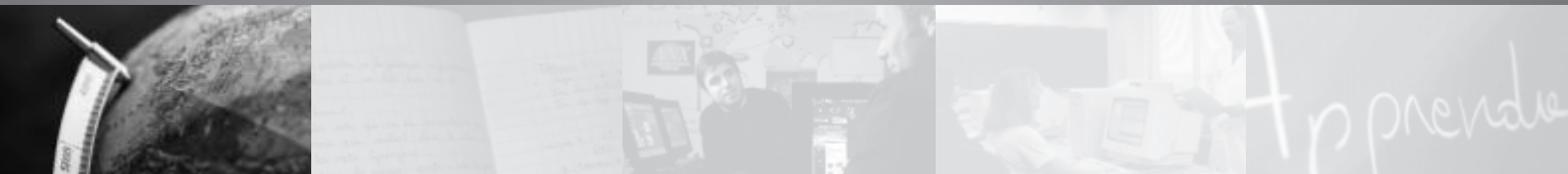
For the members of the educational team, it allows to:

- ➔ Motivate its pupils around a project while be based on structural steps
- ➔ Collaborate with the colleagues of other disciplines
- ➔ Work differently with youngsters and economic actors.

Criteria of success

The most important is to train and encourage the teachers to make this type of action and give schools directors the means of inventing projects and maintaining the motivation of the educational teams. Then, it is advisable to register these practices in the teaching reference frames and to arrange a space-time in the week to carry out multi-disciplinary and transversal activities. Lastly, one needs commitment and implication from the political, educational and economic decision-makers at the highest level.

Since 1991, 584 Mini-Companies have been created, 9 338 young contractor pupils, 1 589 teachers and 183 high schools of the "Provence-Alpes-Côte d'Azur" area have taken part in the operation.



BUSINESS STRATEGY IN ADMINISTRATION, MANAGEMENT AND COMMERCIALISATION IN SECONDARY EDUCATION

Fernando Mur Alegre, IES La Llitera, Huesca, Spain

During the last years in the IES La Llitera de Tamarite, Huesca (Northwest Spain), the use of an enterprise strategy simulator in “Basics on Administration and Companies Management” (Upper Secondary levels) is paying very good results, both in students participation in and motivation for entrepreneurship. It also encourages remarkably students’ enterprise abilities.

Working in teams with the aid of a tailor-made enterprise simulator, students can take decisions about the most important variables for enterprise strategy (price, production, research and development, marketing and capital investment). Each group creates a company and competes on a virtual market. They are provided with economic-financial information to make decisions. After reporting on this, the system generates results, which the groups must analyse before doing next steps. In the meantime, changing economic environment impacts the simulation process, and students have to take it into account in their business decisions

The development and application in the classroom is as follows:

1. Design of the product to be produced and sold by the companies. Participants in the simulation should be familiarized with it.
2. Draft of the macroeconomic environment through the variables that define the situation: interest rate, corporate taxes, banking credit limit...
3. Description of the variable limits object of decision by companies.
4. Delivery of the initial economic-financial information to the different groups for its analysis and strategy draft to follow.
5. Group analysis and decision making about the most important strategic variables in a company (production, price, marketing, R+D, and capital investment).
6. Encode of the decisions of all the groups in the simulator and results report.
7. Analysis of the new company situations, newsletter about possible environment changes and new round of decision making.
8. At the end of the decision making processes, it will be determined which companies performed better through a ratio that weighs profits, growth, market share,...

The success of this activity is based on the use of the ICT in learning, on teamwork, on the analysis of information and the link between theory and enterprise practice, assuming the risks in the decisions-making process. Students are more motivated by the study of business management which fosters entrepreneurship.



TEACHER TRAINING IN ENTERPRISE EDUCATION

Linda Brownlow, University of Strathclyde, UK

While Enterprise in Education activities have been an accepted part of Scottish education for many years, in 2003 the Scottish Executive Determined to Succeed programme was launched. It stated that children and young people should have the opportunity to:

- ➔ develop enterprising attitudes and skills through learning and teaching across the curriculum
- ➔ experience and develop understanding of the world of work in all its diversity
- ➔ participate fully in enterprise activities
- ➔ enjoy appropriately focused career education

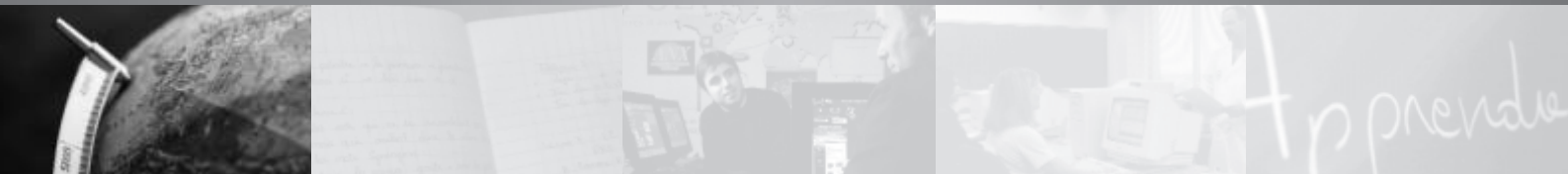
All student teachers on all Initial Teacher Education courses at the Faculty of Education of The University of Strathclyde (Glasgow) attend 'awareness-raising' sessions in the early stages of their courses. As well as introducing the philosophy behind Enterprise in Education, this also encourages them from the very beginning of their course to consider adopting an enterprising approach to teaching and learning. Those students who wish to study this area in more depth can then undertake an option module later in their course.

For one particular group of students, i.e. those studying for the Bachelor of Education (Hons) degree – a four year course, there is an opportunity to undertake a 48 hour module over two years (Year 3 and Year 4 of the course). In Year 3, students work in groups and undertake an enterprise project at their own level. For many of these students, this is a completely different way of working, compared to other methods of delivery in the course. For some, the prospect of an enterprise project, to be completed over an 8 week period, is fairly daunting, but after the initial briefing they are able to generate ideas and progress with the project very quickly. For assessment purposes they are required to compile a group report of their project, and deliver a presentation to peers about the processes involved. This is followed by an individual piece of reflective writing, identifying the personal and professional benefits of the experience to the student, and consideration of the implications for teaching and learning in general. Student evaluations of the module are extremely positive and many are able to recognise very important benefits.

This module is consistently rated extremely highly by the students, who then extend their knowledge of Enterprise in Education during the module in the following year. After graduation, they take this depth of knowledge into the teaching profession and for some this may help when they apply for teaching posts.

These modules are delivered by staff of the Centre for Studies in Enterprise, Career Development and Work (Enterprising Careers) www.strath.ac.uk/enterprisingcareers

For those practising teachers who wish support, the centre also provides a wide portfolio of in-service training courses. Teachers who wish to gain additional qualifications can study for the Postgraduate Certificate / Diploma in Enterprise in Education.



WORKSHOP CONCLUSIONS

Rapporteur: Anna Gethings, AG Services, Ireland

I. Introduction

The topics that were explored in Workshop 2 focused on:

- ➔ Curriculum and teaching methods for entrepreneurship education
- ➔ Teacher training – initial and in-service training for entrepreneurship education
- ➔ Entrepreneurship and the school – the practical support and instruments for schools to encourage entrepreneurship activities
- ➔ The contribution of enterprises to formal and non formal entrepreneurship education at secondary level

II. Recommendations

The following recommendations emerged from the discussion:

1. Curriculum development

- ➔ Entrepreneurship should be embedded within the secondary school curriculum. Curriculum development should be driven by national policy with full engagement of the relevant ministries.
- ➔ Key government departments should engage and collaborate to develop a focused programme for entrepreneurship curriculum development. The Norwegian model was cited as an excellent example of collaboration at national and regional levels.
- ➔ National governments should engage with the EU support programme (2007 – 2013) to address curriculum reform.
- ➔ The diversity of each country's education systems needs to be taken into consideration in evolving policies
- ➔ There is a need for research to be compiled for comparative purposes. The EU should facilitate intelligence gathering and comparative analysis. The curriculum for entrepreneurship is still uncertain. Reforms need to be tested and a top down and bottom up approach should be encouraged.
- ➔ Different strategies need to be applied for evolving general and vocational entrepreneurship curricula.
- ➔ Societal partners need to be involved in curriculum reform. Actions forward should incorporate the wider community as well as business interests.

2. Teacher training and school support

- ➔ Teacher training for entrepreneurship is a national policy issue and should be attached to national curriculum reform.
- ➔ National ministries should review the financial requirements for teacher training and support mechanisms and create conditions that stimulate teacher and school empowerment.
- ➔ National governments need to acknowledge that teacher training for entrepreneurship is a strategic issue. There is a need for piloting teacher training programmes.
- ➔ It was recommended that an action line for teacher training would be part of the EU lifelong learning programme. This would facilitate the sharing of experience and networking.
- ➔ Schools should create incentives to enable teachers to participate in continuous professional development.



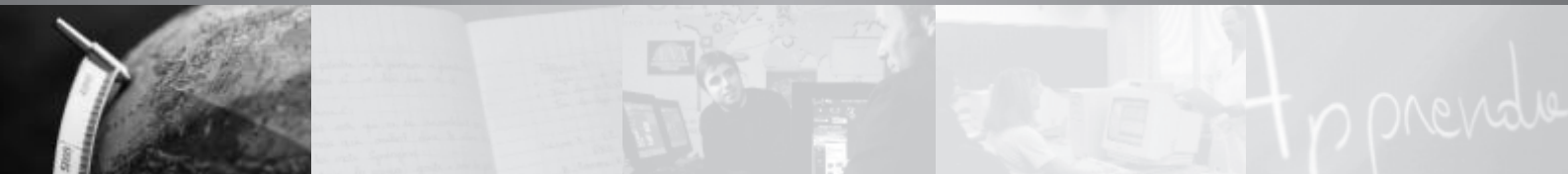
- School boards, enterprises and community interests should develop formal linkages and set commitments and objectives forward for cooperative measures for teacher training and school support.
- Every teacher should be facilitated to be pedagogically innovative. The Scottish best practice teacher training example for transfer of know-how was cited.
- Best practice examples should be shared between countries.

3. Participation by external actors and businesses

- European Employers need to establish more proactive policy mechanisms on entrepreneurship at all levels of entrepreneurship education. Business are stakeholders and, as such, should be involved in curriculum development.
- There is a need to develop a research base at EC level to determine innovative approaches for effective engagement of employers (SMEs, large enterprises and MNEs). This will address the apparent hesitancy of enterprises to cooperate with education.
- It was suggested that enterprises should be represented at EU policy making events such as the Oslo Conference.
- Concern was expressed that the Mini Company initiative would distract from other school enterprise initiatives.

4. General

- There is a need to shift from ad hoc policy thinking to consolidated strategic planning at European level (EC, Council of Ministers, national governments).
- Teachers play a central role in meeting the Lisbon objectives of competitiveness and employment. Policies need to be put in place to recognise and support their role.
- Teaching infrastructure, support services and staff development are essential for entrepreneurship development across the entire learning system.



WORKSHOP 3: ENTREPRENEURSHIP IN HIGHER EDUCATION

Workshop 3 discussed programmes and teaching methodologies both in business and in non-business studies, with an emphasis on how to ensure that entrepreneurship is horizontally spread across different fields of study. Among other issues addressed were how to support business ideas of students, how to promote university spin-offs and increase cooperation between universities and enterprises.

The following good practice examples were presented:

- ➔ Teaching of entrepreneurship across different subjects, Ms. Angela Short, Dundalk Institute of Technology, Ireland.
- ➔ Science Enterprise Challenge - Changing the culture at UK universities, Mr. Robert D. Handscombe, University of Sheffield, UK.
- ➔ TOP Programme for young start-ups, Mr. Jann van Benthem, University of Twente, Netherlands.
- ➔ Innovative entrepreneurship education - Junior Enterprises at universities, Mr. Jonathan Nowak, JADE European Confederation of Junior Enterprises
- ➔ An Integrated Approach to Entrepreneurship Education, Mr. Jon Erik Svendsen, BI Norwegian School of Management, Norway.

Workshop moderator: Mr. Paul Hannon (National Council for Graduate Entrepreneurship, UK)

Workshop rapporteur: Ms. Karen Wilson (European Foundation for Entrepreneurship Research)



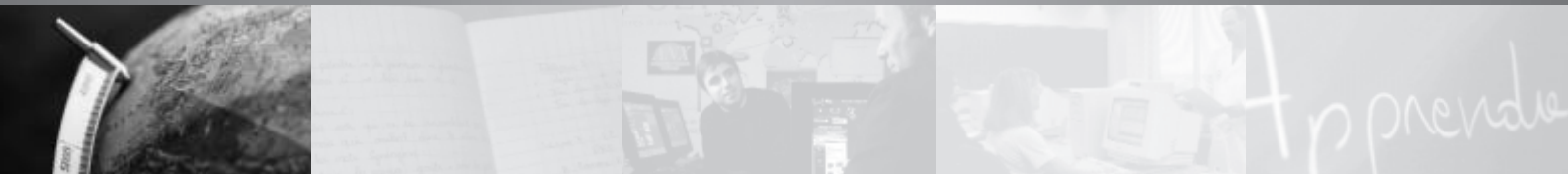
TEACHING OF ENTREPRENEURSHIP ACROSS DIFFERENT SUBJECTS

Angela Short, Dundalk Institute of Technology, Ireland.

Entrepreneurship as a module in its own right has been taught at Dundalk Institute of Technology (DKIT) in some form since the mid 1980s. Initially originating from within the Institute's Business School, entrepreneurship first appeared on the curriculum as "Innovation Studies" and "Enterprise Development". The content, structure, duration and delivery style of such modules have developed significantly over the years, resulting in a differentiation between both levels and disciplines. Currently, entrepreneurship is taught at DKIT across all four schools/faculties (Business & Humanities; Informatics & Creative Media; Nursing & Health Studies; Engineering) and across levels 6, 7, 8 and 9 of the NQAI framework.

Commencing at level 6 (Higher Certificate), students within the School of Business & Humanities will encounter entrepreneurship under the heading of "Creativity & Innovation" – an exciting and highly practical one-semester module which introduces students to problem solving and idea generation for the purposes of new venture creation. The module is taught interactively in workshop-style sessions and, although it carries 5 ECTS, there is no formal written exam. Rather, a team-based creativity project forms the basis of the assessment. Students can then progress to level 7, where they will encounter "Entrepreneurship", a module offering a higher level of study with a more theoretical and academic content, along with the "Business Project" where students will research the potential for setting up a new business in the region.

Entrepreneurship is taught within programmes as diverse as Agricultural Science, Sports Leadership, Hospitality and Tourism, Event Management, Food Science, Engineering, Early Childhood Studies, Creative Multi-Media, Cultural Studies, Business Information Systems, Accounting & Finance, Marketing and Business Studies. DKIT, through its Centre for Entrepreneurship Research, keeps up to date with current research in the field of entrepreneurship education and continues to develop and enhance its entrepreneurship programme offerings. A recently funded EU programme – INICIA – in which DKIT played a key role through the Irish organisation TecNet, helped the Institute to completely redesign its first year entrepreneurship modules. As a result, only the practical creative and innovative elements of entrepreneurship are taught in first year, with the theoretical components being covered later in the curriculum. This facilitates students to think creatively right from the beginning.



SCIENCE ENTERPRISE CHALLENGE – CHANGING THE CULTURE AT UK UNIVERSITIES

Robert D. Handscombe, University of Sheffield, UK

Science Enterprise Challenge was a UK government initiative launched in 1999 by the Office of Science and Technology. By mid 2000, 12 centres had been set up, involving 33 universities and, after the second round of funding in 2002, there were 13 centres networking 65 universities.

By the end of 2004, when UKSEC became a national network of enterprise centres open to all UK universities, it had enabled 160,000 students and 1000 staff to become more involved with enterprise learning, set up 70 student enterprise societies and ran 180 business plan competitions involving 8700 new ideas.

Its challenge was to change the culture in UK Universities and particularly to change the learning experience of science and engineering students and increase the wealth creation capacity of universities. As such, and particularly in engineering, it connected with wider imperatives (Deering Report in the UK, Boyer Report in USA for example) to 'reinvent undergraduate education'.

At a national level, UKSEC provides a community of practice for those involved in enterprise development across the UK. Additionally it runs a series of events to assist networking, the sharing of best practice and the development of new approaches. Its success resides in providing opportunities for talking, sharing and experimentation in a climate of competitive cooperation.

Its largest event is its annual conference and gala. At the gala, prizes are given out to the winners of the national student business plan competition - a winners of winners competition to celebrate the best of student entrepreneurship.

At a local level, enterprise development depends upon the culture and strategies of the individual universities and the skill and vision of those individuals involved. There is a diversity of approach; one size does not fit all.

Whilst some universities have developed enterprise learning programmes driven by their business schools others, such as the University of Sheffield, have chosen an embedded approach where the learning is closely connected with the science or engineering subject and led by academic staff in those departments. The key to success in this approach is the infiltration of 'enterprise teaching' into the professional standards of the teaching staff.

Cultural change is apparent at universities throughout the UK. It is a complicated and lengthy process that has strategic implications. The key consequences of a move to an enterprise culture are that research becomes more focused on its applications and teaching more focused on how to get and how to use rather than just the acquisition of subject knowledge.



TOP PROGRAMME FOR YOUNG START-UPS

Jann van Benthem, University of Twente, Netherlands

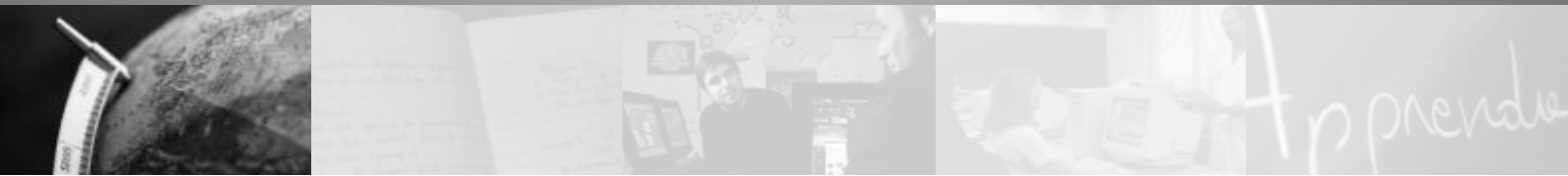
The process of knowledge and technology transfer should bridge the gap between basic research, applied research and society. In practice it is somewhat more difficult: the transfer of knowledge obtained by research does only work for the larger companies that can afford to invest in new knowledge and technology and, in most cases, have a research-laboratory of their own. It does not work for small and medium sized enterprises (SMEs). At the Dutch Institute for Knowledge Intensive Entrepreneurship (NIKOS), part of the University of Twente, we develop models/projects to reduce the gap between basic research, applied research and SMEs. The TOP-programme is one of those projects and was set up in 1984 to start knowledge-based companies with the help from the University.

The objective of TOP is to encourage graduates of the university to start their own knowledge-based companies. During one year, knowledge-based firms can be in the TOP-programme. Prerequisites for entering the TOP-programme are having a business idea that matches with the interest of staff members in one of the research-groups of the university and having a consistent business plan. The programme offers the entrepreneur the following support:

- Office space: The entrepreneur is housed physically in the research-group. The research-group receives a financial compensation for its hospitality from the TOP-project.
- Secretarial support: The entrepreneur can use (within certain limits) communication aids as computer, fax, copier and telephone in arrangement with the research-group.
- Laboratory facilities: Depending on the type of company, the entrepreneur sometimes needs the access to expensive equipment.
- Course "Becoming an Entrepreneur": TOP is learning by doing but we strongly advise students to follow this course which helps to develop skills and to write a business-plan.
- Financing: The TOP-entrepreneur receives an interest-free loan of 12.000 euro if necessary. It is a personal loan, not a loan to the company, which has to be paid back in 4 years, starting the second year.
- Mentorship: Because the starting entrepreneur lacks experience in doing business, the entrepreneur is matched with an experienced businessman who started his own business..

Further, the TOP coaching committee gives advice and monitors during the year the entrepreneurs are in the program.

Since 1984 till the end of 2005, 355 entrepreneurs established 280 knowledge-based firms (sometimes a firm got started with 2 or 3 entrepreneurs) using the help of the TOP-programme. The evaluation of the TOP-programme medio 2000 showed that 75% of the companies established through the TOP-programme still exist, only 22% stopped their activities. These existing companies offer, on average, 8.7 jobs.



INNOVATIVE ENTREPRENEURSHIP EDUCATION – JUNIOR ENTERPRISES AT UNIVERSITIES

Jonathan Nowak, JADE European Confederation of Junior Enterprises

What is JADE?

“Exchanging views with students working in a Junior Enterprise is always enlightening, as one is impressed by the enthusiasm, innovation and creativity that these activities help to unlock in young people.”
José Manuel Barroso

“JADE is promoting the Junior Enterprise concept to third parties, ensuring constant quality of its members and offering a platform for knowledge transfer. We provide extensive support and coordination to our international network in order to foster the entrepreneurial spirit among students during their higher education.”
JADE Mission

JADE is a student-run, pan-European network representing more than 20 000 young entrepreneurs in 225 local Junior Enterprises. Together with the affiliated Junior Enterprise Network in Brazil and several contacts to student consulting groups in non-member countries, the JADE Network is the largest network of entrepreneurial students in the world.

The Junior Enterprise concept

The European Commission recognises the Junior Enterprise concept (entirely student-run consulting companies) as one of the best practices in the field of entrepreneurial education and an aide to foster entrepreneurial mindsets among young people, and importantly as a basic facility for a more entrepreneurial society.

A Junior Enterprise is a small- to medium sized enterprise entirely managed by students and related to their field of studies. The students offer different services on a project base, e.g. market researches, business plans, IT consulting, or the organisation of job fairs. They experience unique learning opportunities through these projects on the one side, and the management of enterprises on the other. Therefore, our students develop professionalism, and experience entrepreneurship at an early stage. They distinguish themselves through soft skills such as entrepreneurial spirit, team-working, creativity, intercultural understanding, work experience, and professional career progress to date.

Project work: designing a new business strategy for managing growth

Between April and July 2006, a Delta team designed a new business strategy for managing growth; the client was Dockwise Yacht Transport (DYT), the world-leading company for the maritime transports of yachts. The growth strategy's aim was to increase DYT's annual net profit by several million USD by 2012.

The project strategy followed a three-step approach which composed of: *Market and Competitors Analysis*, *Business Case Modelling* and a *Business Plan*. For each phase of the project, clear deliverables were defined.



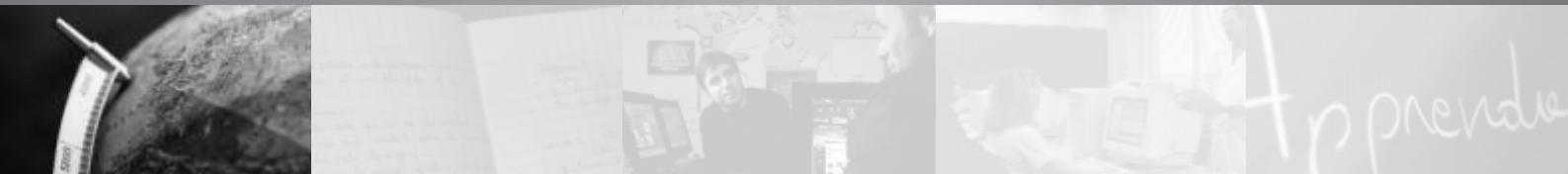
AN INTEGRATED APPROACH TO ENTREPRENEURSHIP EDUCATION

Jon Erik Svendsen, BI Norwegian School of Management, Norway

Many students have started their own companies, either during or after their studies at the Norwegian School of Management BI. We have developed and offered Entrepreneurship Education in different forms and at different levels during the past ten years. Our philosophy is to offer research-based education with high academic standards in a manner practitioners find useful. The portfolio of Entrepreneurship Education includes everything from single courses in setting up your own business to a specialized Bachelor in Entrepreneurship offering all the dimensions of setting up new businesses.

The latest Entrepreneurship Programme at BI is the Bachelor in Entrepreneurship. The BE Programme Structure allows students to establish and develop their own company as part of the programme, and the students develop their own network of central actors. The integrated approach to Entrepreneurship Education is enhanced by the Centre for Entrepreneurship's ability to provide an active network, thus ensuring students needed help from advisors, incubators, venture companies etc.

The Entrepreneurship Education is based on Active Participant Learning, meeting with actors in the field and practical learning by doing when the students develop a real company. For those being at an earlier stage of developing themselves as entrepreneurs, the integrated approach involves possibilities to participate in Business Plan competitions, Youth Enterprise activities, or other practical activities enhancing learning by practical assignments. The students are systematically introduced to investors and other actors valuable to entrepreneurs. This is done partly in the classroom, and partly by visiting the actors in their own environment. The students have also experienced how entrepreneurs meet and discuss with consultants and investors when a Connect Springboard® was presented in the classroom with the entire class sitting ringside. The students have also experienced Real Time Live Cases when the entrepreneurs develop business plans together with the class, for instance before the company was to seek refinancing.



WORKSHOP CONCLUSIONS

Rapporteur: Karen Wilson, European Foundation for Entrepreneurship Research

I. Key Conclusions

The workshop on higher education provided many examples of good practice and innovative approaches in entrepreneurship education across Europe. The presentations and discussions highlighted six main conclusions, which are discussed below.

1. Clarifying the outcomes we seek from higher education

Greater clarity is needed regarding the purpose and goals of entrepreneurship education. These should be based on a broadly defined set of outcomes, not only on a narrow measurement of the number of start ups created from universities. Entrepreneurship education is about developing attitudes, behaviors and capacities at the individual level. It is also about the application of those skills and attitudes, which can take many forms during an individual's career, creating a range of long term benefits to society and the economy. Developing a broader framework for assessing entrepreneurship education is therefore necessary.

2. Building effective entrepreneurship education

In terms of the content or curricula, it is important to take the local context into account as well as the level and background of the students. Opportunities should be made available to students at all levels and from all disciplines across the campus to take entrepreneurship. In Europe, the majority of entrepreneurship courses are offered in business schools. Entrepreneurship needs to be expanded across the campus, particularly to the technology and science departments where many innovative ideas and companies originate.

In terms of delivery, a greater emphasis is needed on experiential and action learning. There are numerous pedagogies which can be utilized including case studies, team projects, and activities with entrepreneurs. Using active learning methods is more complex than traditional teaching methods. It requires engaging students' feelings and emotions in the learning process. Educators/facilitators therefore must be able to create an open environment of trust in which students develop the necessary confidence to take risks. The proper incentives, assessment, rewards and recognition must be put in place to encourage educators to try these approaches.

3. Developing effective educators

It is vital to create a critical mass of entrepreneurship educators able to create the right learning experiences for students. Growing the base of experienced educators not only means providing the necessary training and education but also requires expanding the definition of "educators" beyond professors to include entrepreneurs, alumni and even students.

Greater mobility and exchange of experience is needed in Europe, not only between universities but also between academia and the business world. Programs need to be developed that allow educators to spend a significant amount of time at other institutions and/or in the private sector to truly engage, learn and develop. Europe needs more entrepreneurial learning models and greater sharing of knowledge and good practice across sectors and national borders.

4. Reshaping the institutional paradigm

Institutional culture, practice and policies often get in the way of developing an entrepreneurial spirit and environment within universities. Entrepreneurship champions play critical roles within the universities but there must also be a strong commitment from the university leadership. Traditionally universities have been focused on ensuring students can secure future employment. Today, universities must prepare students to work in a dynamic, rapidly changing entrepreneurial and global environment. This requires a complete paradigm shift for the entire university.



5. Integrating entrepreneurs/professionals in curricula design and delivery

Active and learning-by-doing methods integrate elements of practice into the learning process. This highlights the importance of actively engaging entrepreneurs and other professionals in both course design and delivery. These individuals serve as role models, particularly if they are alumni of the school, as well as coaches and mentors. They also enhance entrepreneurial spirit within the university as well as create stronger links between the university and the local community.

6. Securing public support/interventions

It is clear that public interventions have affected the behavior of universities and faculty, increasing the focus on entrepreneurship education. The field of entrepreneurship education is still relatively young in Europe and it is therefore important and necessary that this support is continued until entrepreneurship is embedded in a sustainable manner in universities across Europe. Efforts to communicate with policy makers about the need, benefits and possible actions to take to encourage and support entrepreneurship education should be increased.

II. Recommendations for Action

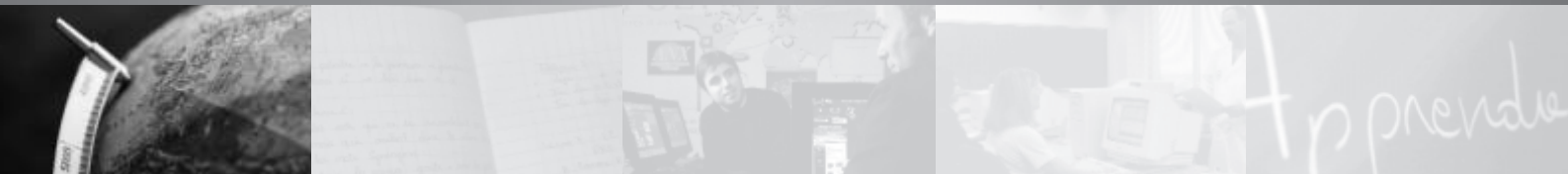
There is a role for public interventions at the EU, national, regional and local levels, for embedding entrepreneurship support within a coherent framework. There is also clearly a role and responsibility for Higher Education Institutions (HEIs). These initiatives are often led by individual educators and other champions but a commitment is also needed from the highest levels of the universities.

1. Recommended actions for governments

1. Support training programs of educators (professors, practitioners, students)
2. Provide support for European-wide mobility and exchanges of educators
3. Improve the resource base
 - ➔ Best practices models
 - ➔ European/local entrepreneurship case studies
4. Reassessment of components of the Bologna Protocol
 - ➔ Recognition and acceptance of teaching by practitioners
 - ➔ Undergraduate education to recognize entrepreneurial career paths
5. Create a broad framework of outcomes and measures

2. Recommended Actions for HEIs

1. Develop shared framework of desired outcomes of entrepreneurship education
 - ➔ Developing individual capabilities, attitudes, mindsets
 - ➔ Encouraging application of those capabilities
 - ➔ Contributing to economy/society
2. All faculties/disciplines should develop opportunities for students at every level to experience entrepreneurship
3. Engage university leaders in actions to gain their commitment to reshaping the institutional paradigm
4. Broaden base of entrepreneurship educators, develop appropriate incentives and celebrate successes
5. Engage and exchange with the business community



WORKSHOP 4: MINI-COMPANIES AND STUDENTS' ACTIVITIES BASED ON PROJECT WORK

The Workshop addressed programmes whereby students run mini-companies (real or virtual) at school or university, and other forms of students' activities based on project work. The discussion focussed particularly on how to promote a wider use of these programmes, also taking into account time and organisation issues, and how to ensure their integration into the official school programme. Entrepreneurship activities for socially and economically disadvantaged young people were also addressed.

The following good practice examples were presented:

- ➔ The Mini-enterprise in the class room, Mr. Michel Brüll, Les Jeunes Entreprises asbl, Belgium.
- ➔ "School and Entrepreneurship", Ms. Christina Diegelmann, Ministry of Economic Affairs Baden-Württemberg, Germany.
- ➔ Entrepreneurship for young people at risk of social exclusion, Ms. Lena Bondue, NFTE - Network for Training Entrepreneurship.
- ➔ Summer-entrepreneur in the county of Västernorrland, Ms. Ulla Gredemyr, County of Vasternorrland, Sweden.
- ➔ Practice Firm in Merikoski Vocational Training Centre, Mr. Niko Finnilä, Finnish Practice Enterprises Centre – FINPEC, Finland.

Workshop moderator: Ms. Caroline Jenner (Junior Achievement -Young Enterprise Europe)

Workshop rapporteur: Ms. Ingrid Trenner (KIST Consulting, Austria)



THE MINI-ENTERPRISE IN THE CLASS ROOM

Michel Brüll, Les Jeunes Entreprises asbl, Belgium

In Belgium, it is mainly the catholic network which officially recognises the student company programme as an option within the curriculum in technical and vocational education. As part of the curriculum, activities in school are complemented with extra-time work for the students to organise their business operations (product development, contacts with providers and customers, sales, etc.). This methodology is very much based on the enthusiasm and good will of students and teachers. These activities require from teachers not only special knowledge, but also a change in teaching methodologies. This requires specialised training assumed by some teachers selected by the network for this purpose.

More concretely: the mini-enterprise in the classroom is designed for students at the third stage of technical and vocational education. They take responsibility as a group, for a small sized and short time business, from its setting up (at the beginning of the school year) to its liquidation (at the end of the school year). This is a structure which makes it possible to integrate several courses around a project so that students can get into contact with social and economic reality through simulation. This is a structured project which takes five hours per week and is managed by a team of teachers. Teachers are supported by staff of our non-profit organisation "Les Jeunes Entreprises", who provides supporting documents and guides, organizes seminars, etc. The activity takes place in class within the established curriculum, but is also continued outside the school as a voluntary activity for the pupils. In this "in-class" model, the teacher incorporates the methodology into his/her courses: it makes possible to examine certain matters more into details, compared to an out-of-class and completely voluntary activity.

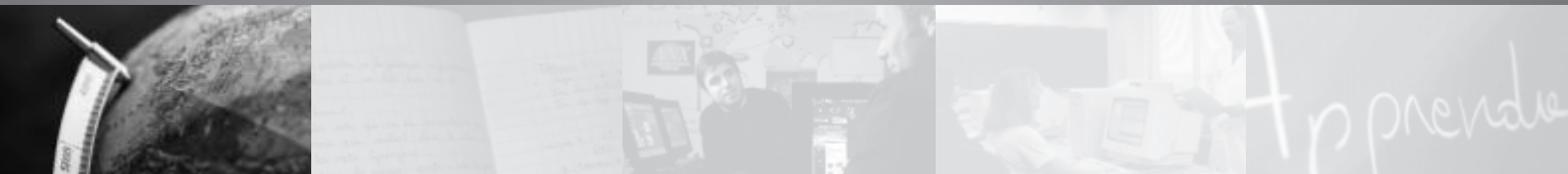
Each mini-company is supported by one or two advisers coming from the business world and who agree to share their experience with the young people. Relations with suppliers and customers provide an opportunity to interact with the real business world out of the school.

"Les Jeunes Entreprises" have evaluation tools at disposal. In addition, teachers prepare data documents and sheets for full assessment. A final exam takes place at the end of the year. If the mini-company activity is considered positively by both teachers and external advisers, the students are granted a certificate of "successful development of the project" by the school. In addition, if the students fulfil a number of conditions set by "Les Jeunes Entreprises", a "young entrepreneur" certificate is issued.

To sum up

The aims of the project are:

1. Learning to learn, on the basis of real life problems;
2. Offering the students prospects and generate motivation;
3. Learning to do business;
4. Extending the cultural background of the students by using self-teaching methods;
5. Learning to anticipate and manage the consequences of one's own decisions and actions;
6. Promoting team work and courses pooling;
7. Acquiring a capacity for synthesis by incorporating in a complex global situation elements of specific and partial knowledge (how to do things, knowledge and know-how being incorporated with each other to produce a knowledge of how to behave);
8. Making the students fully aware of the social and economic environment.



Advantages and Disadvantages of the project

	Advantages	Disadvantages
Students	<ul style="list-style-type: none"> • the students are more aware of and open to the outside world • exchanges with other young people, participating in the same project • the project is a driving force in the learning process : source of motivation and creativity • knowledge learned at school are put into practice • learning by doing • greater ease of presentation and flexibility for the students 	<p>Sometimes:</p> <ul style="list-style-type: none"> • difficulty in working as a team, or being managed by another student • problem with self-involvement
Teachers	<ul style="list-style-type: none"> • teachers see their students from a different angle • useful contacts with Les Jeunes Entreprises • dynamism, mutual assistance, motivation in the teachers team 	<ul style="list-style-type: none"> • difficulty in providing objective assessment • difficulty in managing, controlling and monitoring a group of more than 18 students • difficulty in working as a team • considerable investment in time (weekends, evenings, etc.)



“SCHOOL AND ENTREPRENEURSHIP” ACTIVITY

Christina Diegelmann, Ministry of Economic Affairs Baden-Württemberg, Germany

Baden-Württemberg's Initiative for Start-ups and Business Transfer - ifex is in charge of the design, co-ordination and implementation of the State Government's start-up and business transfer policy and co-operates with more than 1,400 regional support service providers. ifex is the central project agency developing innovative concepts and measures, it is an information turntable informing enterprise starters and intermediaries on support programmes and support services, and it is a support institution giving (financial) support to starters and intermediaries in various programmes.

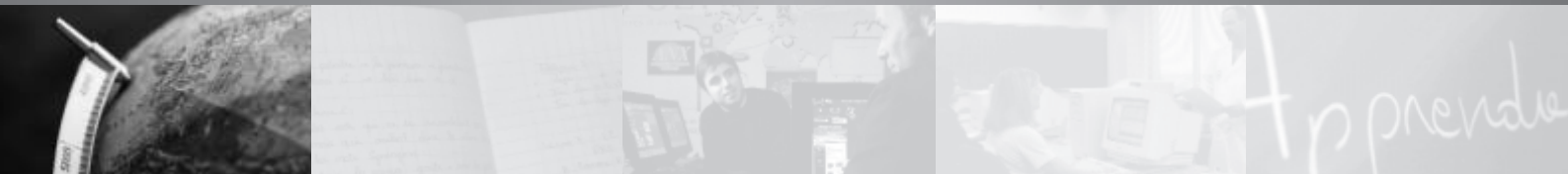
"School and Entrepreneurship" is an important focus of ifex. "School and Entrepreneurship" pursues the goal of creating in Baden-Württemberg's schools a climate where an entrepreneurial mindset can grow. The aim is to sensitise teachers and students for entrepreneurship and business start-up, to strengthen the understanding of economic processes and to bridge the gap between theory and practice. The measures comprise different levels of activity in order to offer a wide range of instruments, from which schools can choose according to their needs:

- ➔ Sensitising pupils, teachers, parents and sponsors, e.g. through a campaign „Entrepreneurs into School“ or trade fair participation
- ➔ Training of teachers, e.g. through development of textbooks and training material, further training of teacher and individual advice.
- ➔ Training of students, e.g. through a region wide business game competition, entrepreneurial summer camps and project weeks.
- ➔ Implementation of mini companies, e.g. through practical advice to teachers and students on how to set up their project and to develop their markets, platform for exchange (e.g. fairs, internet platform, student excursions) and loans of the State Support Bank to mini companies (to train co-operation with banks).

Since 2002, the school and entrepreneurship activity have reached a great number of actors. Each year, 160 secondary schools with 260 teams and 1,500 students are involved in the business game PriManager. At present more than 400 students, junior and practice companies exist all over Baden-Württemberg. More than 1,800 teachers have been trained since 2003 and 70% of all public secondary schools in the region have been reached.

An important lesson learned was to involve the school administration and teachers before starting any activity. Successful projects have to be imbedded in and backed by curricula and accompanied by the supporting agency. In order to create sustainability, it is important to involve regional stakeholders. The experience showed that local companies, banks and politicians like school projects and attracting sponsors is not too difficult. Support agencies should try to offer a diverse range of options for schools. Schools are different and not all schools can implement a mini company. It is also suggested to run mini companies only for a limited time and restart a new company to involve more students in the start-up phase.

For the future, ifex plans to expand its activity to primary schools and to initiate European co-operation to share with other regions the experience.



ENTREPRENEURSHIP FOR YOUNG PEOPLE AT RISK OF SOCIAL EXCLUSION

Lena Bondue, NFTE - Network for Training Entrepreneurship

NFTE Belgium aims at social inclusion through professional integration. Professional integration can be achieved by becoming an employee or becoming a business starter and owner.

Our target group are disadvantaged young people and young adults. We offer them entrepreneurship education and coaching for those you start a business.

The education program consists of 60-hour courses in which participants develop their own virtual business and prepare a business plan. The course is our vehicle to boost entrepreneurial attitudes and knowledge of business and business environment.

We adapted the curriculum and concept to the needs of our target group and we build an award-winning curriculum that do extremely well with its structured and simple approach. The concept is guided by principles, such as learning by doing, interactivity and practical hands on experience. The big unique advantage is that NFTE had employee involvement from companies imbedded in its concept. In NFTE Belgium trainers are businesspeople who still run or who sold their business. In other European countries where NFTE is active, trainers can be teachers, but corporate and employee involvement is required.



SUMMER-ENTREPRENEUR IN THE COUNTY OF VÄSTERNORRLAND

Ulla Gredemyr, County of Vasternorrland, Sweden

With the summer entrepreneur programme your organisation can provide young people with unique opportunities to develop their entrepreneurship and enterprising skills, create their own summer jobs, and earn money using their own ideas and initiatives. The concept is well developed and based on the experience of several hundred summer entrepreneurs. It provides your organisation and young people involved with a flying start by using tools and an approach that say: You can do it! Make the most of yourself, heighten your self-awareness, and develop your creativity. The concept contains:

Programme licence

The organizer is issued a programme licence. The licence grants access to marketing materials and space, programme presentations, background material, concept tools and certain other support which result in a shorter takeoff run.

Advisor/coach training and certification

You will be given the opportunity to educate your advisors for the Summer Entrepreneur programme. Moreover, the advisor training course is also a much-appreciated source of inspiration for anyone working with entrepreneurship.

Programme manual

Certified advisors receive a programme manual which serves to support work with the programme.

Promotional material

Certified advisors, along with the licensed local organizer, have access to promotional material in order to conduct the programme under the name Summer Entrepreneur™.

Support

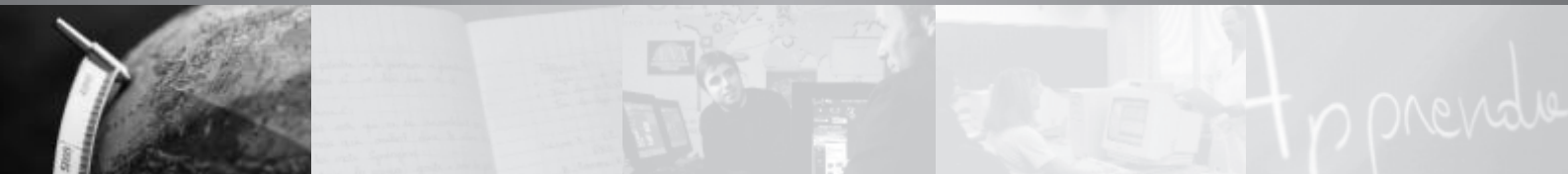
Involvement in an enthusiastic network of current organizers.

Based on huge experience

The original programme is developed by Open for Business (OFB) in the county of Vasternorrland, Sweden, and has been nurtured by a number of stakeholders at the initiative of the County Administrative Board. Since the beginning of 2000, OFB has delivered workshops, seminars, activities and programmes for more than 100,000 participants from the local community: schools, teachers, unemployed, enterprises etc.

Now available

During 2005 the programme was conceptualised in order to give other organisations a “quick start” and access to this successful programme and to give more young people this opportunity. Last summer the concept was used by 12 other local and public organisations in Sweden. More than 40 skilled advisors/coaches from South to North were trained and certified for making use in their local community and 150 Summer entrepreneurs put life into their business ideas.



PRACTICE FIRM IN MERIKOSKI VOCATIONAL TRAINING CENTRE

Niko Finnilä, Finnish Practice Enterprises Centre – FINPEC, Finland

What is a Practice Firm

A practice firm is a virtual company that runs like a "real" business modelling the business procedures, products and services of a "real" firm. Each practice firm conducts "real" business with other practice firms in compliance with commercial business procedures in the practice firm's worldwide economic environment. A practice firm is a company set up by students/trainees with the assistance of trainers to model commercial activities.

Practice Firms in Merikoski Vocational Training Centre

Earlier, practice firms were used for structuring practice firm studies on existing curriculum for business studies. Change in the educational sector and the community in general requires intensifying teaching and learning, and to bring in more entrepreneurship and practice in studies; hence the approach to studies was turned around.

The Merikoski Vocational Training Centre started to plan the curriculum on the basis of a business plan of a practice firm. They managed to accommodate studies and courses to supplement the structure and timing of a business plan, thus curriculum was being planned inside the business plan, not the other way round.

This new approach to planning of studies allows integrating subjects in a practical way and makes studying more organised and efficient. Theory will be taken into practice immediately from theory lessons to the practice firms and business plans. The curriculum follows the business plan during the three-year degree programme in all aspects, such as the timing of courses, course structure, theme penetration and subject integration.

Benefits

Benefits for students are e.g. integrating theory into practice, real business contacts, learning by doing, problem based learning, professional-, technological- and social skills achieved, comprehensive knowledge of business and entrepreneurship, work experience.

Benefits for schools and companies are e.g. the integration of theory and practice, delivery of entrepreneurship attitude, updating teachers' skills, co-operation with local companies, innovative and stimulating learning environment, co-operation with local schools, well trained workforce, company profile, social status, development of education, etc...



WORKSHOP CONCLUSIONS

Rapporteur: Ingrid Trenner, KIST Consulting, Austria

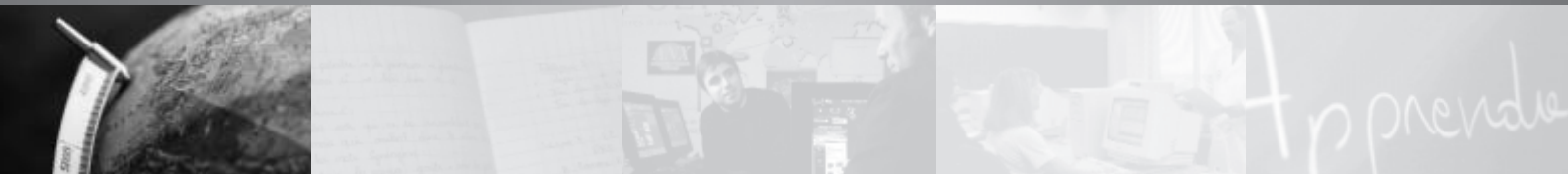
Our actors come from NGO's and Government agencies and business. The discussions centered around how to “stay” Entrepreneurship, how to continue to add value.

The recommendations focused on:

- ➔ Roles of various sectors (NGO's, Government, Business, etc.)
- ➔ Importance of flexibility when implementing the programmes in the curriculum
- ➔ Importance of guidance and training of teachers and students – clear and well structured approach
- ➔ Importance of providing lots of support to Mini-Company Schemes – building networks (regional, national, European)

Recommendations

1. Long term funding: There should be access to long term funding for mini-companies schemes (European and National level)
2. Governments should play the role of providing support and endorsement at all levels for mini company schemes and networks (thematic networks, etc) providing these schemes
3. Entrepreneurship education should be a core competence in teacher training (the teacher learns to play the role of coach and mentor rather than traditional educator)
4. Entrepreneurship should be built into the curriculum but content and participation should be flexible
5. There should be more evaluation and research on the long term economic impact of mini-company schemes
6. There should be a well coordinated Pan-European awareness-campaign that reaches target groups not normally pre-disposed to entrepreneurship-training
7. Mentoring or coaching from business-people and or people with business experience should be a basic element in all entrepreneurship-training
8. There should be a clear and transparent framework (legal and educational) to facilitate the operation of mini-companies
9. The content and methodology of mini-company-schemes should make every effort to promote creativity “just do it” attitudes among young people and ensure that entrepreneurship is understood in its broadest sense (not just about running a business)
10. There should be a database of best practices



WORKSHOP 5: FOSTERING QUALITY AND IMPACT ASSESSMENT

The Workshop explored how to evaluate the quality of programmes, and how to assess their impact in terms of creating more entrepreneurial mindsets. Also the problem of making an inventory of all existing programmes and activities was addressed, as quantitative data both at national and European level are still largely incomplete.

The following good practice examples were presented:

- ➔ Survey "What happened later", Mr. Jarle Tømmerbakke, JA-YE Norway, Norway.
- ➔ EUROPEN quality certificates: the evaluation of practice firms, Ms. Suzana Temkov, EUROPEN Worldwide Practice Firms Network.
- ➔ OPPE, the French good practice to promote entrepreneurial spirit, Ms. Catherine Léger-Jarniou, Paris Dauphine University, France.
- ➔ Business@school: fostering entrepreneurial thinking at high-schools , Ms. Babette Claas, Boston Consulting Group, Germany.
- ➔ "Raising the bar – JADE Alumni Career survey", Mr. Johannes Weissmann, JADE European Confederation of Junior Enterprises

Workshop moderator: Mr. Paul Skehan (Eurochambres)

Workshop rapporteur: Mr. Hamid Bouchiki (ESSEC Business School, France)



SURVEY “WHAT HAPPENED LATER”

Jarle Tømmerbakke, JA-YE Norway, Norway

The survey: “What happened later” is done twice in Norway among former students (back to 1990) in the JA-YE Company Program in Upper Secondary Schools. The surveys is done by North-Trøndelag Research Institute in 2003 and 2005

More than 11.000 young students establish their own mini-company related to the upper secondary school every year in Norway. Experience from Sweden shows that more than 20% of the youths who have participated in the company program in school, establish their own company later in life. In the light of the numbers from Sweden, JA-YE Norway wanted to make an evaluation among Norwegian youth.

Results shows that the start up rate in the study in 2005 is 16,6 % due to 9,7 % in the 2002-study. This shows an increase of over 50 %. For the age group 29 years and older the start up rate is 26,6% due to 19,6% in the 2002-study and 20 % in a similar Swedish study from 1998. The start up rate in Norway is for comparison 7,5 % in 2003. (Kolvereid og Alsos 2003). This shows that getting practical experience in establishing and running a company when you are young increases the ability and interest in establishing your own company considerably.

30,8 % carries on with the same kind of idea as they had in their mini-company in school, and 62,3 % of the established enterprises is still in operation.

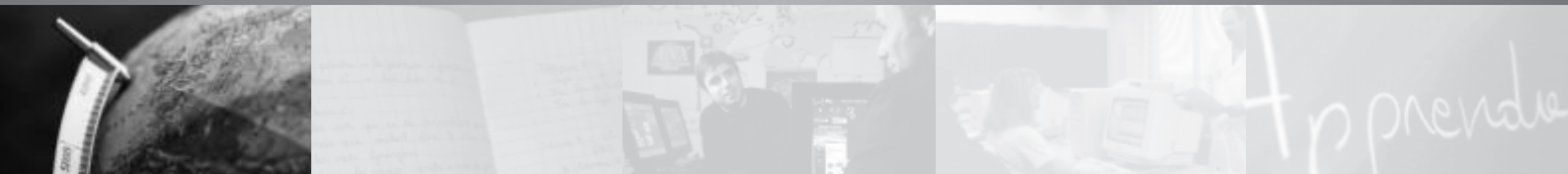
The start up rate seems to increase with the age of the people. But, in this study, the age group 21 to 24 years shows a larger start up rate than the age group 25 to 28 year.

80,6 % of the teachers finds it positive to teach the company program, and a still larger part wish to carry on with this kind of teaching.

The result shows that many of the teachers who teach youth enterprise have another work experience than teaching. About 20,4 % of the teachers has a background as self employed. Out of these does 51,9 % have experience from private enterprises and 14, 4 % experience from other public services. Experience from the private sector seems to be a suitable and special experience for teaching youth enterprises.

The study shows that the teachers find it professional and pedagogic demanding to teach youth enterprises. There are also many teachers who answer that teaching this way creates a better collaboration between the pupils, which also will affect the pedagogic arrangement.

We are now able to present also a new study done in October 2006 on what happened later for students in the Graduate program – mini companies in Universities.



EUROPEN QUALITY CERTIFICATES: THE EVALUATION OF PRACTICE FIRMS

Suzana Temkov, EUROPEN Worldwide Practice Firms Network

EUROPEN is the worldwide network of practice firms with over 5.500 practice firms in more than 42 countries. A practice firm is a virtual company that runs like a "real" business silhouetting a "real" firm's business procedures, products and services. Each practice firm trades with other practice firms, following commercial business procedures in the practice firm's worldwide economic environment. The practice firms buy and sell all different kinds of products and services and trade with other practice firms in the network in Europe, Canada, USA, South America, Asia and Australia. Trainees quickly develop skills in identifying potential clients for their business, promoting their products and organising their work efficiently. Many practice firms have a mentor country company (real company) that assists them by giving commercial support in the running of the business, in line with the mentor company's products and policies. Central Offices support the practice firms by offering some of the commercial services., which are expected to be available to the business world (e.g. bank, tax office, labour office, customs office, utilities..)

Target groups of practice firms are: pupils in business schools, high school students, college and university students, unemployed people, returnees to work, employees in "real" companies, other disaffected persons, people wishing to set up their own business, people with disabilities, future employees being assessed for a job, prisoners.

Training institutions from Austria, Denmark, Finland, France, Germany, Great Britain, Italy, Netherlands, Spain and Sweden participated in a Leonardo project co-ordinated by EUROPEN between 2001 and 2003, with the objective to develop minimum quality certificates for practice firms and practice firm trainees. In order to determine the minimum standards for the practice firms network as a whole, the partners questioned the following target groups: the institutions in which the practice firms operate; the trainers working in the practice firms; the trainees being trained in the practice firms: the ex-trainees who have been trained within the practice firms and real companies. Research was also undertaken to identify skills shortages in all partners' countries. By questioning companies to find out about their skill needs, by highlighting basic skill shortages in training and development published by Governmental Departments, Employers, Chambers of Commerce and other National and European institutions and comparing them to the skills trainees obtain in practice firms it was ensured that practice firms are and will be training staff to meet the needs of employers.

Practice firms and its trainees belonging to EUROPEN can nowadays obtain two kinds of bilingual quality certificates if they fulfil the defined quality criteria. One is a minimum quality certificate for practice firms and the other one is a minimum quality certificate for practice firm trainees. 14 European countries are already using these quality certificates.

Added Value of the Certificates:

- Meet needs of labour market
- Enhance employment + career advancement + increased mobility of labour
- The motivation to reach higher competence levels for students + trainers
- The sharing of minimum quality standards among European countries
- Standardised assessment and verification of competencies and skills
- A target group skill competency recognition
- New candidate selection tool for employers
- Recognise the effective, efficient, reliable methodological environment in which the trainees are being trained
- Ensure and increase quality of training
- Added value tool to be incorporated in students curriculum vitae demonstrating students life-long learning - practical experience
- Adding international dimension to education – employers can recruit internationally



OPPE, THE FRENCH GOOD PRACTICE TO PROMOTE ENTREPRENEURIAL SPIRIT

Catherine Léger-Jarniou, Paris Dauphine University, France

The OPPE – Observatory of Pedagogical Practices in Entrepreneurship has been created in March 2001. The steering committee is composed by ministries of research, education, industry and SME, APCE, « Académie de l'entrepreneuriat », representatives from universities & schools and the DIESE Association. A large contribution of professors specialised in entrepreneurship as « experts » is a tradition since the beginning.

Missions

- ➔ Promote the entrepreneurial spirit in education
- ➔ Offer a data base of all education actions in entrepreneurship in secondary and higher education (universities, engineering and management schools)

Realisations

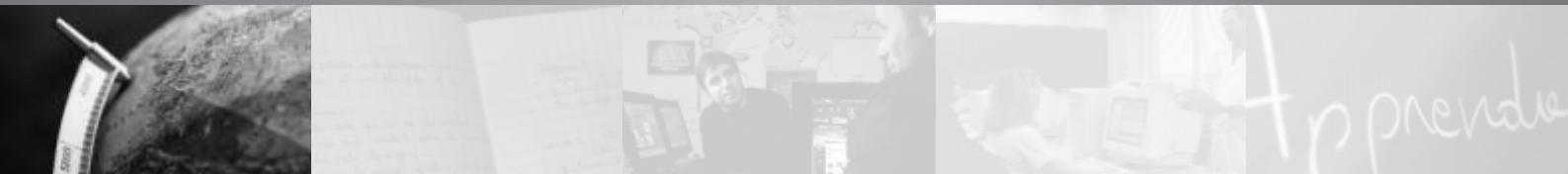
1. On-line data base, daily Letter from APCE, Annual OPPE Conference in order to develop and initiate exchanges between professors, institutions and support structures for start-up. (Networking with Free, Belgium and OFQ, Québec).
2. Inventory of all entrepreneurship actions in France using an on-line questionnaire (www.entrepreneuriat.net):
 - ➔ 197 in higher education
 - ➔ 84 in secondary degree
 - ➔ 14 “collective actions”
 - ➔ 1 “Maison de l'entrepreneuriat”
3. Research and analysis: 220 academic references are available on the website plus 8 specific reports concerning actions by type of institution and 4 specific research on students' entrepreneurial intention

Future realisations

1. Increase the promotion of the « learning tools » for professors in secondary and higher education. For this purpose a national contest was launched in June 2006 and results will announced during the OPPE annual Conference in December 2006
2. Updating and extension of the inventory
3. New inventory of students' reports and works
4. Daily promotion of the OPPE's activities (APCE daily)
5. More academic references to be available on the website
6. More interviews of professors, students to be available on the website

Key factors

- ➔ Real willingness of the pioneers
- ➔ Small team with support of involved ministries
- ➔ Networking
- ➔ Involvement of an entrepreneurship specialist at APCE
- ➔ Involvement of professors in entrepreneurship as “experts”



BUSINESS@SCHOOL: FOSTERING ENTREPRENEURIAL THINKING AT HIGH-SCHOOLS

Babette Claas, Boston Consulting Group, Germany

The aim of business@school is to bring business to life for students at schools in Germany, Austria, Italy, Switzerland, and Singapore. Roughly 390 volunteers (from BCG and 19 other companies) adopt a school every year and coach a total of 1,800 students through the program over the course of one school year. To ensure quality, current and future interested schools must apply to participate. A continuous flow of information between the business@school project office and project participants (students, teachers, and coaches) is also a source of numerous ideas.

Over the last eight years, business@school has given over 6,500 young people from 250 schools firsthand experience with business and enabled them to practice key skills. The initiative provides numerous opportunities to learn in a project-based context, encouraging students to work independently and serving as an alternative to teacher-centered instruction at schools. Students retain what they learn during project work because they conceive and develop content on their own in group work. Other than business basics, participating students learn skills that go far beyond what regular school education generally has to offer.

Project success documented by survey-based evaluation

How do former business@school participants judge the project? To evaluate its activities, business@school conducts surveys regularly. At the end of each project year, student participants and project-leader teachers are surveyed with an online questionnaire. Also once a year, participants from previous years are surveyed on the significance of business@school participation for their further education and careers.

These surveys show that eight of ten business@school participants have a better grasp of the abstract concept of "business" after having talked under the auspices of business@school with the owner of the "bakery on the corner," for example, about the challenges of starting one's own business. And every fifth former business@school participant now reads the business section of newspapers.

Seminars close gaps in business knowledge

Another component of the program is business seminars for teachers and coaches. These are offered at the beginning of the project for training and quality assurance purposes. Experience is also shared at a three-day business seminar for teachers and at various workshops with coaches over the course of the school year. One teacher at each participating school may take part in the three-day business seminar, which is led by an experienced trainer. The focus is on business topics that are given scant attention in Germany's standard teacher training, even for economics teachers. Teachers who participate in the business seminar then take over the role of multiplier at their schools, sharing their newly acquired knowledge with colleagues.

Volunteers provide access to real-life know-how

Another form of quality assurance is the involvement of experienced people from the world of business. These volunteers serve as coaches at the participating schools, sharing their expertise and insight on daily business practices. In this way, business@school gives participating students access to real-life business know-how.

“RAISING THE BAR – JADE ALUMNI CAREER SURVEY”

Johannes Weissmann, JADE European Confederation of Junior Enterprises

What is JADE?

JADE is a student-run, pan-European network representing more than 20 000 young entrepreneurs in 225 local non-profit organisations, called Junior Enterprises.

Together with the affiliated Junior Enterprise Network in Brazil and several contacts to student consulting groups in non-member countries, the JADE Network is the largest network of entrepreneurial students in the world.

JADE Alumni Career Survey

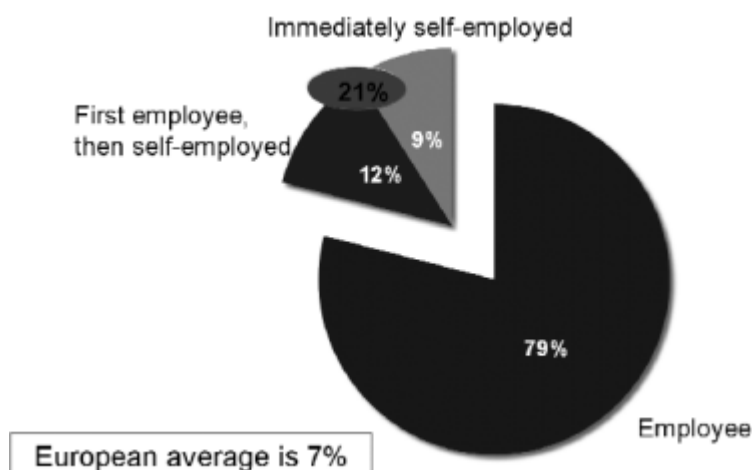
The European Commission recognises the Junior Enterprise concept (entirely student-run consulting companies) as one of the best practices in the field of entrepreneurial education and an aid to foster entrepreneurial mindsets among young people, and importantly as a basic facility for a more entrepreneurial society.

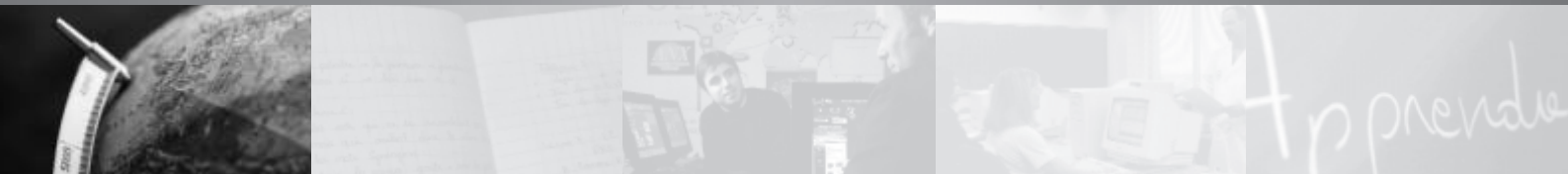
The main purpose of the JADE Alumni Career Survey is to observe and analyze whether JADE Alumni are more entrepreneurial than other graduates,; determine if they have used JADE contacts in order to create their companies and as a tool to monitor their professional career progress to date.

JADE Alumni are significantly more entrepreneurial than the European average

21% of the JADE Alumni are currently running their own company. This is the main fact we point out if we are going to talk about entrepreneurial education. Directly after studies 9% of all JADE Alumni dedicate themselves to an entrepreneurial career. 21% of those interviewed gathered experience as employees before starting their own business.

Compared with the European average of 7%, it proves that the Junior Enterprise concept is an excellent way of teaching young people to be entrepreneurial.





WORKSHOP CONCLUSIONS

Rapporteur: Hamid Bouchiki, ESSEC Business School, France

I. Preamble

The participants in this workshop fully acknowledge the crucial role of quality and impact assessment in the diffusion and development of entrepreneurship education. They are nevertheless, aware that mindless measurement systems and practices can induce counter-productive consequences. A thoughtful approach to measurement ensures that the questions of what to measure, why, for whom, when and how are adequately answered before setting up an impact and quality measurement system.

II. The State of Play

The design of quality and impact assessment systems is challenged by the high complexity of entrepreneurship education in Europe.

First, entrepreneurship education means different things to different people: enterprise culture, new business start-up, creation of new businesses in established firms or the entrepreneurial mindset.

Second, impact and quality assessment and improvement are constrained by poor knowledge of cause-effect relationships. In particular, research has not yet provided satisfactory answers as to what makes people entrepreneurial and how can formal education contribute to the process. Also, it is still difficult to know whether entrepreneurship programs “merely” attract entrepreneurial people or do indeed contribute to making recipients more entrepreneurial.

Third, contrary to advances in other fields of public policy, entrepreneurship, in general, and entrepreneurship education, in particular, still lack an “evaluation culture” that is comparative, independent, multi-stakeholder and time phased.

Finally, and corollary to the observations above, entrepreneurship education lacks quality standards and certification.

To address these issues, participants in the workshops have put forward twelve recommendations.

III. Recommendations

1. Take stock of what exists

The EU should undertake systematic data collection about entrepreneurship education in Europe: target groups, programs, resources (teachers, teaching materials, budgets), cost effectiveness, etc. This ground work shall enable European educators and policy makers to better map out the fields and identify good practices.

2. Encourage networking and information sharing

Member states should encourage the creation of networks of entrepreneurship education stakeholders. To this purpose, they should enable the implementation of common platforms to publicize best practices, services, and results. These platforms must enable information sharing about best practices, obstacles, solutions, evaluation and quality standards. Also, they should enable comparison, cooperation, and competition. The participants in the workshop insist that these platforms are open to cooperation with business.

The French Observatory of Pedagogical Practices in Entrepreneurship (OPPE) is a good example of what can be achieved in this area. The Jade network for Junior Enterprises illustrates a decentralized approach to the same objective. Involving small numbers of students on European campuses, the network enables the sharing of experiences between its members and sharpens their entrepreneurial mindset.



3. Use publicity to promote good practices

Member states should strive to foster quality through competitions, awards, and various public events to praise outstanding programs, teachers, and business partners. To this end, the EU could organize thematic conferences and workshops and encourage member states to do the same.

4. Define common criteria for quality and impact assessment

The EU should bring together a working group of researchers and practitioners of entrepreneurship education to help define indicators and specify typical educational processes. The workshop participants insist that although uniformity might seem desirable, it is not always feasible. Therefore, member states should be allowed to adopt and adapt the recommendations produced through this process.

5. Encourage members to articulate objectives and measurements

Member states can contribute to the development of a measurement and evaluation culture through strategic plans specifying a shared strategic vision, objectives for each educational level, key performance indicators, and evaluation mechanisms.

The EU and member states should encourage greater collaboration between ministries for enterprise and education. Participants in this workshop were impressed by the Norwegian Strategy for Entrepreneurship 2004-08, a document produced in close cooperation between three ministries and containing very specific definitions, targets, programs, resources, and evaluation criteria.

6. Promote quality standards and certification

The EU should take the lead in encouraging and assisting member states in the design of quality certification for programs and teachers/trainers.

The EUROPEN quality certificates are a good source of inspiration.

7. Include entrepreneurship in program accreditation standards

The EU should strive to include entrepreneurship education in accreditation standards across primary, secondary, and tertiary education. To this end, the EU should convince accreditation bodies at European, national, and regional levels of the criticality of entrepreneurship education and provide them with the necessary tools.

8. Encourage and support comparative evaluation

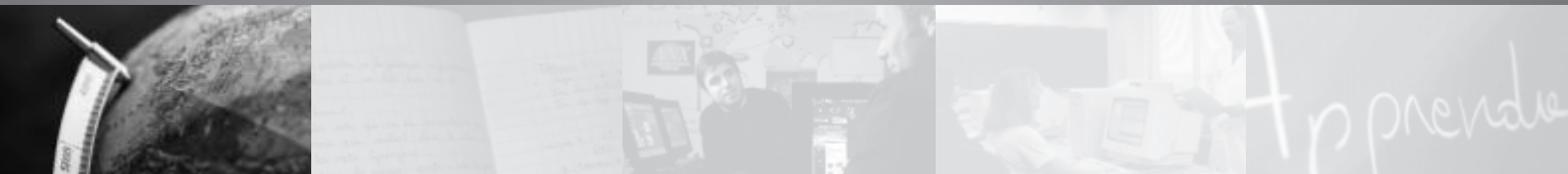
The EU should promote benchmarking: before and after a training program, evaluations using control groups, comparisons of different programs, and cross-border evaluation of equivalent programs.

The Junior Achievement-Young Enterprise program (JA-YE) in Norway, an important instrument in the Norwegian strategic plan, is a good example in this respect and has comparative built-in mechanisms.

9. Encourage multi-stakeholders evaluation

Quality and impact assessment should integrate the views of key stakeholders: learners, educators, deans and headmasters, policy makers, fund providers, employers, and business partners.

The Norwegian JA-YE program is again a good example in this respect, as well as the Business@School initiative in Germany



10. Encourage and support independent evaluation

The EU and member states should consider independent evaluation as an important component of an entrepreneurship program and include it in program budgets.

Here again, the Norwegian JA-YE came up as a good example.

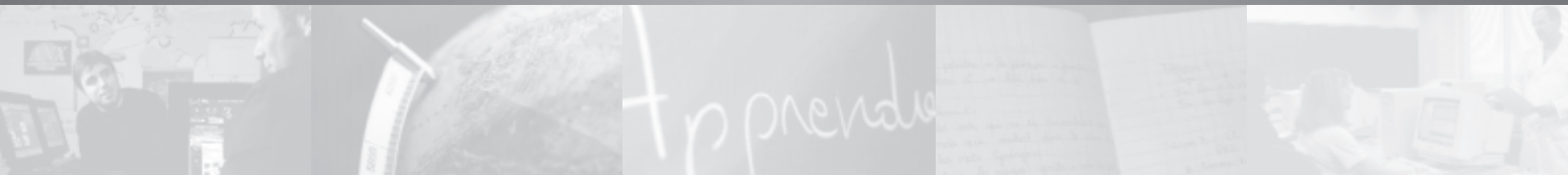
11. Build evaluation systematically into programs

For quality and impact assessment to be possible and to enable continuous improvement, evaluation should be systematically included into programs at the outset. Here again, the workshop participants stress the need for evaluation that is independent, comparative, and reflecting a multi-stakeholders perspective.

Also, evaluation should seek a balance between short term impact measurement (learners satisfaction with a program) with long term “business” impact (people actually creating businesses or behaving entrepreneurially).

12. Tie public funding to evaluation

The participants in the workshop would like policy makers to ponder the potential benefits of tying public funding of program to the specification of a built-in quality and impact assessment and improvement system.



WORKSHOP 6: BRIDGING POLICY MEASURES AND PRACTICE

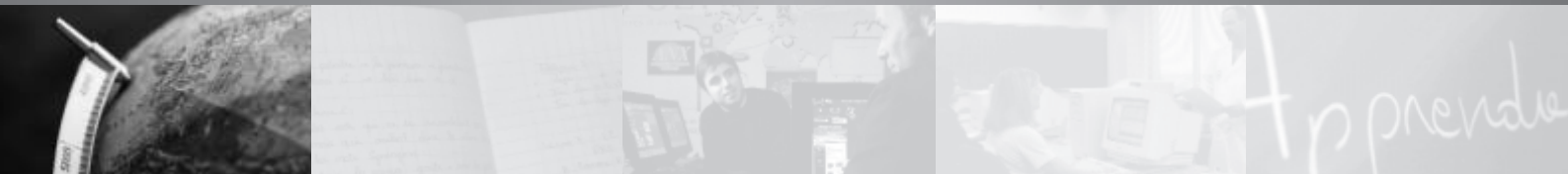
The Workshop discussed how can policy-making best support a systematic approach to entrepreneurship education, so that all young people have the possibility to learn about entrepreneurship. Recommendations included in the recent Commission's Communication on entrepreneurship education were taken into account, with an emphasis on how to ensure a concrete follow-up to these recommendations.

The following good practice examples were presented:

- ➔ Action Programme for Entrepreneurship and Education, Ms. Marjan van Dongen, Ministry of Economic Affairs, the Netherlands.
- ➔ Strategy for economic literacy and entrepreneurship education, Mr. Eugenijus Savicius, Lietuvos Junior Achievement, Lithuania.
- ➔ Strategy for entrepreneurship education, Mr. Jussi Pihkala, Ministry of Education, Finland.
- ➔ "The Stairs to Entrepreneurship", Mr. Stig Hanssen, Entré Entrepreneurial development, County of Gävleborg, Sweden.
- ➔ National annual competition in entrepreneurship, Mr. Kostas Katsogiannos, Special Authority Unit for the Operational Programme in Education, Greece.

Workshop moderator: Mr. Christian Weinberger (European Commission - Directorate General for Enterprise and Industry)

Workshop rapporteur: Ms. Elisa Sainz (Ministry of Industry, Tourism and Trade - Directorate General for SMEs, Spain)



ACTION PROGRAMME FOR ENTREPRENEURSHIP AND EDUCATION

Marjan van Dongen, Ministry of Economic Affairs, the Netherlands

Stimulating and embedding entrepreneurship in education (from primary school to university) is one of the main goals of the Entrepreneurship and Innovation policy of the Dutch government. The action programme Education and Entrepreneurship states a number of stimulating actions towards students, teachers and educational institutions, which are being implemented at the moment.

It appears to be important to support educational institutions during the first few years, and to facilitate them in working out entrepreneurship in education. Already quite a number of good initiatives are known in the Netherlands, but these should be opened up to schools that would also like to start with implementing the theme of entrepreneurship in their institutions. However there is quite a difference in the points of departure for the different sectors of education.

In November 2005 the National Partnership Learning Entrepreneurship (Leren Ondernemen) was set up. The partnership includes employers' organizations, umbrella organizations in education and parties that are actively stimulating entrepreneurship in education with specific means like business plan contests. Together their goal is to join forces to stimulate entrepreneurship in the different sectors of education. SenterNovem, agency of the Ministry of Economic Affairs, is coordinating the project.

The central objective of the partnership is stimulation and wider implementation of initiatives that contribute to connecting entrepreneurship and education. Entrepreneurship is hereby interpreted as the skills and knowledge that are needed to start and run a business. Part of this consists of stimulating an entrepreneurial spirit and pro-activity among young people. The programme has to be inspiring and facilitating to everyone who wishes to do something on this theme in education. The partnership's goal is to generate added value to schools and entrepreneurs.

In 2006 different lines of action were carried out:

1. Entrepreneurship assignments for teachers and students
2. Entrepreneurs in front of the classroom
3. Label for entrepreneurial schools
4. Roadshows in cooperation with schools
5. Local ambassadors
6. Annual award for schools
7. Website as information portal: www.lerenondernemen.nl

In 2007, two subsidy programmes will be created from the annual natural gas revenues. The first programme to start is aimed at Higher Education, stimulating institutions to create Centers of Entrepreneurship. Later next year, a second subsidy will be aimed at stimulating entrepreneurship in Primary and Secondary Education.



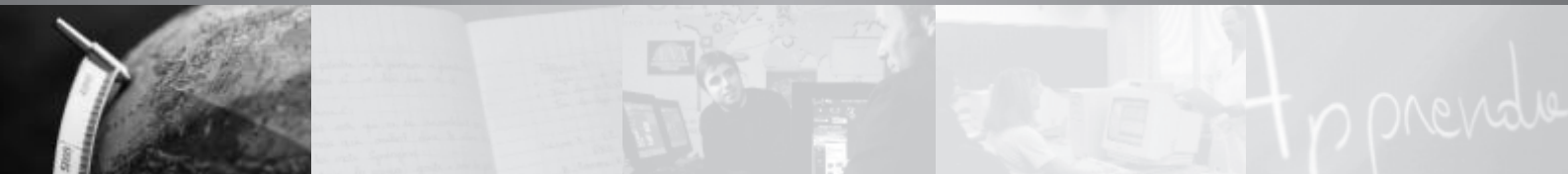
STRATEGY FOR ECONOMIC LITERACY AND ENTREPRENEURSHIP EDUCATION

Eugenijus Savicius, Lietuvos Junior Achievement, Lithuania

Strategy for economic literacy and entrepreneurship education was initially a document prepared by the Ministry of Education. The initial goal of the strategy was to foster economic education by introducing subject of economics into the school curriculum. The implementation process showed that the initial goals should be reviewed and success could be achieved only through a complex solution, by including into the process other institutions and making decisions at the governmental and parliament level. It is clear that the results could be achieved only based on permanent and consistent actions – the main strategic documents contain policies for the long period – up to year 2012. The strategy requires changes at national and international level in education and business.

Strategy documents include action plans in the 4 main focus areas: curriculum, educational materials, human resources, and attitudes towards entrepreneurship education in the education community and public opinion. Human resources and relations with the local business (involving business people into entrepreneurship education) are especially important.

The European Commission plays a very positive and important role by setting guidelines as well as highlighting trends and best practices in the area of entrepreneurship education: national documents are approved faster and their content is more contemporary. Guidelines and examples of best practices allow to save time and benefit from instruments and approaches already tested.



STRATEGY FOR ENTREPRENEURSHIP EDUCATION

Jussi Pihkala, Ministry of Education, Finland

The Finnish entrepreneurship strategy is multi-layered: entrepreneurship policy outlined in the government programme; measures related to the normative and information-based steering in the central government; teachers' initial and continuing education; the development of entrepreneurs' pedagogical knowledge and skills; and a number of development projects. Additionally, the development of entrepreneurship education and training involves extensive and strong networking and the utilisation of different stakeholders' knowledge.

The programme of the current Finnish Government highlights the importance of promoting entrepreneurship at all levels of education. There is a separate Entrepreneurship Policy Programme, which contains entrepreneurship education and training as one element. Relating to this, the Ministry of Education worked with different stakeholders to outline entrepreneurship education in 2004 and prepare an action programme for it. The aim is to enhance business knowledge and use entrepreneurship education and training to enable citizens to set up a business if they so wish. Another aim is to increase the attractiveness of business as a career choice. This knowledge enhancement extends to the whole education system. To this end, measures are being taken to increase education-business interaction and teachers' and guidance counsellors' knowledge about entrepreneurship and to develop learning contents and methods in all education and training.

In 2002 the Ministry of Education appointed a steering group to develop and coordinate entrepreneurship education and training at the national level. It is composed of representatives of 14 different stakeholders and focuses on diffusing information and promoting exchange of information. In addition, the Ministry of Education and the Ministry of Trade and Industry initiated a joint project named "From higher education to business" (2006-2008).

The current basic education core curriculum was adopted gradually from 2003 to 2006. It includes a thematic entity called "participatory citizenship and entrepreneurship". The current upper secondary education core curriculum, adopted in autumn 2005, contains an entity called "active citizenship and entrepreneurship". An entrepreneurship component was also added to the vocational core curricula. Five universities drew up entrepreneurship strategies of their own in late 2005 and the rest are currently preparing their strategies. The polytechnics cooperated in devising a joint strategy in 2006, in which one goal is that in ten years after graduation one in seven polytechnic graduates will have a business of their own.

At regional and local levels, the target is to include entrepreneurship education in local and school curricula and instruction. Some 30% of schools strengthened the status of entrepreneurship education in their new curricula. The regional resource centre system is currently being expanded: there are now four centres, another four forthcoming and the aim is to have one in each region. Activities are also being expanded within Junior Achievement-Young Enterprise Finland (JA-YE Finland) and within the Practice Enterprise system. One current challenge is to develop entrepreneurship education in teachers' initial and continuing education and encourage teachers to take an interest in it. Special attention is also being paid to entrepreneurs' pedagogical knowledge and skills with a view to entrepreneurship education.



“THE STAIRS TO ENTREPRENEURSHIP”

Stig Hanssen, Entré Entrepreneurial development, County of Gävleborg, Sweden

Entré has been working with Enterprise and Entrepreneurship education since 2000, focusing on teachers and educators and aiming to put enterprising students and enterprising teachers together.

Entré is subsidized by the Ministry of Industry, Employment and Communication as a national pilot project in entrepreneurship.

Our work is based on education and method development in the education system from preschool to upper secondary education. We are mainly working on entrepreneurial learning and abilities development, in cooperation with educators.

We know, from our experience, that it is necessary to focus on different abilities when working with small children or young students.

To start the journey of enterprising, young people need courage enough to take some risk and knowledge of their capabilities.

In **preschool** we focus on methods that increase the abilities of self-confidence, self-esteem and self-image. This is, according to us, the ground for entrepreneurship.

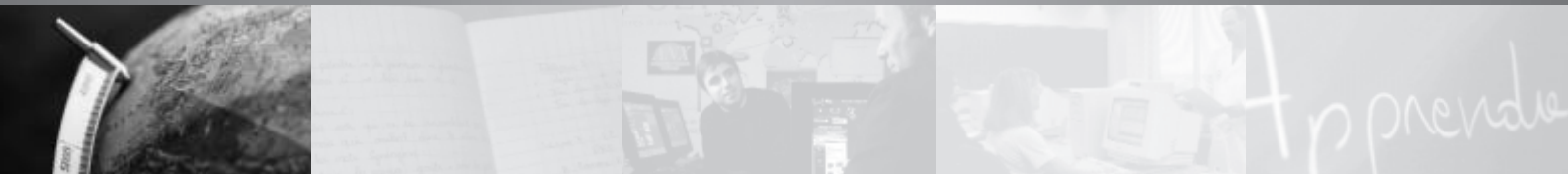
In **primary** and secondary school we focus more on creativity, inventions and problem solving methods, and cooperation between schools and the local business community.

Flexibility is a principle, since each school is free to create methods of enterprise training and learning. Nevertheless, we are connecting everything we do to the national curriculum.

We are also working closely together with Young Enterprise (mini companies) in the region. Young Enterprise in our region has been in a growing phase, and the number of companies represented on the yearly fair has increased from 40 in 2000 to 130 in 2006

Considering that 22 % of the students going through the Young Enterprise project are starting up their on business before the age of 28, working on entrepreneurship education is very important for our 280 000 inhabitant region.

The next step in our work in entrepreneurship education is to start a Teachers Academy of entrepreneurship development together with European partners.



NATIONAL ANNUAL COMPETITION IN ENTREPRENEURSHIP

Kostas Katsogiannos, Special Authority Unit for the Operational Programme in Education, Greece

Students from Higher education institutes and from postsecondary institutes (Vocational education training Centers) – mostly graduates – participate on a voluntary basis, as individuals or teams, and compete with other similar groups in a National competition. The first stage of the competition awards the best business ideas, while the second one awards the best business plans. A Committee consisting of professors, executives from successful market companies, businessmen, representatives from federations of companies, local authorities etc. select the best ideas not only on an educational basis, but also regarding the feasibility of the idea to become a real business.

The whole project is co-funded by the Greek Government and the European Social Fund, under the Operational Programme for Education in Greece (2000-2006). The Greek Ministry for Development, under the Operational Programme for “Competitiveness”, offers a chance to the winners of this competition to receive a subsidy (70% of their business plan’s budget) in order to realize their business idea. Companies also offer prizes to the winners of the competition (computers or money).

Two different Operational Programmes of the 3rd Community Support Framework co-operate in order to promote young entrepreneurship in Greek students.

Responsible organisations

Ministry of Education and Religious Affairs - Managing Authority O.P for Education; Ministry for Development - Managing Authority O.P. for “Competitiveness”.

Participants

Higher Education Institutes, successful business executives, Business Associations, financial and Venture capitalist representatives, local authorities.

Beneficiaries

Students in Higher education from all University departments, students from postsecondary initial Vocational training institutes (IEK).

Factors of success

Representatives from national business organizations involved in the competition procedure from the first stage. Famous entrepreneurs and consultants are invited to inspire the participants and to transfer ideas and good practices in a way to promote and diffuse entrepreneurship culture and behavior in our educational system.

Successful synergy and added value within the O.P for Education (EPEAEK) and O.P “Competitiveness”.

A close and successful cooperation between Ministry for Education and Ministry for Development has been established, not only for the purpose of this competition, but also in the framework of a National planned competition for students in secondary education, regarding competitiveness, entrepreneurship action in education, technical and innovation spirit.



WORKSHOP CONCLUSIONS

Rapporteur: Elisa Sainz, Ministry of Industry, Tourism and Trade - Directorate General for SMEs, Spain

I. Preamble

I would like to start with an introductory remark. In the other five workshops, the topic for discussion was very precise. In our workshop we have been dealing with a purely strategical question: how can the decision makers turn theory into practice where promoting the entrepreneurial spirit is concerned?

First of all, I would like to point out that we are all agreed on one point: education is a key element in the creation of an increasingly entrepreneurial society, but to be really effective we need a genuine agreement between the various Governments, which should develop global strategies.

II. Principal conclusions and recommendations:

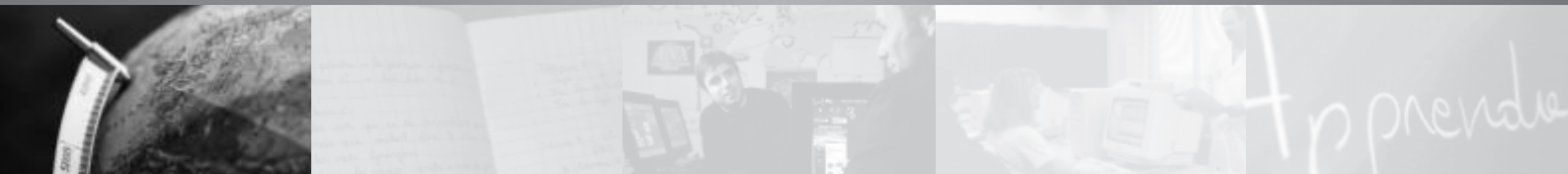
Strategic points

- Nowadays, no one disputes the fact that the entrepreneurial spirit is a driving force for economic growth, progress and wellbeing. Now is **the time for action with the cooperation of all the parties concerned**.
- These parties are many and varied:
 - Public administrations (at European, national, regional and local level);
 - Teachers;
 - Students and schoolchildren;
 - Entrepreneurs and entrepreneurs' associations;
 - Trade unions;
 - The media (press, TV, Internet);
 - Parents.

Clearly, each has a part to play but they will all have to cooperate if a genuine synergy is to be achieved. **Public-private partnerships must be promoted more vigorously**.

The establishment of an **observatory** in which all these parties are represented is another possible recommendation.

- **The regional dimension is very important**. It is necessary, however, to have the requisite material and human resources at regional level in order to be able to influence the world of the entrepreneur.
- While acknowledging the importance of the part to be played by the local and regional dimension in promoting entrepreneurship, it should be pointed out that, in order to be more effective, there must be a **systematic and global strategy at national level for coordinating all the efforts**, particularly bearing in mind that the entrepreneurial spirit concerns a variety of ministries (education, industry, economic affairs, employment etc.).
- **A high level political agreement** would permit swifter progress in the construction of an entrepreneurial society.
- Another key element is **a favourable social climate**. Society in general must be made aware of the importance of the entrepreneur for social progress. This will help promote a positive image of entrepreneurs, who will thus be able to serve as models for young people (via TV, Internet). A representative of the Economic and Social Committee has suggested that there should be a "year of the entrepreneur".



The education system:

- ➔ It is agreed that the **entrepreneurial spirit should be included in curricula** so that all students/pupils have a chance to learn the skills required for this key element.
- ➔ A question that has been much discussed is whether the entrepreneurial spirit should be concentrated in a single subject or included as an interdisciplinary aspect of all the subjects taught ("mainstreaming"). A long discussion led to the following conclusion:
 - ➔ In primary and secondary schools, where the aim is to convey skills, the entrepreneurial spirit should be touched on in all the subjects.
 - ➔ In higher education, in addition to teaching where the student plays an active part in the process, it would be a good idea to include courses specifically geared to gaining a knowledge of the world of business.
- ➔ **Teachers have a crucial role to play in this entire process.** They need training and support for this task. If they are not enterprising and innovative themselves, it will be difficult to instil the entrepreneurial spirit into their pupils.
- ➔ **The importance of the role of entrepreneurs** has been discussed. Entrepreneurs must take part in school activities, telling pupils about their experience. We need models that children and young people can relate to. A book containing stories about young entrepreneurs has been suggested.
- ➔ A need has been identified for setting up sources of finance to support entrepreneurial initiatives.

Finally, and on a personal note, I would like to say that we have not reached any very original conclusions; almost all of these recommendations had already been formulated at national, regional and European level. This conference has been very useful nevertheless. It has enabled us to extend our knowledge and experience, and to realise that the time has come for action. We must persuade our countries and regions to make efforts to promote enterprise and progress.



5. PLENARY SESSION ON 27 OCTOBER 2006

A summary with conclusions and recommendations from each Workshop were presented by the rapporteurs.

→ *Workshop 1 - Entrepreneurship in Primary education: Mr. Volkmar Liebig (ifm - Institut für Fremdsprachen und Management, Germany)*

The Workshop highlighted that a lot of good practice cases exist already in Europe, and acknowledged therefore that that entrepreneurship – with its different elements – should be a topic for primary schools. Workshop's conclusions stressed the need for a common European platform of existing projects and teaching material, to help sharing and dissemination. In fact, a better transfer of experiences is needed, which would benefit all actors involved in developing entrepreneurship education. Also, a better integration of programmes and activities in the established curriculum is fundamental. Finally, there is a need to increase public-private partnerships by involving more the enterprises as part of their corporate social responsibility.

→ *Workshop 2 - Entrepreneurship in Secondary education: Ms. Anna Gethings (AG Services, Ireland)*

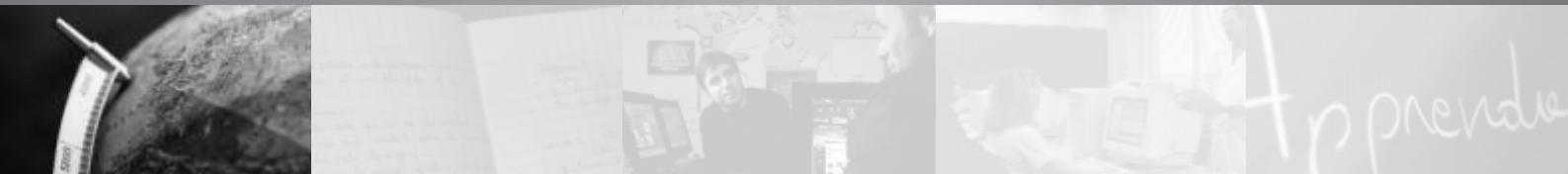
Workshop's conclusions stressed that entrepreneurship should be embedded in curricula. One issue to be further explored remains whether these activities should be compulsory or voluntary, also depending on the diversity of education systems. A key to success is cooperation between different public departments, and in this respect Norway is indicated as a model. The EU should support curricular reforms, and facilitate comparative analysis. Teacher training should be part of the necessary reforms. In this respect, the Scottish case is presented as a complete and innovative model that could be transferred. It is essential to disseminate best practice. A strategic piloting of teacher training on entrepreneurship should be launched, supported by the EU under the Lifelong Learning Programme. In addition, schools themselves should create incentives to enable teachers to teach entrepreneurship, for instance by means of setting up staff development funds. Finally, there is a need for more involvement from enterprises: research should be developed on how employers can be better engaged in school education.

→ *Workshop 3 - Entrepreneurship in Higher Education: Ms. Karen Wilson (European Foundation for Entrepreneurship Research)*

Case presented within this Workshop allowed to highlight a number of critical factors for success in developing entrepreneurship education within universities and technical institutes. Real life experience is key. It is not sufficient to bring entrepreneurs into the classroom: students should be directly involved in enterprise projects. The approach should be student-driven: not teaching to them but mutual inter-action between the educator and the students, involving feeling and emotions. Finally, increasing the rate of start-ups from higher education institutions will be possible only by connecting research with enterprise. Recommendations for policy action (at European and national level) include: to support training for educators (who are not only teachers, but all those involved in education, including entrepreneurs and students themselves); to encourage the mobility of educators across Europe; to better disseminate good practice, and to increase the production of European case studies to be used in the classroom; to review the Bologna process in order to facilitate the development of entrepreneurship education, including by encouraging mobility and recognising the role of educators other than teachers. Finally, a task for the institutions themselves will be to reshape their internal paradigm and to set up incentives for the faculties.

→ *Workshop 4 - Mini-companies and other students' activities based on project work: Ms. Ingrid Trenner (KIST Consulting, Austria)*

This Workshop stressed the important role of NGOs in implementing entrepreneurship education, and the importance of ensuring flexibility of educational establishments. A number of recommendations were made to relevant actors, such as: governments should ensure long term funding for student company activities; entrepreneurship education should be a recognised competence within teachers' training schemes; entrepre-



neurship should be part of the curricula, but contents and participation should remain flexible; mentoring or coaching from people with business experience should be a basic element in all entrepreneurship training; evaluation should be developed at European level on the impact of student mini-companies; awareness campaigns to encourage the use of these instruments should be developed at European level, ensuring that entrepreneurship is understood in its broader sense (not just about running a business); a clear framework should be created by public administrations at national level to remove legal and fiscal obstacles to the activities of student companies; a data base, or a common platform, should be developed at European level with good practice in running mini-companies and enterprise projects.

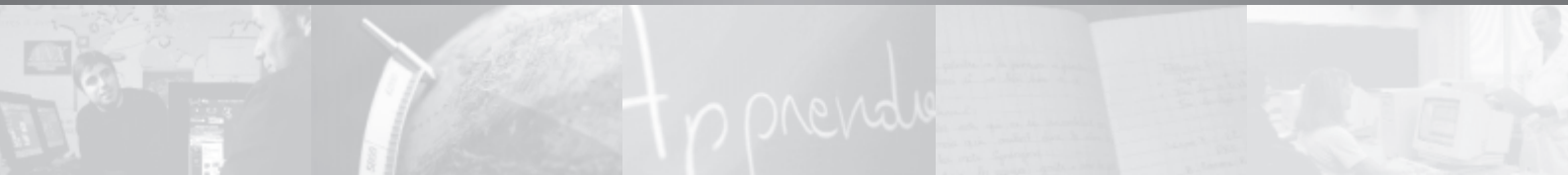
→ *Workshop 5 - Fostering quality and impact assessment: Mr. Hamid Bouchiki (ESSEC Business School, France)*

This Workshop explored the important aspects of quality evaluation and assessment of impact. As regards the evaluation of programmes, it is stressed that the most effective evaluation is independent, i.e. not run by the same organisation that runs the programme. It is then recommended that evaluation be comparative: it should be run before the beginning of the programme and after its conclusion. This type of evaluation, independent and comparative, should be built systematically into all programmes. One possibility to be further explored would be to make public funding conditional to the presence of built-in quality criteria of this type. Finally, the overall level of quality can be improved also through celebration of what works well, for instance by organising awards and competitions. The European Commission should take the lead in this area. As regards the assessment of impact of programmes and activities, it is emphasised that this should correspond to all the objectives of entrepreneurship education (therefore, success should not be measured only in terms of new start-ups created). Unfortunately, not enough research has been so far developed. The EU should bring together a group of researchers in entrepreneurship education to help define indicators and specify typical educational processes. Concerning the third topic of this Workshop, the collection of quantitative data and information, it is suggested that gathering of information should be organised and/or coordinated at the EU level. The importance of information sharing is underlined: Member states should encourage the creation of networks of stakeholders.

→ *Workshop 6 - Bridging policy measures and practice: Ms. Elisa Sainz (Ministry of Industry, Tourism and Trade - Directorate General for SMEs, Spain)*

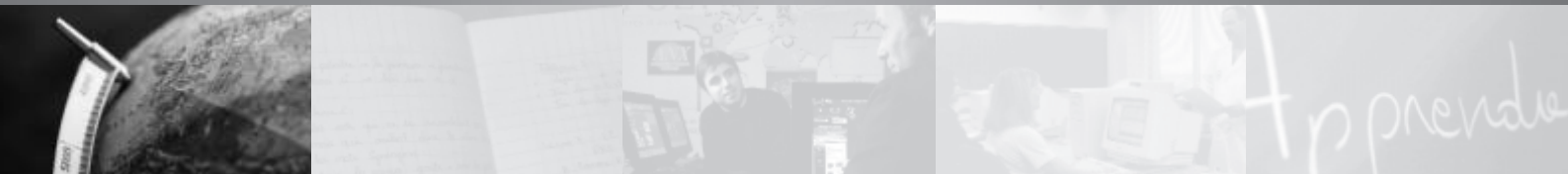
Good practices presented within this Workshop showed that in some countries a national strategy for the promotion of entrepreneurship education does exist. One case presented from Sweden shows that a regional programme can become a national strategy, thanks to financial support from the Ministry of Industry. The importance of the regional dimension is stressed, yet a national strategy is necessary in order to coordinate all the diversified efforts. The Workshop made a number of recommendations for policy actions, among which: to create an observatory at European level where all the different stakeholders involved in entrepreneurship education can be represented (public administrations, businesses, educational establishments, students, etc.); to enhance political support at the high level, taking the Norwegian case a positive example; to promote a more positive image of entrepreneurs, with actions such as the organisation of a Year of Entrepreneurship (as proposed by the European Social and Economic Committee); to integrate entrepreneurship into curricula, either as a horizontal element in all fields of study (particularly in primary and secondary education) or as a subject in its own right (in higher education); to introduce innovative pedagogies into all courses and programmes and at all levels, as a necessary basis for building an entrepreneurial spirit; to assume entrepreneurs as role models for young people: a suggested strategy in this respect is to disseminate within schools a book with success stories of young entrepreneurs.

The Commission reminded to participants that from 2007 the new Community Programme on Lifelong Learning will support projects with a European dimension, aiming to foster entrepreneurial attitudes and skills and to promote links between educational establishments and enterprises. Also, the European Social Fund and the Regional Development Fund will continue to support initiatives at European, national and local level.



An overview was therefore provided of available EU instruments to support entrepreneurship education projects:

- ➔ The new Lifelong Learning Programme, Ms. Maruja Gutierrez, European Commission - Directorate General for Education and Culture.
- ➔ Entrepreneurship education within the European Social Fund (ESF), Ms. Ana Maria Nogueira, European Commission - Directorate General for Employment, Social Affairs and Equal Opportunities.
- ➔ Cohesion policy instruments and entrepreneurship education, Mr. Henry Britton, European Commission - Directorate General for Regional Policy.



THE NEW LIFELONG LEARNING PROGRAMME

Maruja Gutierrez, European Commission - Directorate General for Education and Culture

The new Lifelong Learning Programme, effective from 2007, will be the main tool to support the implementation of Education and Training 2010. Mrs. Maruja Gutierrez, European Commission - Directorate General for Education and Culture, gave an overview about its specific objective which "aims to foster interchange, cooperation and mobility between education and training systems within the Community so that they become a world quality reference." (COM(2006)236 final)

The overview shows that the actions will not change radically. The overall objectives remain unchanged. In Grundtvig for example, all current actions like 'Learning Partnerships', 'Multilateral Cooperation' 'Projects', 'Individual training grants for adult education staff' and 'Networks' will continue to be funded. Additionally there will be some new actions (individual adult learner mobility, assistantships and innovation projects).

Mrs. Gutierrez explained the structure of the programme, the focus, and gave a brief overview about the new administrative procedures.

She then pointed out that funding possibilities for Entrepreneurship Education can be realized, either for networks in a particular thematic area or sector, addressing a set of key issues or for projects, developing, promoting and disseminating new approaches.



ENTREPRENEURSHIP EDUCATION WITHIN THE EUROPEAN SOCIAL FUND (ESF)

Ana Maria Nogueira, European Commission - Directorate General for Employment, Social Affairs and Equal Opportunities

The European Social Fund's main task is to contribute to the priorities of the Community as regards strengthening economic and social cohesion by improving employment and job opportunities, encouraging a high level of employment, and more and better jobs.

To this end, the links between the ESF and the policy framework – the European Employment Strategy (EES) – are being reinforced so that the ESF can contribute more effectively to the employment objectives and targets of the "Lisbon Strategy for Growth and Jobs".

Therefore, the ESF should support the policies of Member States (MS) closely in line with the strategy's **three main objectives of full employment, quality and productivity at work, social cohesion and social inclusion**.

For the period 2007-2013, the ESF will continue to support education and training systems, particularly under the "human capital" priority. Whilst retaining a focus on the labour market and the need for adaptation of education and training systems, the new ESF reflects the comprehensive policy approach to education and training:

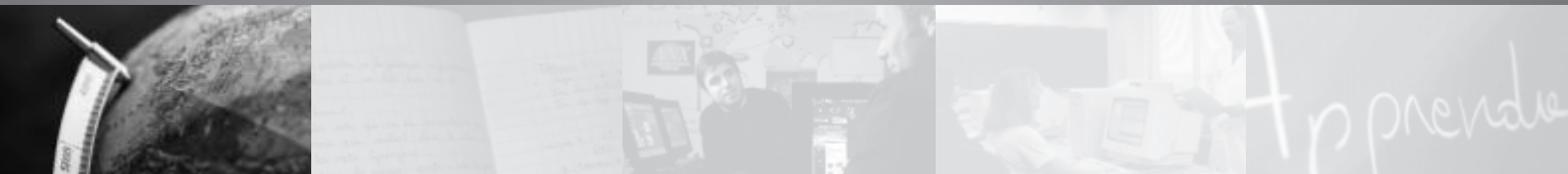
- ➔ The scope has been broadened to reflect a life-cycle approach to education;
- ➔ There is an increased emphasis on strengthening research and innovation, particularly through enhanced collaboration between education, technology and companies.

Under both the **Convergence and the Employment and Competitiveness objectives**, it will focus on the adaptation of the educational and training systems to the labour market requirements and to the needs of a knowledge-based economy.

This requires well designed reforms which ensure that those leaving the education systems are equipped with the necessary competences and occupational skills. Education and training systems should be flexible and allow for the adaptation of skills through the professional life

The educational and training needs in the convergence regions and Cohesion countries, under the **Convergence objective** are more substantial. These regions often face severe problems in the structure of education, gender-based segregation of subjects, insufficient accessibility, low quality of education and training, lack of training offered after formal education etc. In these regions comprehensive reforms will certainly be necessary. To this end, current focus on comprehensive and overall reform of the education and training systems should be continued and could include support for the implementation of such reforms.

Moreover, in **these regions the educational and training systems can also benefit from overall reforms of the public administration and public services implemented under the "institutional capacity" priority.**



COHESION POLICY INSTRUMENTS AND ENTREPRENEURSHIP EDUCATION

Henry Britton, European Commission - Directorate General for Regional Policy

The overall budget committed to the EU's cohesion policy for the period 2007-2013 comes to over 308 billion euros which are distributed across three main funding instruments, i.e. the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund. These funds contribute together to three priority objectives, namely the "Convergence" objective which aims to speed up the recovery of the least-developed regions, the "Regional competitiveness and employment" objective which aims to boost economic growth and job creation, and the "European territorial cooperation" objective which aims to strengthen cross-border, trans-national, and inter-regional cooperation.

Generally, in order to promote entrepreneurship, the ERDF has invested mainly in business support activities and infrastructures (science parks, incubators, enterprise agencies, etc.), leaving education and training activities to the ESF. However, as part of projects co-financed by the ERDF, the crucial role of knowledge and experience for stimulating company creation has led local players and beneficiaries to develop a more "hands-on" approach through activities such as entrepreneurial awareness-raising and promotion campaigns towards youth, technical and managerial assistance for young entrepreneurs and business tutoring or mentoring within school or university schemes.

Entrepreneurship education is explicitly referred to in the Community Strategic Guidelines on Cohesion which set the political priorities for the investments to be made under the Structural Funds and Cohesion Fund for the next programming period. This enables Member States to include entrepreneurship education in their National Strategic Reference Frameworks and Operational Programmes. Organisations wishing to develop projects in entrepreneurship education should therefore target the appropriate funding opportunities and submit project ideas to the relevant authorities in charge.

During the period 2000-2006 several projects relating to entrepreneurship education were carried out with support from the ERDF. Examples include the Road Show for Entrepreneurship (RS4E) project in Madeira, the Baltic Entrepreneurship Partnership (BEPART) network in the Baltic area and the University Student Entrepreneurship (UNISTEP) project in Crete.



PANEL DISCUSSION AND CONCLUSIONS

The panellists were the following:

- Ms. Gry Ulverud Hoeg, Deputy Director General, Ministry of Education and Research, Norway
- Mr. Anthony Gribben, European Training Foundation
- Mr. Paul Hannon, Director of Research and Education, National Council for Graduate Entrepreneurship, UK
- Ms. Caroline Jenner, CEO, Junior Achievement -Young Enterprise Europe
- Mr. Paul Skehan, Deputy Secretary General, Eurochambres
- Mr. Christian Weinberger, Head of Unit, European Commission- Directorate General for Enterprise and Industry
- Ms. Erna Hennicot-Schoepges, Member of the European Parliament

Each panellist made a short statement presenting her/his views as a result of previous presentations and discussions. The main messages of the panellists can be found below:

Ms. Gry Ulverud Hoeg

Entrepreneurship education is built through the natural curiosity of children. The European Commission can contribute to better awareness and understanding of the scope of these activities in primary school, by clarifying that the objectives of entrepreneurship education are much wider than training on how to start a business. In this respect, it is important to circulate ideas. A database funded at EU level would help teachers.

Mr. Anthony Gribben

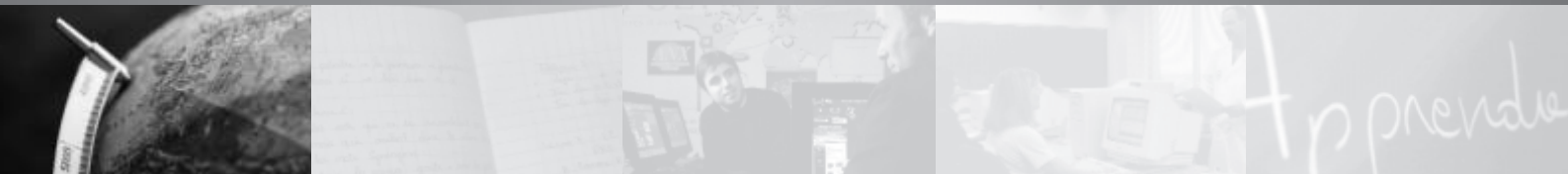
There are many activities in the Member States, but little attempt to bring them together and to circulate the information. Independent evaluation should be used to validate practices, with the objective to disseminate them. Member States should set up a reference and a strategic framework at national level on entrepreneurship education, involving all stakeholders. Norway can be seen as a model for setting up a national strategy. The case of Scotland should be considered as a good practice as regards training the teachers.

Mr. Paul Hannon

It is essential to focus on building the capacity of institutions and of educators. This should start from the top management (e.g. the Rectors) of higher education establishments. Exchanges of experience and practice between leaders of institutions should be promoted. This type of action should be coordinated at the EU level. Also, it is very important to promote the mobility of educators across Europe (all of them, not only the teachers). There is a need for mobility programmes. This approach has been recently taken in the UK, it should be so also at EU level. More generally, a EU wide framework of what is to be achieved should be set up, followed by proper evaluation of the impact of measures taken.

Ms. Caroline Jenner

Progress was made recently as regards the endorsement of entrepreneurship activities. The effects of this recognition, particularly at EU level, can be seen already. It is therefore important to keep the momentum. We have achieved recognition, but not critical mass: there is a need to reach more students, teachers and potential volunteers. Work in this direction should build on a partnership at three: governments, NGOs, businesses. At European level, we should create a common platform and/or a database to facilitate the exchange of experiences.



Mr. Paul Skehan

It is important to define better what we want to achieve: clear targets should be set up, both at European and at national level. These targets should be defined with the participation of all relevant stakeholders. Clear recommendations are taking shape out of this Conference, the European Commission should coordinate their implementation. The European Commission should also take the lead as regards the evaluation of activities, otherwise results will not be comparable. A working group at European level could be set up in order to define targets, and to create a matrix that would allow results to be compared.

Mr. Christian Weinberger

We need national strategies. A way to achieve that would be to set up steering groups at national level including all the relevant players. Then, entrepreneurship education should become part of the curricula. If these activities are not recognised, it will be difficult to find financial means, and to train the teachers. The adoption of the forthcoming Recommendation on Key Competences will facilitate this. There is a need for more educators, coaches and mentors. The focus should be also in the regions: regional centres for entrepreneurship should be established across Europe.

Ms. Erna Hennicot-Schoepge

It should be recognised that what the European Commission is doing is only an addition to what Member States should do themselves. There is a need to have, after 2013, a bigger budget for education. Education should become a European policy, and entrepreneurship should be recognised as an objective of education. The concept of “entrepreneurship” should replace “employability” in Commission’s policy documents. However, entrepreneurship should not be a specific subject: rather, creativity should be spread everywhere across the curricula. It should be ensured that, when measuring the outcomes and impact of activities, all the different objectives of entrepreneurship education are taken into account.

Following interventions from the audience pointed out a number of issues. It was commented that it will be very difficult to have a European evaluation system. The creation of a European platform for entrepreneurship education was suggested, bringing together different groups of stakeholders. It was noted that the active involvement of key players like entrepreneurs and students is essential: their participation should be ensured, and have a wider representation in occasions like this conference. Finally, it was emphasised that all businesses should donate at least a tiny part of the working time of their staff to participation in activities within schools. It was suggested that an award is given at European level to acknowledge enterprises that distinguish themselves more in donating their time to education.

The Chairman, Mr. Christian Weinberger, assured that the European Commission will prepare and disseminate a catalogue of all the concrete proposals advanced during this Conference.



CLOSING SPEECH

Maruja Gutierrez, Head of Unit, European Commission - Directorate General for Education and Culture

In her closing speech, Mrs. Gutiérrez-Díaz, Head of Unit in the Directorate General for Education and Training, thanked the Norwegian Ministry of Education and Research, the Norwegian Ministry of Trade and Industry and the Oslo School of Management for their hospitality and for sharing their expertise in this important subject.

She congratulated the various stakeholders, who had successfully worked together supporting the quest that Entrepreneurship education can and must be a key subject for education and training.

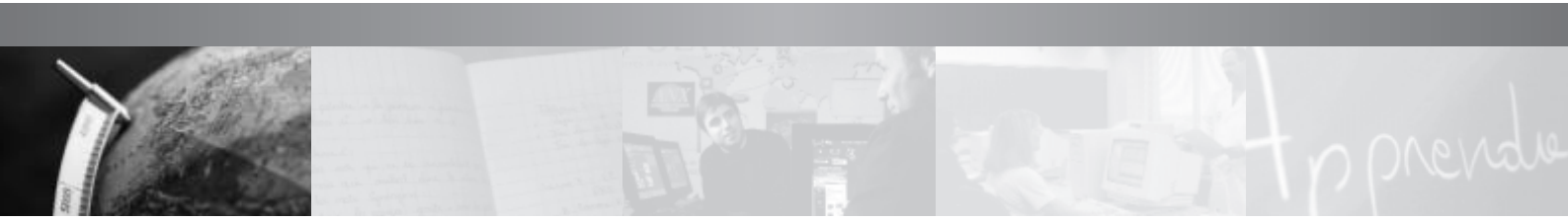
She underlined that promoting an entrepreneurial culture is a shared vision within the Commission policy areas in order to meet the Lisbon objectives and in order to foster innovation and to maintain economic growth and competitiveness.

The conclusions she drew from the conference were the following:

- Entrepreneurship education needs to start from early on.
- Closer links between education and business are needed.
- Entrepreneurship education needs a more prominent place in the school curricula.
- Learning entrepreneurship asks for practical approaches and hands-on experience.
- 'Fostering Entrepreneurial Mindsets' needs to be promoted at all levels of education.
- A coherent framework of teaching of entrepreneurship in schools and universities is needed.
- Schools need to be supported with tools and materials and incentives for the teachers are needed to encourage the take-up of entrepreneurship activities and programmes.
- Entrepreneurship is one of the eight key competences defined in the Draft Recommendation on Key Competences for Lifelong Learning which was adopted by the Commission in November 2005. This underlines the importance of entrepreneurship as being a prerequisite to meeting the challenges of an increasingly global society.
- Universities need to promote the spirit of enterprise and create a favourable climate for the emergence of entrepreneurship also by placing more emphasis on supporting students' business ideas.

Finally, highlighting some of the concrete examples discussed during the conference, Mrs. Gutiérrez-Díaz emphasized that a large number of 'good practice' examples can be found in Europe, but that the challenge was to disseminate information about these positive examples.

Referring to the new Lifelong Learning Programme, she invited Member States and encouraged stakeholders to set up projects, to help promote creativity, competitiveness, employability and the growth of an entrepreneurial spirit.



CLOSING SPEECH

Lisbet Rugtvedt, State Secretary for Education, Norway

Ladies and gentlemen,

Thank you for the opportunity to take part in the winding up of this interesting conference on the *Fostering of Entrepreneurial Mindsets through Education and Learning*.

As we all know, Entrepreneurship in education and training is recognized as a central element in the EU entrepreneurship policy. It is pointed out that a culture that supports entrepreneurship will contribute to innovation and economic growth.

In the spring 2000 the EU decided upon the Lisbon strategy. The strategic goal is that by 2010 the *EU shall be the most competitive and dynamic knowledge-based economy in the world, an economy that can create sustainable economic growth with more and better workplaces and greater social equality with respect for the environment*.

In the EU's follow-up of the *Lisbon strategy*, entrepreneurship has a central place. This we can also see in what was decided upon in the Stockholm meeting of ministers in spring 2001 where the Lisbon goals were further enhanced.

In February 2001 *The Education Council* adopted a report on the future objectives of the education systems. Key areas identified include strengthening the links between educational institutions and businesses, and developing the spirit of enterprise throughout the education and training systems.

In 2003 the European Commission added a further follow-up, the so-called *Green Paper on Entrepreneurship in Europe*. Here growth and development opportunities are emphasized, among other things, through knowledge and innovation.

Why Entrepreneurship Education?

So, ladies and gentlemen. – Why Entrepreneurship Education?

The importance of entrepreneurship as one of the basic skills to be improved through lifelong learning is highly recognised today. Both the mentioned *Lisbon strategy* and the *European Charter for Small Enterprises* have stressed this point. In particular, the European Charter for Small Enterprises commits the EU to teach business and entrepreneurship at all levels, and to develop training schemes for managers.

At this conference the European Commission has presented its recommendations for paving the way for entrepreneurship in education and training and an entrepreneurial culture. These are very much in line with the priorities of the Norwegian entrepreneurship education policy. I would particularly like to emphasize the importance of:

- ➔ The support from schools and pupils, schools shall receive practical support and incentives to include entrepreneurship in training as well as paving the way for training teachers. ·
- ➔ Encouraging entrepreneurship in HE (Higher Education), including integrating entrepreneurship in training - especially in natural science and technical studies.
- ➔ Good quality training and networks for teaching staff, where they can exchange best practice and increase the mobility of teaching staff between educational institutions and the business sector.

What does Entrepreneurship Education really mean?

Entrepreneurship education involves developing certain personal qualities, and is not necessarily directly focused on the creation of new businesses.



The objectives of teaching about entrepreneurship will therefore include:

- Promoting the development of personal qualities that are relevant to entrepreneurship, such as creativity, spirit of initiative, risk-taking and responsibility.

In addition to this entrepreneurship education should contribute to raising pupils' and students' awareness of self-employment as a career option. The message being that you can become not only an employee, but also an employer.

Personal Qualities relevant to Entrepreneurship

A set of personal qualities relevant to entrepreneurship were also discussed and approved by the forum *Training for entrepreneurship* organised by the EU in Nice in October 2000. These are especially relating to the primary and secondary levels. They include:

- Problem solving: Pupils and students should have the ability to solve problems and should be increasingly encouraged, implying encouraging ability in the fields of planning, decision-making, communication and the willingness to assume responsibility.
- Cooperation and networking: Pupils and students should increasingly gain competence in fields such as the ability to cooperate, networking, learning to assume new roles (Social competence).
- Self-confidence and motivation: Pupils and students should try to develop self-confidence and the motivation to perform, learn to think critically and independently and in particular achieve the willingness and ability to learn autonomously.

Identifying good Practice

In most EU countries, national initiatives already exist addressing the issue. A lot of information on good practice in entrepreneurship has been collected and some of it has been demonstrated here during this conference.

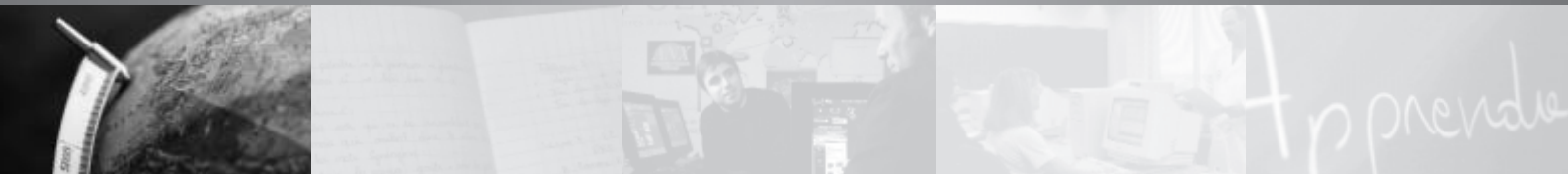
The best practice examples can be identified within the following categories:

- entrepreneurship in primary and secondary school
- training of teachers on the subject of entrepreneurship
- cooperation between schools/universities and businesses aimed at the promotion of entrepreneurship
- entrepreneurship chairs and activities at university level

National experts have assessed the best practice examples with the aim of policy change in the Member States, and in Norway. Ongoing activities and measures taken at national level by the EU Member States and Norway, have been assessed and these show that entrepreneurship is neither integrated into the curriculum, nor part of a coherent framework. Initiatives are often isolated taken by individual institutions, partnerships or local authorities. Frequently they are driven by external actors and not by the education system itself. Unfortunately, many would say, entrepreneurship is more likely to be taught as a separate subject or seen as an extra-curricular activity.

Entrepreneurship integrated in several Subject Curricula

In Norway we have entrepreneurship and entrepreneurial thinking at the basis of many subject curricula for primary and secondary education and training. Examples from upper secondary education are topics like Social Sciences, Design, Arts and Crafts, Nutrition, Health and Food and from the preparation of local curricula in optional programme subjects. In upper secondary and vocational programmes entrepreneurship is integrated in Arts, Crafts and Design, Electro and Electrical subjects, in Media and Communication and in Programme for Agriculture, Fishing and Forestry and in Service and Transport. In the programme for General Studies entrepreneurship is integrated in Marketing and Management, Social Studies, Arts and Design subjects, in Sports subjects and in Business Economics.



Entrepreneurship as a separate subject curriculum in upper secondary school

However, we do not only think of entrepreneurship as an integrated dimension in our education system. Work is currently being done to implement entrepreneurship as a separate subject curriculum. From autumn 2007 a new programme subject will be established within the education Programme for Specialization in General Studies, Social Sciences and Economics Studies. The programme is called *Entrepreneurship and Enterprise Development*.

Norway and the EU

Norway participates in several fora on trade and industry policy under the auspices of the EU. Exchange of findings with other European countries provides useful information on public sector investment in entrepreneurship education. Norway has participated actively in the EU Leonardo da Vinci programme, in which one key activity has been to promote innovation in entrepreneurship in Europe through modification schemes linked to professional and vocational training in individual participant countries.

Approximately 4,000 major projects for this purpose have been financed since 1995. Of these there have been about 100 Norwegian-coordinated projects.

Norway intends to strengthen its participation in EU cooperation on entrepreneurship in the new Life Long Learning Programme to be launched in 2007.

Conclusion

We are grateful of having been able to host this conference which has shown us the width and creativity in this field. I hope this conference will result in concrete initiatives for the future.

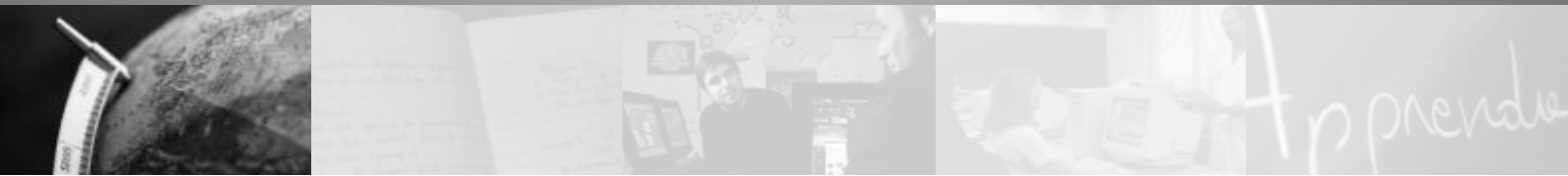
Thank you for your attention.



6. INFORMAL NETWORKING SESSIONS ON 27 OCTOBER 2006

The afternoon of 27 October, after the official closing of the Conference, was dedicated to the organisation of 10 thematic networking sessions, with topics selected by the participants themselves. These sessions had a light structure, in order to keep the discussions flexible and based on the concrete interests of participants. Information was exchanged and contacts developed on an informal basis on the following broad topics:

- How to interest/ motivate teachers for the topic of Entrepreneurship education;
- Cooperation between education and business;
- How to give students international real life experience for value creation;
- How to build teams of Entrepreneurs from different faculties/universities;
- International cooperation projects between schools/regions on Entrepreneurship education;
- Evaluation on the outcomes of entrepreneurship education;
- EU regional policy and entrepreneurship education-Funding opportunities for Entrepreneurship activities in EU-Programmes;
- How to support student entrepreneurship activities;
- Cooperation between the Ministry of Economy and the Ministry of Education for a national action programme on Entrepreneurship;
- European perspectives on entrepreneurship doctoral education.



7. SUMMARY OF CONCRETE PROPOSALS FROM THE CONFERENCE (“THE OSLO AGENDA”)

The Oslo Agenda for Entrepreneurship Education in Europe

The aim of the “**Oslo Agenda for Entrepreneurship Education**” is to step up progress in promoting entrepreneurial mindsets in society, systematically and with effective actions. The Agenda is a rich menu of proposals, from which stakeholders can pick actions at the appropriate level, and adapt them to the local situation. Relevant actors are indicated for each one of the proposed actions.

The Agenda is an outcome of the Conference on “Entrepreneurship Education in Europe: Fostering Entrepreneurial Mindsets through Education and Learning” – an initiative of the European Commission jointly organised with the Norwegian government - held in Oslo on 26-27 October 2006, which followed the Communication from Commission on the same topic.

The Conference aimed to exchange experiences and good practice, and to propose ways to move forward in this area. The ideas advanced in Oslo by a **broad representation of stakeholders** (e.g. national, regional and local governments, business associations and entrepreneurs, promoters of programmes, school teachers, academics and students) result now in a **detailed catalogue of initiatives**, based on successful experiences in Europe, which could be usefully taken in the EU and in neighbouring countries.

EU	Member States	Educational authorities	Regional / Local authorities	Schools/Universities	Intermediary organisations ¹	Businesses/entrepreneurs
----	---------------	-------------------------	------------------------------	----------------------	---	--------------------------

A - Framework for policy development

A1 Ensure political support for entrepreneurship education at the highest level. Real progress will be possible only with a strong commitment from national and regional governments and from the relevant Ministers, in the context of the implementation of the Lisbon strategy.

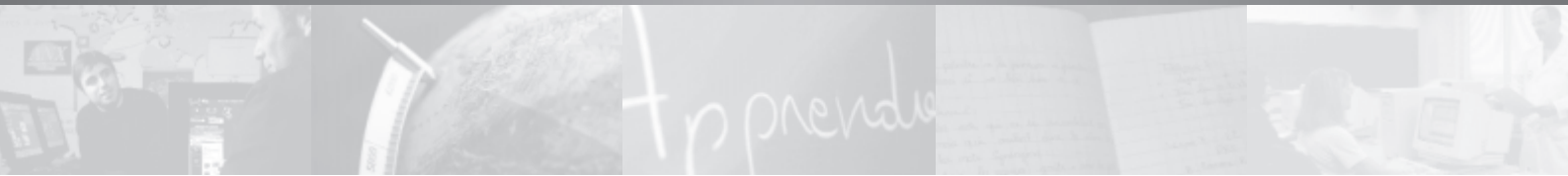
A2 Better integrate Entrepreneurship Education into the Lisbon monitoring process (Integrated Guidelines for Growth and Jobs), and make the assessment of Member States’ progress in this field more effective by means of applying specific indicators.

A3 Set up a European-wide framework of what is to be achieved, followed by proper evaluation of the impact of measures taken. Coordination needs to be ensured at the EU level, with the definition of broad objectives and of desired outcomes for entrepreneurship education. The above framework could be supported by the establishment of a European Observatory for Entrepreneurship Education, with national antennae.

A4 Launch national strategies for entrepreneurship education, with clear objectives covering all stages of education. Such strategies should call for the active involvement of all relevant actors (public and private), and establish a general framework while defining concrete actions. These will range from the inclusion of entrepreneurship into the national curricula to providing support to schools and teachers. The overall goal will be to ensure that young people can progress coherently in acquiring entrepreneurial competences across all stages of the education system.

A5 Create Steering Groups, both at European and at national level, where all the different stakeholders involved in entrepreneurship education can be represented (public administrations, businesses, educational establishments, students, etc.). These Groups would have among their objectives that of setting targets for entrepreneurship education, taking into account its various elements, and that of reporting on progress achieved.

¹ Intermediary organisations are those organisations and business associations that play the role of building links between education and the business world, and/or that of running/mentoring/coaching entrepreneurship education programmes and activities



	EU	Member States	Educational authorities	Regional /Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs
A6 Promote entrepreneurship education at regional level , with a coherent programme bringing together local stakeholders and addressing the various levels of education through a range of different instruments.			■	■		■	
A7 Facilitate the development of entrepreneurship education within the Bologna process by: encouraging the mobility of teachers (across countries and across different institutions, including in the private sector); recognising the role of educators other than teachers (practitioners, entrepreneurs, students themselves); recognising entrepreneurial career paths in undergraduate education at university.	■	■	■				
A8 Increase coherency between European funding programmes that can be used to support entrepreneurship education projects and activities (in particular the Lifelong Learning Programme, the ESF, the ERDF). These programmes can be valuable in supporting actions taken at national and local level.	■						
A9 Ensure coordination at European level in the evaluation of programmes and activities, in order to allow the comparability of results. The EU could bring together a group of researchers in entrepreneurship education, to help define indicators and specify typical educational processes.	■		■		■	■	

B - Support to Educational Establishments

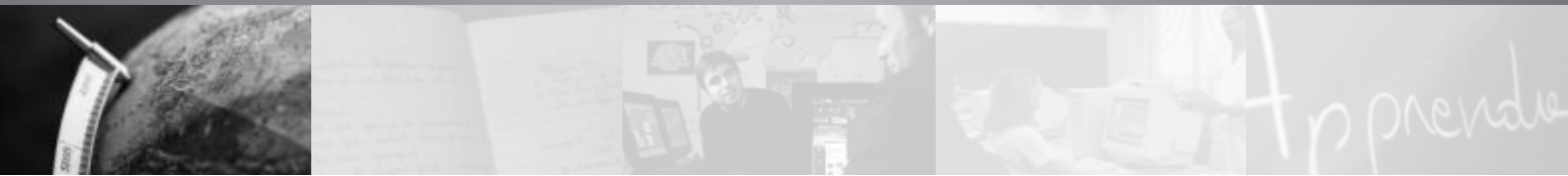
B1 Better integrate entrepreneurship programmes and activities in the established curriculum for schools at all levels (primary, secondary, vocational), as a horizontal element in all fields of study (entrepreneurial mindset) and as a subject in its own right (entrepreneurial skills).

B2 In its broader definition (fostering attributes like creativity, autonomy, initiative, team spirit, etc.) **entrepreneurship should be also included in the curriculum for primary schools.** Especially at this level of education it is important to convince schools, teachers and parents that entrepreneurship is a key competence for all, and it does not aim to turn all pupils into businessmen.

B3 The European Commission should support curricular reforms to be undertaken at national level and facilitate comparative analysis, through a range of instruments going from the coordination of the implementation of the Lisbon strategy to facilitating the exchange of good practice.

B4 Support the use of practice-based pedagogical tools whereby students are involved in a concrete enterprise project (for instance in running a mini-company). Embed these activities as a recognised option in official school programmes, particularly at secondary level.

B1 Better integrate entrepreneurship programmes and activities in the established curriculum for schools at all levels (primary, secondary, vocational), as a horizontal element in all fields of study (entrepreneurial mindset) and as a subject in its own right (entrepreneurial skills).			■	■			
B2 In its broader definition (fostering attributes like creativity, autonomy, initiative, team spirit, etc.) entrepreneurship should be also included in the curriculum for primary schools. Especially at this level of education it is important to convince schools, teachers and parents that entrepreneurship is a key competence for all, and it does not aim to turn all pupils into businessmen.			■	■			
B3 The European Commission should support curricular reforms to be undertaken at national level and facilitate comparative analysis, through a range of instruments going from the coordination of the implementation of the Lisbon strategy to facilitating the exchange of good practice.	■						
B4 Support the use of practice-based pedagogical tools whereby students are involved in a concrete enterprise project (for instance in running a mini-company). Embed these activities as a recognised option in official school programmes, particularly at secondary level.	■	■	■	■	■	■	■



B5 Stimulate - through targeted public funding - the implementation of pilot projects in schools, in order to test different ways of delivering entrepreneurship education. The final goal will be to disseminate resulting good practices widely, and to encourage take up of tested methods by the largest number of schools.

B6 Ensure sustained funding/support for entrepreneurship education activities, and for the implementation of concrete enterprise projects in school. The termination of short-term project funding or the changing of funding mechanisms creates fragility to sustainable provision, unless this can become embedded within a coherent strategy.

B7 Grant public funding for the establishment of Entrepreneurship Centres at universities and the creation of a network between them. These Centres would have the missions - among others - of: spreading entrepreneurship across different fields of studies within the institution; fostering the commercialisation of research and the exploitation of new business ideas; building links with businesses; etc.

B8 Build common European and national platforms of existing programmes, projects and teaching material, in order to help sharing and dissemination. Such platforms will greatly support practitioners in improving the offer of entrepreneurship education.

B9 Develop research to assess the impact of entrepreneurship education on individuals, communities, society and the economy. The possibility of tracking alumni will be an essential success factor

	EU	Member States	Educational authorities	Regional /Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs
B5 Stimulate - through targeted public funding - the implementation of pilot projects in schools							
B6 Ensure sustained funding/support for entrepreneurship education activities							
B7 Grant public funding for the establishment of Entrepreneurship Centres at universities							
B8 Build common European and national platforms							
B9 Develop research to assess the impact of entrepreneurship education							

C - Support to Teachers and Educators

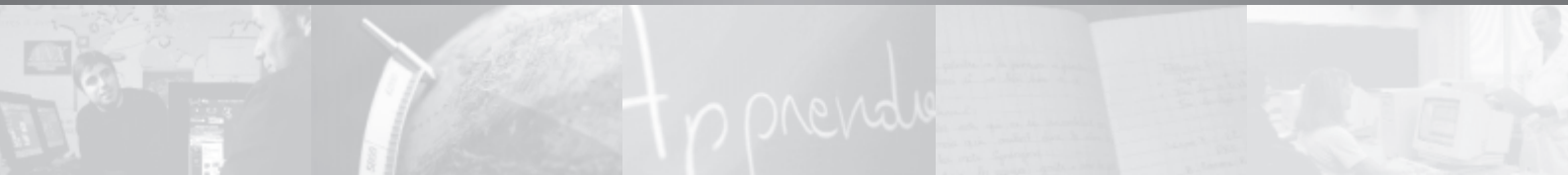
C1 Providing specific training to teachers in entrepreneurship is a policy issue, and should be attached to the national curriculum reforms. The educational authorities should talk to teachers in their own language, explaining why entrepreneurship is a key competence for all and how related methods and activities can bring more dynamism and innovation into different courses.

C2 Adopt innovative methods to train teachers in entrepreneurship. These would include case studies and other inter-active methods, such as involving teachers in real work on enterprise projects or even in running themselves a mini-company. By acquiring direct experience, teachers will be more effective when using these methods with the students.

C3 Set-up incentives at school level to enable teachers to teach entrepreneurship, for instance by means of setting up staff development funds, and by recognising and rewarding the involvement of teachers in activities that require an innovative pedagogy and very often also an extraordinary effort from them.

C4 Launch innovative actions for training teachers on entrepreneurship, with a European dimension, to be supported under the Community Lifelong Learning Programme.

C1 Providing specific training to teachers							
C2 Adopt innovative methods to train teachers							
C3 Set-up incentives at school level to enable teachers							
C4 Launch innovative actions for training teachers on entrepreneurship							



EU	Member States	Educational authorities	Regional / Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs

C5 Support the mobility of educators across Europe, particularly in higher education, through the Community Lifelong Learning Programme and/or other instruments specifically designed for that purpose. Greater mobility and exchange of experience is needed in Europe, not only between universities but also between academia and the business world. Programmes need to be developed that allow educators to spend time at other institutions and/or in the private sector to truly engage, learn and develop. Europe needs greater sharing of knowledge and good practice across sectors and national borders.

D - Entrepreneurship activities in Schools and in Higher Education

D1 Embed elements of entrepreneurial behaviour (curiosity, creativity, autonomy, initiative, team spirit) already **in primary school education**. To this end, use games, cartoons and other tools appropriate to the age of pupils.

D2 Starting from primary school, raise awareness in young children of the role of enterprises and entrepreneurs in society. Emphasising the notion of “responsible entrepreneurship” will help to make an entrepreneurial career a more attractive proposition.

D3 Disseminate within schools a book with success stories of young entrepreneurs, in order to improve the image of entrepreneurs as role models for young people.

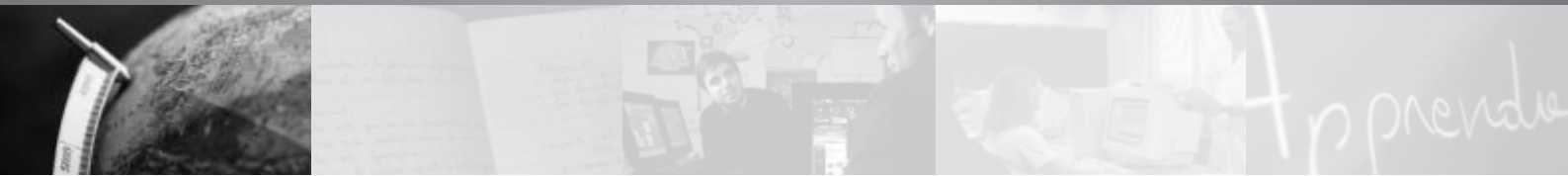
D4 Introduce innovative pedagogies into all courses, as a necessary basis for building an entrepreneurial spirit. Extend the range of pedagogies in use through innovative curricula development. School education should build upon the curiosity and the natural entrepreneurial ability of children.

D5 As part of the final evaluation of a programme or course in entrepreneurship, test the entrepreneurial competences of students and offer them a certificate (“entrepreneurial driving licence”) acknowledging the acquisition of those skills.

D6 Associate students to real companies and to business people, in order to ensure a close relation with real business experience. Students should not be kept in isolation and far from the world outside the school, for instance when running a virtual firm or simulating a business plan.

D7 Allow and support the spontaneous initiative of student associations pursuing objectives such as creating links with businesses, and involving students in work on enterprise projects. Recognise and reward the time that students dedicate to these activities by means of educational credits.

D8 Engage alumni in the activities of the school/university and in the classroom (for instance, alumni who started a company).



D9 Offer entrepreneurship education to disadvantaged groups. In particular, young people at risk of social exclusion (low-income youth, school dropouts, adolescents in danger of long-term unemployment, refugees, etc.) may greatly benefit from this type of training. It can raise the motivation of those who learn best by doing, and who have difficulties in more traditional subjects. Some programmes addressing these target groups proved very successful both in terms of start-ups and of social integration.

D10 Higher education establishments should integrate entrepreneurship across different subjects of their study programmes, as it may add value to all degree courses (e.g. technical and scientific studies, but also humanities and creative studies). All faculties/disciplines should develop opportunities for students at every level to experience entrepreneurship

D11 In higher education, bring entrepreneurs into the classroom and involve students directly in enterprise projects. Using active learning methods is more complex than traditional teaching methods. It requires engaging students' feelings and emotions in the learning process. Educators/facilitators therefore must be able to create an open environment in which students develop the necessary confidence to take risks.

D12 Increase the production of European case studies to be used in the classroom in higher education. Group work on concrete cases is an effective method, as it improves the understanding of real issues related to entrepreneurship and engages students in finding solutions to real problems. To be most effective, case studies used should have a European and local dimension, rather than being imported from the US.

D13 Give entrepreneurship more academic esteem: establish good research programmes and PhD programmes on entrepreneurship, in order to create a "critical mass" of future teachers with this specific competence;

D14 Encourage students, graduates and researchers with commercially viable business ideas to develop them into companies, by providing a range of support services within the institution (incubators, financing, mentorship, etc.).

D15 Embed evaluation systematically into all programmes. The most effective evaluation is independent and comparative (i.e. it should be run before the beginning of the programme and after its conclusion).

	EU	Member States	Educational authorities	Regional /Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs
D9 Offer entrepreneurship education to disadvantaged groups.			■	■	■	■	
D10 Higher education establishments should integrate entrepreneurship across different subjects of their study programmes,					■		
D11 In higher education, bring entrepreneurs into the classroom and involve students directly in enterprise projects.					■	■	■
D12 Increase the production of European case studies			■		■		■
D13 Give entrepreneurship more academic esteem:			■		■		
D14 Encourage students, graduates and researchers with commercially viable business ideas to develop them into companies,					■	■	■
D15 Embed evaluation systematically into all programmes.			■		■	■	



EU	Member States	Educational authorities	Regional / Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs
----	---------------	-------------------------	------------------------------	----------------------	----------------------------	--------------------------

E - Building links and opening education to the outside world

E1 Encourage the creation of learning communities with the mission of fostering entrepreneurial mindsets, by building links between the public and the private sector, involving schools, academia and businesses, as well as relevant intermediary organisations. In particular, the role of those intermediary organisations dedicated to the dissemination of entrepreneurship activities within schools and universities, and to building links between education and the business world, should be better recognised.

E2 Encourage the involvement of private partners in education for entrepreneurship, through funding or contributions in kind. This involvement should be seen by firms as a long-term investment, and as an aspect of their corporate social responsibility.

E3 Businesses should consider donating at least a tiny part of the working time of staff to participation in activities within schools and universities. In fact, mentoring and coaching from people with business experience are a basic element in all entrepreneurship training.

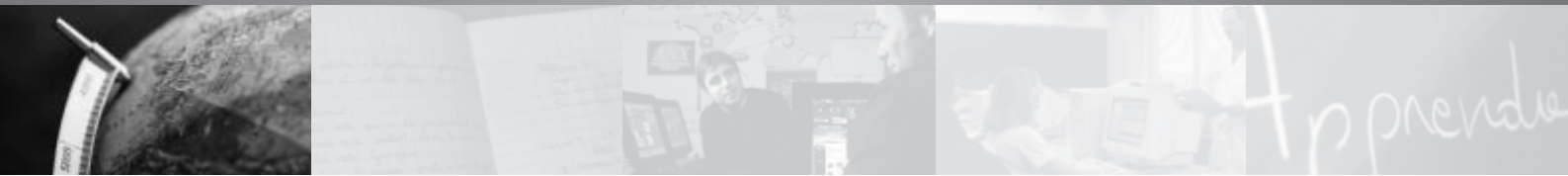
E4 Develop or support research on how employers can be better engaged in school/university education. The business community needs incentives to more fully engage with educational institutions. Opportunities for mutual benefit can work, but are often not recognised as verifiable and appropriate staff activities.

E5 Help develop the pedagogical abilities of entrepreneurs and business people, in order to make their participation to activities in the classroom more effective. This task could be usefully performed by those non-profit organisations dedicated to linking schools and businesses, and by business organisations.

E6 Conceive, develop and promote a label for “entrepreneurial schools” and “entrepreneurial universities”, to be used by educational institutions on a voluntary basis. Broad criteria could be defined at European and/or national level, which should be in any case adapted to the local environments and education systems. This initiative could be implemented at national level by intermediary organisations with in-depth experience in entrepreneurship education, through cooperation with educational authorities and with schools/universities.

E7 Give young people the opportunity to develop their enterprising skills by helping them to create their own “summer job”, and earn money by using their own ideas and initiatives. These activities can be promoted through cooperation between schools, non-profit organisations, businesses, local authorities.

E8 Build Entrepreneurship Centres at a local level, with the missions of assisting schools and teachers, developing links between educational establishments and enterprises, facilitating the participation of entrepreneurs and business people in programmes at school and university, promoting raising awareness initiatives in the local community.



EU	Member States	Educational authorities	Regional /Local authorities	Schools/Universities	Intermediary organisations	Businesses/entrepreneurs
----	---------------	-------------------------	-----------------------------	----------------------	----------------------------	--------------------------

F - Communication activities

F1 Launch awareness campaigns at European and national level, ensuring that entrepreneurship is understood in its broader sense (not just about running a business). Broad initiatives could bring together and coordinate different actions to take place at national and local level (e.g., entrepreneurship days, or a European Year of Entrepreneurship).

F2 Celebrate entrepreneurship education activities and programmes that work well, by organising awards and competitions.

F3 Establish awards, at European and/or at national level, **to acknowledge enterprises** that distinguish themselves more in dedicating funds and working time of their staff to teaching, mentoring and more generally to participation in activities within schools and higher education.

The Agenda presents ideas tabled in Oslo by relevant stakeholders from 33 countries. These ideas do not necessarily represent the views of the European Commission



European
Commission



MINISTRY OF EDUCATION AND RESEARCH
MINISTRY OF TRADE AND INDUSTRY

entr-conference-entrepreneurship@ec.europa.eu
http://ec.europa.eu/enterprise/entrepreneurship/support_measures/training_education/oslo.htm