

2010-6

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### Recommended Citation

English, R. M., Collins, K., : Enhancing the Entrepreneurial Spirit in Apprenticeship Education to Develop Craft and Micro-enterprises, Edulearn '10 Conference, July, 2010, Barcelona, Spain.

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# ENHANCING THE ENTREPRENEURIAL SPIRIT IN APPRENTICESHIP EDUCATION TO DEVELOP CRAFT AND MICRO-ENTERPRISES

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## Abstract

Micro, small and medium-sized enterprises are considered to be the mainstay of the economy of the European Union, since they represent 99% of all EU enterprises. They are socially and economically important in that they provide 65 million jobs and contribute to innovation and entrepreneurship. However, a 2002 Eurobarometer survey found that EU citizens are less inclined to become entrepreneurs, and tend to be more risk adverse. In recognising this, the EU made entrepreneurship one of the main objectives of the Lisbon Agenda in 2000. The European Commission in 2003 drafted the Green Paper on Entrepreneurship in Europe to stimulate debate on how to best promote the entrepreneurial spirit. In 2004, in adopting the conclusions from 'Stimulating Entrepreneurship' the European Council recognising that entrepreneurship is a major driver of employment, innovation and growth encouraged member states to stimulate the entrepreneurial mindset through training and education. The SENSibilisation des Apprentis à leSprit d'entreprendre (SENSAS) project is based around the notion of fostering entrepreneurship, or the entrepreneurial spirit, among young people, in line with the European Commission's 2004 "Action Plan: The European Agenda for Entrepreneurship". In this specific case the focus is on apprentices, who are in direct contact with both the worlds of work and training by virtue of their position in work-linked training programmes. As such, this project aims to target trainers, to enable them to imbue their students with the idea of entrepreneurship and to equip apprentices with an entrepreneurial spirit that they will employ in the real world. This partnership entrepreneurial project is located within the area of continuing education for teachers and trainers. It targets the following actors: trainers of apprentices and apprentices. In addition the outputs of this project can be broadened to reach regular third level students (of business or commerce for example) as well as secondary school pupils and their teachers or lecturers. There are two main products or outputs anticipated for this project. These are a pedagogical tool kit to raise awareness in entrepreneurial spirit and a computer software role playing tool. This working paper will seek to assess the outcome streams from each of the partner organisations implementation of the SENSAS products and subsequent evaluation of the emerging entrepreneurial spirit and channel them into conceptual frameworks that will signpost a continuing research paradigm.

Keywords: entrepreneurship, apprenticeship, work-linked training, employability.

## 1 INTRODUCTION

The SENSAS project based around the notion of fostering entrepreneurship, particularly amongst apprentice learners who inhabit the dual worlds of work and education, is supported through the Leonardo da Vinci programme. The purpose of the paper is to describe the emergent pedagogical tools, target audience and embryonic evaluation trends from the SENSAS partners. The SENSAS project partners are representative entities from Sweden, Portugal, France, Belgium and Ireland.

The function of the discourse is dissemination and dialogue. While research reports and papers are generally presented ex post; this paper is presented ex ante. This approach will allow the development of communication and dialogue with interested parties and actors external to the project and foster the sharing and exchange of knowledge within the wider communities of practice.

## 2 SMEs IN EUROPE AND ENTREPRENEURSHIP

### 2.1 SMEs in the economy

Many news reports and Institutional attention across Europe currently highlight the closure, merger, re-organisation and bankruptcy of large multinational enterprises from traditional construction and manufacturing industries to the newer Bio-Medical device and Pharmaceutical sectors. This has led to a sharp rise in unemployment, short time working and the breaking of apprentice contracts across

many member states. However Euractiv (2010) [1] report that the EU economy is primarily dominated by Small (less than 50 employees) and Medium sized Enterprises (less than 250) with 99% of all non-financial businesses in Europe being a Small and Medium Enterprise (SME).

The European Commission (2010) [2] in further analysis suggest that 90% of SME's are in reality micro- enterprises with less than 10 employees, with the average company having five workers. In European terms these micro enterprises account for 53% of all employment and they provide two out of three private sector jobs. Therefore, they form a mainstay of the European economy being primarily responsible for wealth and economic growth. These micro enterprises, many of which are in the craft and local service level, play a key role in innovation, research and development and are essential to economic development and job growth.

The Annual Report on Small and Medium Sized Enterprises (2008)[3] shows that the most popular sector in which SMEs are involved are services; research and development and computer related activities. Between 2001-2005 new birth SMEs had a 75% chance of surviving for more than 2 years, with a growth in the number of new enterprises of some 2 million between 2002 -2007. Additionally, 67% of employment in the private, non-financial economy is found in small and medium-sized enterprises, numbering some 88 million people, the majority of these being in micro-enterprises. In Ireland, between 1995 and 2005 SMEs created 500,000 jobs in the economy and currently account for 64% of private sector employment, and €10 billion in taxes and income to the exchequer. However, economic uncertainty, decreased consumer spending, and difficulties with access to credit mean SMEs in particular are now facing difficulties. This is evidenced by the fact that 1400 companies went into liquidation in Ireland in 2009 and 467 for the first three months of 2010.

## 2.2 Entrepreneurship policy and practice

Current explorations of new pathways to growth, innovation and diversification have put a strong emphasis on entrepreneurship, or the creation of an entrepreneurial mindset. Principle 1 of the Small Business Act for Europe (SBA) [4] states that "the EU and Member States should create an environment within which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded". In much of the entrepreneurship literature it is asserted that an entrepreneurial spirit is not just a predisposition, but is also dependent on learning and experience (Lans, 2009) [5]. Entrepreneurial competence is now seen as key to coping with current global economic conditions and with societal change, such as shifting consumer habits, enhanced environmental regulations and new requirements for product quality, chain management, food safety and sustainability.

In February 2004 the European Commission published an Action Plan on Entrepreneurship, which focused on action in five policy areas: entrepreneurial mindsets, incentives for entrepreneurs, competitiveness & growth, access to finance and cutting red tape (EurActiv, 2004) [6]. Central to this plan are micro-enterprises and small businesses forming the backbone of the European Economy, and where risk-taking and entrepreneurial initiatives, underdeveloped compared to other international economies such as the United States, are promoted.

Use of the term entrepreneur (those who show entrepreneurial behaviour) is often used as a substitute for business owner, starter, self-employed, or sole trader (Lans, 2009). While there are many definitions of entrepreneurship the Final Report of the Expert Groups on *Entrepreneurship in Higher Education, Especially within Non-Business Studies* [7] and *Entrepreneurship in Vocational Education and Training* (2009) [8] suggest that:

*Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity.*

In the scholarly literature, attempts have been made to come to some form of consensus that a fundamental feature of entrepreneurship is the identification and pursuit of business opportunities. When perceived in this way it broadens the scope of the study of entrepreneurship beyond specific situations of venture creation and towards its own intellectual identity within learning and development. Two opposing aspects of the theoretical assumptions underlying the opportunity concept are whether the opportunity is considered to be 'objective', waiting to be discovered in a ready-made form, or

'constructed', by the individual. From the objective viewpoint opportunities are there for everyone and it comes down to individual differences whether these are exploited. Therefore it is a matter of entrepreneurial alertness reflecting the knowledge base of the entrepreneur. From the constructed viewpoint, opportunities are actively constructed by the individual and therefore there is a degree of importance placed on perception, understanding, interpretation, and creativity (Lans, 2009).

Analysis by the Commissions' Expert group for Higher Education (2008, p.23) finds that while most current entrepreneurship courses are offered in economic and business studies the most '*innovative and viable business ideas may be more likely to originate from technical, scientific and creative studies*'. Further, the systematic integration of entrepreneurial training into technical institutions will facilitate spin-offs and innovative start-ups and allow researchers acquire appropriate skill sets. Development of skills for innovation exploitation and knowledge transfer activities in combination with the commercialisation of new technologies are seen as key academic means of enhancing local economic development. However a perceived lack of relevant experience and self-confidence are cited as reasons for newer graduates not engaging in entrepreneurial activities and third level experiences through activities such as SENSAS should address these needs.

The Expert Group on Vocational Education and Training (2009, p. 11) believe that entrepreneurial training would develop creative thinking, problem solving abilities and allow analysis of a '*business idea objectively, and to communicate, network, lead, and evaluate any given project*'. Education for entrepreneurship in vocational training may be particularly beneficial as students are close to the working life experience and should be complementary to the production of skilled workers.

The idea of entrepreneurship is about looking for, finding and exploiting opportunities. This is encompassed in the entrepreneurial spirit (being proactive, innovative, creative, accretive, enthusiastic, etc) which is both a way of thinking and of acting; a philosophy to a certain extent. This entrepreneurial philosophy manifests itself in a number of different ways and contexts in terms of attitudes (failure is learning, opportunities abound, embrace innovation and change), behaviour (pursue opportunity, persevere, manage risk), professionally (being entrepreneurial in a number of different ways over one's career life cycle), or personally (family, community involvement, personal relationships). Therefore, entrepreneurship in this project is not simply about the creation of entrepreneurs, but rather the development of the ability and facility to manage risk and change, to see and seize opportunity, and to be the drivers of creativity, innovation and ambition.

The drive to develop entrepreneurship in Europe was laid down as part of the Lisbon Strategy (2000) [9]; to make Europe the most competitive knowledge-based economy. This included a number of initiatives to promote small business in Europe in conjunction with the Action Plan on Entrepreneurship. The first action, 'Entrepreneurial Mindset' which "seeks to promote awareness of the entrepreneurial spirit by presenting best practise models and fostering entrepreneurial attitudes and skills among young people" (EurActiv, 2004) forms the backdrop of the SENSAS (Sensibilisation des Apprentis à l'esprit d'entreprendre) project to be presented here. In this project entrepreneurial spirit is defined as:

*the mentality which leads a passive individual to take initiative, to rise to challenges, and to become the driver of their own personal and professional future. This "mentality" is expressed through entrepreneurial qualities which can be classified in competences and attitudes related to the entrepreneurial spirit.*

Therefore entrepreneurship has become important at policy level .Firstly, in terms of enterprise creation, it is recognised as key for employment growth and effecting structural change. Secondly, in order to encourage existing firms to become more entrepreneurial as a means of enhancing international competitiveness. The SENSAS project looks to facilitate the implementation and effectiveness of these policies by concentrating on the development of an entrepreneurial spirit, for those who will drive economic development; to prepare them to develop new activities, to drive innovation, and even to create new business. One group who have not yet been addressed in these policy actions are apprentices or other similar groups of young people who take part in education and training that involves a workplace learning component.

### **3 APPRENTICESHIPS IN EUROPE**

Apprenticeships have been an important part of the vocational education and training system for hundreds of years, delivering the experience of the workplace and supplying the learner with generic

employability skills and job specific qualifications. In recent times, changing socio-economic conditions and forces such as globalisation and the European credit crisis have meant that many countries are reviewing current apprenticeship models [10]. Two models of apprenticeship pre-dominate across Europe the demand led Dual system and the supply led system.

In the dual system, countries such as Germany, Austria, Switzerland and Denmark, apprenticeship is largely demand led where employers offer apprenticeships to approximately two thirds of young people. Under the German system learners prepare from secondary school for apprenticeship, enter vocational secondary school and apply for an apprenticeship with a company. Thereafter attendance in a Berufsschule for one day and four days in the work place is common. Steedman (2005) [11] suggests that the dual system is categorised as one with high employer commitment and low higher education relationship/progression. The dual system has, over the last number of years, seen difficulties in achieving the employer-apprentice match due to stronger world competition and pressure on costs associated with apprenticeship training.

The supply led system used in France, UK and Holland utilises employer organisations, state funded training centres and funded training in private organisations to ensure a supply of apprentices. Steedman (2005) suggests that supply led expansion has stabilised or slightly increased numbers entering apprenticeship in these countries. Re-alignment over previous years within this approach means that vertical integration, in this low employer commitment model, with Higher Education (HE) is more pronounced.

In Ireland a major discussion is underway to redefine the apprenticeship model as employer demand led apprenticeships are rapidly decreasing and the final vocational apprenticeship certificate has failed to become a 'gateway' award to HE. The move to a more supply led vertical integration approach with strong links to HE allowing full progression from apprenticeship is being proposed by many. A core model being discussed for all re-defined apprenticeships is entrepreneurial skills.

#### **4 SENSAS PROJECT**

The SENSibilisation des Apprentis à leSprit d'entreprendre (SENSAS) project is based around the notion of fostering entrepreneurship, or the entrepreneurial spirit, among young people, in line with the 2004 "Action Plan: The European Agenda for Entrepreneurship". In this specific case the focus is on apprentices, who are in direct contact with both the worlds of work and training by virtue of their position in work-linked training programmes. The means to do this is by way of the apprentices' own teachers and trainers as well as the apprentices themselves. As such, this project will target trainers, to enable them to foster the idea of entrepreneurship amongst their students and to equip apprentices with an entrepreneurial spirit that they will employ in the real world. The specific project objectives are:

- To develop the entrepreneurial spirit among young people and in particular apprentices on training programmes
- Promoting awareness of the entrepreneurial spirit among teachers
- Transfer existing pedagogical tools, identified by the partnership, to new sectors of the population
- To favour the creation of a new business or buying of an existing company.

There are two main products or outputs anticipated by the partners for this project. These are:

1. A pedagogical tool kit to raise awareness in entrepreneurial spirit comprising of;
  - The E book: fostering an entrepreneurial mindset
  - The E rocket: Entrepreneurship rocket
  - B4AD: Business for a Day
2. A computer software role playing tool

## 4.1 The Partnership

The partnership comprises six parties as listed in table 1 below. The working languages are both English and French. For each work package one partner has primary responsibility and all partners are involved to some extent.

Table 1. Partners and associated work packages

Number	Partner	Country	Sector
0. Promoter	Chambre de Métiers et de L'Artisanat de Vaucluse (CMAV)	France	Chamber of Trades and Craft
1.	Institut wallon de formation en alternance et des indépendants et petites et moyennes entreprises (IFAPME)	Belgium	Walloon Institute of Training for Independent Companies and SMEs
3.	BE Soft	France	Business education software
4.	Dublin Institute of Technology (DIT)	Ireland	Education and Training
5.	Global Human Development (GHD)	Portugal	Work placement, exchange, mobility
6.	Länsstyrelsen i Västernorrland län (CAB V)	Sweden	County administration board

## 4.2 Target group

This project is located within the area of continuing education for teachers and trainers. It targets the following groups:

- Trainers of apprentices (general subjects and business studies)
- Apprentices (all levels)
- Apprentice training centres or training providers
- Teacher/trainer training centres

The training needs of apprentices, in terms of entrepreneurial spirit, range from the development of their self-confidence, motivation, sense of responsibility, resourcefulness, introduction to the notion of a life plan, and skills development such as interpersonal skills related to the management areas of how a company is run. The first training package (tool Kit) developed as a means of raising awareness in entrepreneurial spirit comprises the E book, E rocket and B4AD packages.

The E Book introduces the concepts of Open for Business, the Pyramid of Entrepreneurship, the Entrepreneurial Continuum, the 5 Paths of Learning and Just Do IT! While the E rocket contains three steps of activities, that raise awareness about self knowledge; peering and networking; creativity and entrepreneurship. These lead to the Business for a Day which develops a business idea, implements it and before the day is over, closes and evaluate the experience.

The second tool is a computer role playing game that was developed by BeSoft (France) to raise student awareness of business management. The computer role playing model has been introduced to apprentice trainers to familiarise them with the software before testing it with apprentices.

The teacher/trainers' training needs were identified as requiring an understanding of the notion of entrepreneurial spirit and the ability to transfer that to the apprentices. As well as training in relation to tools that integrates business management as well as training on the general notion of entrepreneurial spirit.

Apprentices, in particular, were targeted because they are in direct contact with the worlds of work and training. In addition to the identified target groups of apprentices and their trainers, the outputs of this project could be broadened to reach regular third level students (of business or commerce for example) as well as secondary school pupils and their teachers or lecturers. Once the project tools have been tested by the pilot group, it is intended to target trainers and apprentices of apprentice training centres as well as national training bodies.

Table 2 below presents a SWOT analysis of the project, providing a brief overview of SENSAS and its potential in the current social, economic, cultural and political context.

Table 2. SWOT analysis SENSAS

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>➤ Access to highly motivated and experienced apprenticeship trainers</li> <li>➤ The expertise and insider knowledge of the partners</li> <li>➤ The multicultural diversity of the project partners</li> <li>➤ DIT potential to offer this training as a Continuous Professional Development (CPD) award at level 6 and 7 of the National Framework of Qualifications (Level 5 of the EQF).</li> <li>➤ The partnership has access to large number of apprentices via their institutes and networks</li> <li>➤ Integration with existing training/learning curricula in partner institutes</li> <li>➤ Focus on entrepreneurial values that could be used in different learning/training environments</li> <li>➤ Modular content that could easily be adapted to different target groups.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computer literacy essential by the target population for use of the software</li> <li>➤ Language diversity in the target population</li> <li>➤ Differences between national training systems</li> <li>➤ Lack of more sector-specific training with a narrower focus that is complemented by technical content e.g. management and marketing</li> <li>➤ Content and methodology of training No. 1 may be too flexible/informal for some of the partner markets and training culture.</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>➤ Economic downturn forcing people to become entrepreneurial</li> <li>➤ Apprenticeship is a key growth area for entrepreneurship</li> <li>➤ General labour shortage and specific skills deficit</li> <li>➤ SENSAS project output could be added to existing curricula to provide a real “bridge” to the labour market</li> <li>➤ High numbers of apprentices in partner countries with no access to specific entrepreneurial programmes</li> <li>➤ Opportunity to pilot project output in several environments before presenting to the market</li> </ul>	<ul style="list-style-type: none"> <li>➤ Economic downturn means many apprentices out of work</li> <li>➤ Fewer employers due to downturn in construction industry</li> <li>➤ High numbers of EC projects/institutes targeting entrepreneurship</li> <li>➤ Employment centres offering similar short-duration training courses</li> <li>➤ Consulting companies focused on providing similar services to clients.</li> </ul>

## 4.3 Outcomes

### 4.3.1 Training 1 in Entrepreneurial Spirit

The first training programme took place in Charleroi, Brussels in September 2009 with a number of trainers from all of the partner countries. As a result there are now 13 certified trainers in the partnership, who are qualified to train students in entrepreneurship spirit. This training contributes several components to the final SENSAS project tool kit

- E-Book
- E-Rocket
- 'Business for a Day' Manual

Trainers for this part of the project must fit a specific profile that requires them to have proficiency in English; have experience of working with young people and be motivated to transfer the concept of entrepreneurial spirit.

The Portuguese partner, GHD, has one certified trainer. It is planned to roll out this 'Training 1' in April 2010 within two business centres, one which caters to entrepreneurs and the other which is an employment and training centre.

IFAPME, the Belgian partner, has four certified trainers. They plan to increase this number by organising several three-day training sessions, the first of which will take place on 23<sup>rd</sup> April 2010 with 10 trainers from 10 different training centres that form part of their network. On 4<sup>th</sup> May 2010 they will hold a 2 day seminar with 20 participants to inform them about the concepts of entrepreneurial spirit.

Additionally, training 1 will be tested out with a group of apprentices who will participate once a week at the training centres. As well as this IFAPME is also training mentors who work with apprentices and young trainees as well as businessmen to pass on this entrepreneurial spirit.

The Swedish partner has five certified trainers. They are working with two vocational educational schools to test both training 1 and training 2. This will commence in April/May 2010 in order to fit in with the workings of the normal school curriculum and will cover initially 20 students with a plan to follow up with another 20 students. Sweden has launched a New National Plan for Entrepreneurship which is aimed at students from the age of 16, the SENSAS tool kit could contribute to the roll out of this across school curricula. There are also plans in Sweden to combine both training 1 and training 2 into a programme of study for the unemployed.

DIT, the Dublin Institute of Technology in Ireland, has one certified trainer. Training 1 has been tested with two levels of apprentices as well as one group of undergraduate students from Building Services Engineering programme. This is a total of 46 students. Three participant models are currently being developed to allow the roll out of the B4AD element within the requirements of the DIT. Further the DIT also has plans to target unemployed apprentices through the labour activation programmes now underway in Ireland and include SENSAS as an element of a greater award or qualification.

CMAV, the lead partner from France, has two certified trainers. Testing of this training has been carried out by these trainers between October 2009 and March 2010 with three classes, therefore 84 apprentices. Students were evaluated after the training using the evaluations from the tool kit. Trainers found that certain exercises had to be adapted to the capabilities of the group. They also found that the students could easily express themselves and they were eager to get involved. They displayed a great deal of creativity and were quick to present their final business products.

### 4.3.2 Training 2 Business Simulation Game

In November/December 2009 training 2 was delivered to 13 trainers from the partner countries in Avignon, France. This is software training of a business simulation game.

GHD, Portugal had one trainer trained, and plans to carry out training 2 in June 2010.

IFAPME, Belgium had 4 trainers attend the 'Training 2' session. They have tried the programme out with colleagues already. From 2<sup>nd</sup> April 2010 the software will be used with adults taking a management and accountancy course as well as young adults in their first year of accounting.

Sweden had three trainers attend 'Training 2'. These trainers have tested the software in order to familiarise themselves with it prior to training students. These three trainers will use the software with students from the two vocational schools in 'Training 1' and with the students who have already undergone 'Training 1'. These students are aged between 15-20 years old. One group will be third



year accountancy students (17-19 yrs). This training will also involve 20 students initially with plans for another 20 students, starting in April/May 2010.

DIT had three trainers trained in the use of the software. The software was tested in February 2010 with these three trainers for them to become familiar with the software once more. Two additional lecturers were introduced to the software by these trainers as a test. The software has been tested with 32 apprentices divided into teams of 3-4. The DIT is also considering this for those unemployed apprentices involved in the Labour Activation Scheme.

CMAV had two trainers in Avignon. They will test the simulation game with a group of 10 female florist apprentices on 7<sup>th</sup> April 2010 for a full day of 7 hours.

## 5 CONCLUSIONS

The Partners in the SENSAS project have developed and tested the pedagogical toolkit with a range of apprentices and undergraduate students within the partner countries. Initial feedback has been positive across all activities. From October 2010 the toolkit will be available for roll out throughout the EU member states. SENSAS is seeking partners to participate in the introduction of the toolkit within the target audience group. Further details can be obtained from the SENSAS website.

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