

## Methodology and Evaluation of Entrepreneurship Courses

**A. Herrero de Egaña Espinosa de los Monteros**

alherrero@cee.uned.es

*Facultad de Ciencias Económicas y Empresariales  
Universidad Nacional de Educación a Distancia (UNED)  
Madrid, 28040, Spain*

**Cornelis Adrianus (Kees-Jan) van Dorp**

kees-jan.vandorp@eadtu.nl

*European Association of Distance Teaching Universities (EADTU)  
Heerlen, 6419 AT, The Netherlands*

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### Abstract

Creating a new business is a process. However, there is no magic programme that will guarantee you a new successful business. The process of creating a business is highly stochastic (not all business ideas make it) and iterative (based on what you learn as you proceed, you will likely have to modify your thinking and repeat parts of earlier steps). This paper explores the role of academics in this process, the economic literature related to entrepreneurship education, and the main results from the (virtual) pilot course on entrepreneurship, as organized by Universidad Nacional de Educación a Distancia (UNED) in the project Cross Border Virtual Entrepreneurship (CBVE). This CBVE project has been co-funded by the Lifelong Learning Programme of the European Commission under the Erasmus strand: Cooperation between Universities and Enterprises.

**Keywords:** Flexible, Open and Distance Education, Entrepreneurship, Virtual Business Planning.

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“What we need is an entrepreneurial society in which innovation and entrepreneurship are normal, steady, and continual” (Drucker, 2001).

### 1. INTRODUCTION

For Europe to realize the Commission’s vision of becoming the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion, the predominating challenge of global competition and demographic change can only be faced by unconventional methods for educating, training and retraining of the European labor force. It is reported though that universities encounter difficulties herein i.e., in effectively responding to the lifelong learning paradigm (Com, 2006; 208). Indeed, a number of conventional universities are still in the strategy of educating traditional student cohorts in the age category of 18-25 without any extended flexibility.

To delineate this would imply that a vast number of potential (lifelong) learners will not get served. Demographics and global competition however make the necessity of reaching those learners very clear (Com, 2005; 24). With the number of learners outside the traditional cohorts to increase, the need to act on the development of their skills is of vital interest to the long-term competitiveness of the Union. Moreover, the necessity is particularly clear whereas it concerns the development of entrepreneurship skills and entrepreneurship competences. Small and Medium sized Enterprises (SMEs) in Europe constitute almost 99% of all enterprises and two thirds of all employment i.e., 75 million jobs (EC, 2006). Entrepreneurship is truly a vital force in

economies of developed countries and developing economies. It is a subject of great importance, placed high upon the agenda of the European Commission. Essentially, entrepreneurship refers to the creation and management of new business ventures by either an individual or a team. Though entrepreneurship is not only limited to new business start-ups, it also includes intra-organizational out-of-the-box thinking i.e., innovative entrepreneurship and associated risk taking, activities particularly contributing to the long term competitiveness of larger organizations.

UNED has been collaborating fruitfully with partners of the European Association of Distance Teaching Universities (EADTU), so as to develop innovative education models, with the objective of enhancing students employability. In 2006, the EADTU started its first collaborative European employability project with UNED, stating the objective to facilitate (distance education) students to enter into online working, stimulate their employability, and provide the associated distance education systems with increased business and market connectivity by means of flexible modality internships. This first project Cross Border Virtual Mobility (CSVM), signaled the launch of a wider European endeavor, in which European projects such as Cross Border Virtual Entrepreneurship (CBVE) (Dorp, April 2008; Dorp, September 2008; Herrero de Egaña, 2007), Cross Border Virtual Incubator (CBVI), and the Employability Clinique, alias I2AGORA, are granted a rightful place.

All initiatives mentioned, are co-funded by the European Commission under the Lifelong Learning Programme i.e., Leonardo da Vinci, Erasmus, and KA4 Multilateral Projects. These projects are executed in collaboration with excellent partners from NL, PL, ES, EE, IT, BE, RO and HU. These partners have proven to be reliable in their collaboration in the field, and as to having their own track record of European projects. This paper will now showcase the Universidad Nacional de Educación a Distancia (UNED) as one of the partners in delivery of flexible modality education, particularly with regard to self-employment education. The UNED will present their CBVE results pertaining to the development and execution of pedagogically-rich master class materials and associated pilot(s) on virtual business planning. Dissemination of intermediate and final results has been done in May 2009, at the CBVE multi-country stakeholder seminar in Leuven (BE), in front of European Commission representation (EACEA), also at the 23rd ICDE World Conference M-2009 in Maastricht, and finally during the ICL 2009 Conference in Villach.

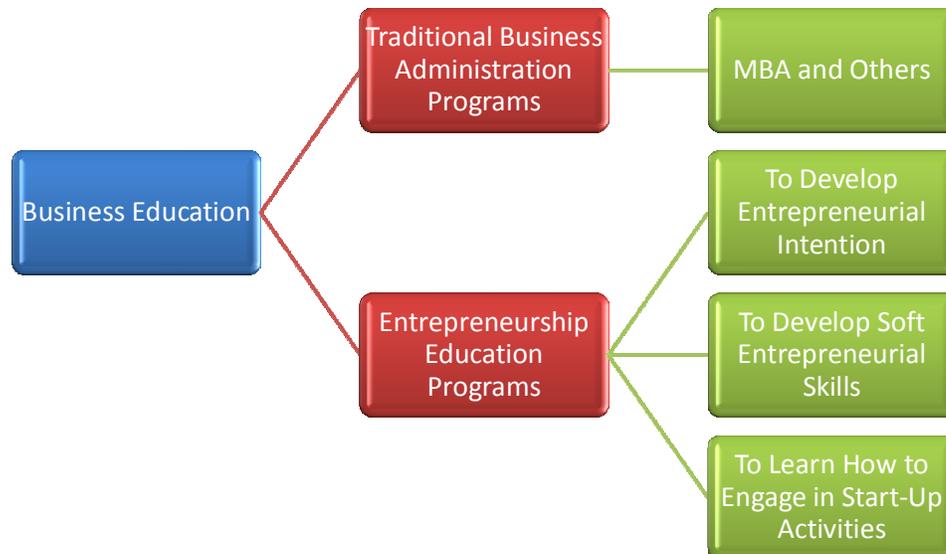
Traditional business programmes have come under increased criticism for failing to be relevant to the needs of today's changing business environment for four main reasons:

- They do not stress the cross-functional complexity of business problems (Solomon, 2007)
- Business school courses are highly structured and do not often pose problems which require novel solutions (Sexton and Bowman, 1984)
- The lack of creativity and individual thinking required (Solomon et al., 1994)
- They are not designed to promote creativity, innovation and self-employment (European Commission Final Report of the Expert Group, 2008)

Business schools are the paradigm of Traditional Business Education. A business school is a university-level institution that confers degrees in Business Administration. It teaches topics such as accounting, finance, information systems, marketing, organizational behavior, strategy, human resource management, and quantitative methods. Traditional business education is designed to meet the needs of well established firms and government institutions. The core management courses offered in traditional business programmes is essential for success in any business career (Block and Stumpf, 1992); but fails in other areas, because there are fundamental differences between business principles applied to new ventures and those applied to large corporations (Davis et al., 1985) and also fails in the challenge "to generate more quickly a greater variety of different ideas for how to exploit a business opportunity, and the ability to project a more extensive sequence of actions for entering business" (Vesper and McMullan, 1988).

Entrepreneurship education programmes exist most generally within established university business schools and should be considered as part of business education, but admitting that is a

different field. Another reason to consider that entrepreneurship education as part of business education is that the origins of entrepreneurship education are linked to Harvard Business School. In 1947 Myles Mace introduced an elective subject in the MBA titled The Management of New Enterprises, the course has remained, in various incarnations, a fixture of the HBS curriculum for decades and is regarded as the foundation of the School's extensive entrepreneurial management programme (Katz, 2003).



**FIGURE 1:** Business Education Classification

What makes entrepreneurship education distinctive from traditional business education is its focus on realization of opportunity, where management education is focused on the best way to operate existing hierarchies. 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. (Commission Communication "Fostering entrepreneurial mindsets through education and learning", Com, 2006, 33 final). As the field has been evolving entrepreneurial education, been seen as only about starting up business ventures, has included other questions such as (Solomon, 2007):

- Skill-building courses in negotiation, leadership, new product development, creative thinking and exposure to technological innovation
- Awareness of entrepreneurial career options
- Sources of venture capital
- Idea protection
- The characteristics that define the entrepreneurial personality
- Challenges associated with each stage of venture development

According to Fayolle and Klandt (2006), in contemporary entrepreneurship education, entrepreneurship can be viewed from three different angles, namely as a matter of culture or state of

mind, as a matter of behavior, or as a matter of creating specific situations. Education focused on entrepreneurship as a matter of culture/state of mind encompasses those aspects that focus on values, beliefs and attitudes associated with entrepreneurship (i.e. entrepreneurial mindset, spirit or identity). Entrepreneurship education focused on behavior deals mostly with specific skills in relation to entrepreneurial behavior, like seizing opportunities, making decisions and social skills. Finally, entrepreneurship education focused on creating specific situations, concerns the creation of new firms and entrepreneurial situations (e.g. new ventures, corporate venturing). This point of view coincides with that of the Commission (Com, 2008; 33), which classifies entrepreneurship courses in three categories:

- Courses to develop entrepreneurial intention
- Courses which develop soft entrepreneurial skills
- Courses that teach how to engage in start-up activities

Entrepreneurship courses are becoming part of the educational offer of universities of the United States and Europe, but this fact does not mean that currently the teaching of entrepreneurship is yet sufficiently integrated in higher education institutions' curricula (Com, 2008; 33), and that there is consensus on just what exactly entrepreneurship students should be taught. Though there is nothing unusual about this, if we consider that the study of entrepreneurship is still in its infancy at university (Brazeal, 1999), or at least far from maturity (Robinson, 1991).

There are different methodologies, contents and support materials that could be used by entrepreneurship educators to coach students. After analyzing the situation in the United States and in Europe, UNED developed its own model for an entrepreneurship course. In particular we analyze the different predominant methodologies in either area and compare them to the one used at UNED. For entrepreneurship educators, the challenge is to prepare entrepreneurship students to start their new ventures using the right methodology, but entrepreneurship courses, studies and programmes should also provided the students with the possibility of starting their own business. The evaluation of entrepreneurship courses should consider both dimensions.

This paper is organized as follows. The introductory section has briefly summarized the main results, the relevant literature necessary to introduce the problem and explained the paper's significance and contribution to entrepreneurship. In Section 2 we describe the UNED model for entrepreneurship and we highlight what makes the UNED methodology different. Section 3 shows the literature about evaluation methods and compares the UNED methodology with other methodologies in the USA and Europe. Section 4 is devoted to the concluding remarks.

## **2. METHODOLOGY**

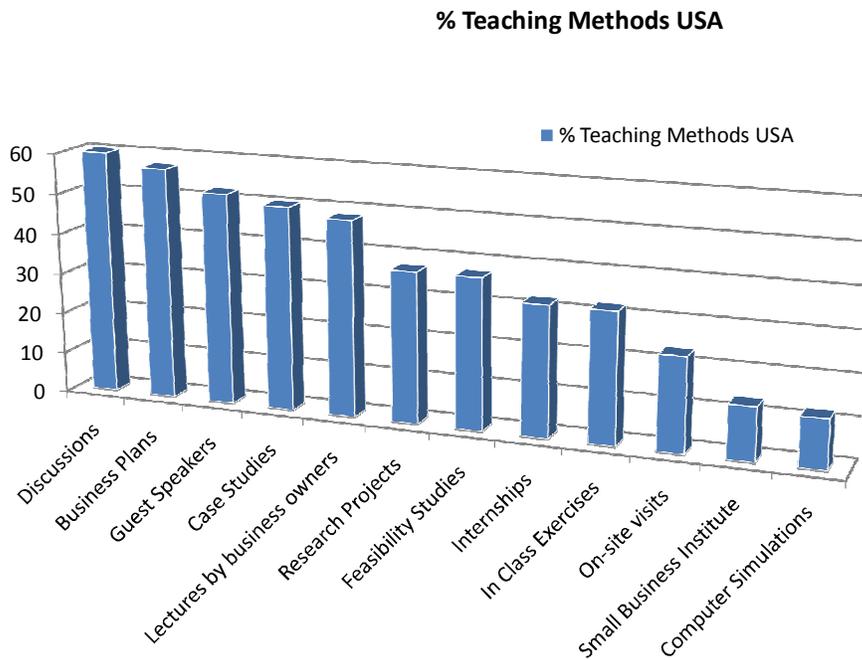
This section is divided in two parts: the first one describes the methodologies used in the USA and Europe, and the second shows how the UNED course was organized and the distinctive features about UNED's methodology.

### **2.1 Methodology in the United States of America and Europe**

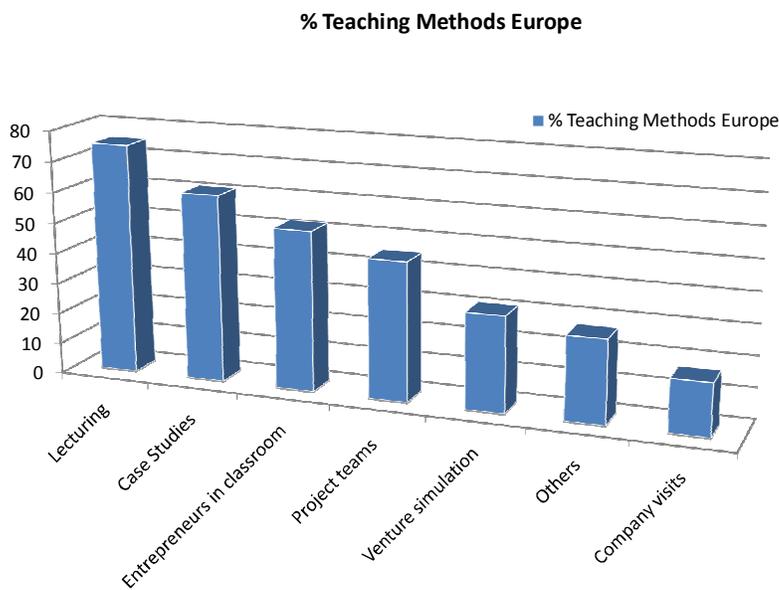
We have studied the USA and European areas because we believe they have been and are fundamental in the development of the idea of the entrepreneur and because of their predominant role in providing good quality education. There are other parts of the world with a rising and impressive economic weight, but we do not believe that their study could be useful for our purpose because of the fact that their political, economic and educational systems are quite different from a system in which entrepreneurs are indispensable or important; and also, because these kind of societies are far away from that state of the economy, which we call the economy of knowledge.

Figure 2 represents the most popular teaching method in entrepreneurship courses/curriculum in the USA. Figure 3 reflects that of Europe. Figure 4 indicates the most common type of teaching

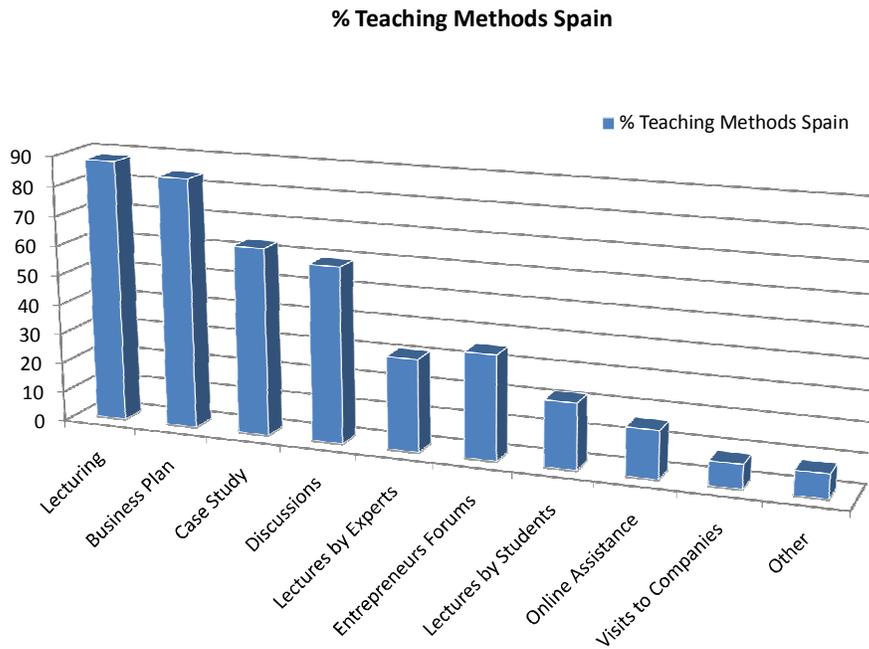
entrepreneurship courses in Spain. Figure 5 shows a comparison of the most common type of teaching by geographical area.



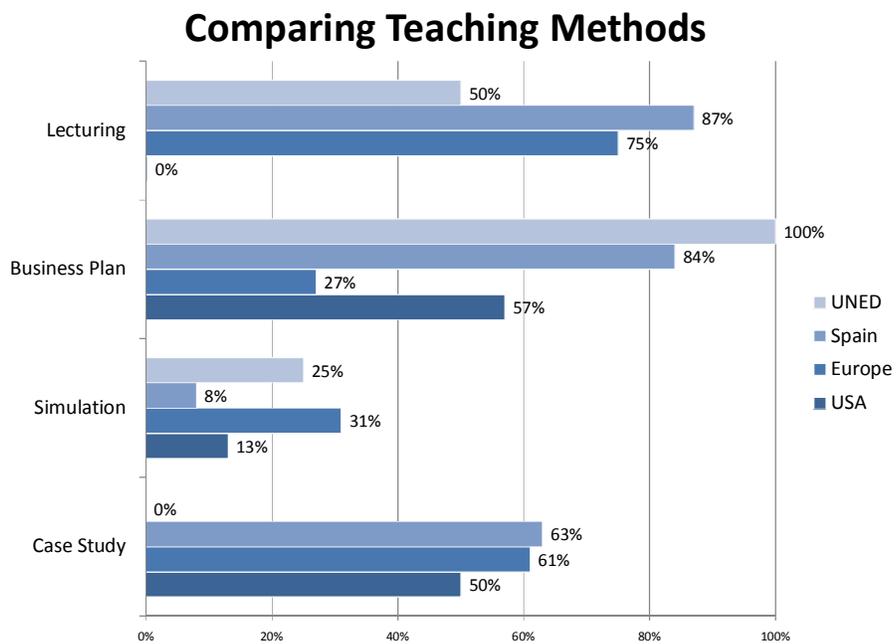
**FIGURE 2:** Teaching Methods USA



**FIGURE 3:** Teaching Methods Europe



**FIGURE 4:** Teaching Methods Spain



**FIGURE 5:** Comparison of Methods

The analysis of the 2007-2008 survey indicates that the traditional teaching method of requiring students to create business plans still exists as a foundation for teaching entrepreneurship and small business management. Yet, the data also shows that lecturing and simulation are also popular.

## **2.2 UNED's Method**

The aim was to create a virtual course for business planning, supported by pedagogically-rich master class materials, designed for distance-learning students, and which could guarantee that students would be able to develop entrepreneurial skills, and in some cases competences as well. The course design needed to be different for distance-learning students because of their special (off-campus) features. For example, the traditional business simulation software is particularly designed for on-campus usage, so as to allow for the interaction between instructors and students; in distance education though, this is not always possible. In that case the simulation software would have to allow the student to work alone without the interaction of the instructor.

The core scheme of the course was to train students to be able to develop a Business Plan, which sometimes could lead to new business creation among participants if they join an Administration Programme for Business Creation or if they are capable of obtaining financial support from financial institutions. To qualify for entry, applicants did not require a special qualification. They just needed to have a business idea at feasibility or pre-feasibility stage. The programme was designed for distance and virtual education, thus participants could be employed, unemployed or continuing their education. The total programme duration has been about six months. From the methodological point of view the aim of UNED was to craft a course that could meet the rigors of academia while keeping a reality-based focus and entrepreneurial climate in the learning experience environment (Solomon, 2007; page 169).

The course is divided in three phases. In phase I, students must present the business idea which is evaluated and criticized by the teachers of the course. The students' ability or capability as entrepreneur is subsequently evaluated using a test. In phase II, after the review of the course materials, the student starts the business plan. In this phase, the student seeks advice from the teacher, or from experts and professionals from a particular sector. Once the business plan is finished the teachers evaluate the plan. The teacher either accepts or rejects it. Phase III, commences when the student obtains the report from the teacher. Once the business plan is accepted, the student applies Business Simulation Games to test it profoundly. To complete the business plan, the student communicates his or her results of the simulation in a final report.

So, UNED's course combines the three most common teaching methods. Our course still relies on a lecture method to give students a basic knowledge of the subject: UNED has developed with Uninettuno a Virtual Master Class. Online delivery of the course and computer based materials are part of the teaching strategy. It is now largely accepted that computer-based materials may be used at various levels to facilitate learning. This approach is being adopted for large classes in entrepreneurship education (Cooper, 2007). Recent changes in higher education, the demands of the knowledge society and the increased need for students to become autonomous, reflective e-learners has increased the need for academics to understand the learning process (Webster and Sudweeks, 2006) which is very specific in our case. UNED's course is not designed to teach economy or business management and that is why after a two weeks of lecture about the business plan and some economic and management concepts the student must start developing his business plan.

Of course entrepreneurship methodology often falls in the same trap as that of traditional business education, requiring students to write and present a business plan in teams, offering the illusion or reality of right answers (Bird, 2002; page 210). Sometimes these kinds of courses rely heavily on theory and are nothing but management theory course adjusted to give advice for

entrepreneurship. In many cases, entrepreneurship programmes educate about entrepreneurship rather than educate for entrepreneurship (Kirby, 2003).

Garavan and O' Cinneide (1994) suggest that the best methods suited to an entrepreneurial learning style are active-applied and active-experimentation (Plaschka and Welsch, 1990, p. 62) said that what is needed is a more proactive, problem-solving and flexible approach rather than the rigid, passive-reactive concept and theory-emphasized functional approach". It is true that the business plan by itself does not assure to achieve these objectives and that is the reason for developing the phases approach.

Typically, those persons predisposed to act in an entrepreneurial manner are depicted as possessing certain personality traits including: creativity; easily bored; independent nature; leadership aspirations; risk-taking propensity; self-motivation; and self-realization through action (Chell et al., 1991; McClelland, 1961; Schumpeter, 1934). Clearly such persons are likely to possess an active-oriented learning style, and this is highly relevant when you must design a course. The role of the Master Class continues in this phase and is very useful because it provides the student with links to a lot of documents, resources and knowledge that the student can use when needed: knowledge is useful when deployed in conjunction with a specific problem. Consequently, within the context of the 'learning organization' the student/lecturer relationship is of a highly interactive nature. In effect the lecturer's classroom role is largely that of a mediator and process consultant (Morrison and Johnston, 2003).

The UNED course is not designed to teach economy or business management. That is why after two weeks of lecture about the business plan and some economic and management concepts, the student must start developing his or her business plan. Preparing a business plan draws on a wide range of knowledge from many different business disciplines: finance, human resource management, intellectual property management, supply chain management, operations management, and among others marketing. You may expect the student to become an expert in a wide range of subjects. This is another reason as to why the role of teachers and professors is to act as consultants for the student. Such approach to learning will help to keep a reality-based focus and entrepreneurial climate, because the student has to discuss the different parts of the plan with teachers that have academic and business experience. The students have to discuss different parts of their business plan with experts in the matter, just like entrepreneurs do in real life.

Entrepreneurship professors met the same difficulties to teach that the professor of traditional business education found when they realized that there were no textbooks suitable to a graduate programme in business. The Business Plan is the method that has helped entrepreneurship education to face this problem, but it has a weakness which is that the teacher has to evaluate a business plan without knowing with certainty its future performance in the real world. Unlike other subjects or matters, where exists a body of accepted knowledge which the teacher can use as a set of guiding principles for his role of evaluator, entrepreneurship courses in business creation has not and has adopted the method used by science to produce new knowledge applying it to developed the hypothesis of the new firm. Science relies heavily on experimentation, business creation courses must rely on simulation (phase III) and this is the very weakness of the process because simulation in social sciences is not as reliable as experimentation in science. There are critical factors (Hindle, 2002) for successful use of simulation games in teaching entrepreneurship but in the case of virtual courses the software must in addition permit the student to work alone. The best option to run business games in distance education is the original Web Based Model (Bernard, 2006).

The combination of the three most common methods of teaching is the distinctive feature of UNED's course, which could be complemented by other methods.

### **2.3 Case Study and Entrepreneurship**

Traditional business education centres teach the use of case studies. Case study methodology started when Harvard Business School was founded. The faculty quickly realized that there were no textbooks suitable to a graduate programme in business. Their first solution to this problem was to interview leading practitioners of business and to write detailed accounts of what these managers were doing. Of course, the professors could not present these cases as practices to be emulated because there were no criteria available for determining what would succeed and what would not succeed. So the professors instructed their students to read the cases and to come to class prepared to discuss the cases and to offer recommendations for appropriate courses of action. Basically that is the model still being used.

Case method teaching as developed by the Harvard Business School is centered on the performance of the professor. Students prepare for class by reading a case study written by experienced case writers, select a strategy and prepare to defend it. If time permits, they discuss their work with a few classmates before coming to class. The real action is in the classroom. The professor, who is a skilled discussion leader, asks provocative questions, pits one student against another, compares alternative solutions and goads the class into reaching significant conclusions (Bonoma, 1989). Case study teaching patterned on the Harvard Business School model deprives students of an authentic learning experience. The teacher is too much of a star and the students are too passive. As a result, the students fail to develop important skills that they need for success in their business careers.

The case methodology is not suitable for entrepreneurship education even if entrepreneurship professors could develop specific case study for entrepreneurs. Entrepreneurship education must use a methodology that can meet the needs of today's changing business environment, stress the cross-functional complexity of business problems, which permits individual thinking and creativity and that, will allow the student to pose novel solutions to new problems.

## **3. EVALUATION**

Another objective of this paper is to deliver and evaluation report on the final results of the pilot-run virtual business planning and of the most suitable evaluation method for this kind of courses. According to our point of view, to evaluate training courses is to relate the programme outcomes directly to the objectives of the course. But before doing it, we should have a look at the methodological issues surrounding the evaluation of business courses.

### **3.1 Case Study and Entrepreneurship**

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

The OECD has highlighted the need to develop appropriate measurement and evaluation of the impact, not just outputs, of entrepreneurship programmes (OECD, 2008: Policy recommendations chapter 5). Currently there is little evaluation of entrepreneurship education programmes and almost no statistical evidence, outside of some output indicators that may or may not be the right measures. Without clear objectives and measurement, support for programmes may be difficult to sustain:

- As we have seen in the United States, entrepreneurship is a result of a long-developed cultural and education environment
- Europe has already had many "starts and stops", and needs to take a much more sustained and long-term approach

### **3.1.1 Purpose of the Evaluation**

Stake (1980) suggested that the purpose of evaluation should be to produce information that can guide decisions about modifications to a certain programme. This is an insider perspective to evaluations. Hytti and Kuopusjärvi (2004) have also mentioned:

- Marketing and public promotions purposes. Some programme promoters consider evaluation to be a good way of proving the results and quality of the training to other stakeholders since scientific evaluation (especially if carried by an independent party) can be seen as being objective as opposed to 'biased' marketing efforts.
- To report the activities taken.
- To measure the impact of programmes. Impact analysis to provide information of the impacts of an individual programme and/or institutional framework within a region/country for promoting entrepreneurship (for the policymakers). In this case the evaluator has adopted an outsider perspective to the evaluations.
- Financial reasons.

### **3.1.2 How to Evaluate**

The following methodological literature about evaluation approaches can be summarized:

- Storey (2000) and McMullan et al. (2001) suggest that the best means by which to evaluate training courses is to relate programme outcomes directly to objectives.
- Positive position. Wyckham (1989) notes that no universally accepted criterion, which can be used to evaluate the effectiveness of such programmes, has yet been identified. Wyckham has argued that such programmes are measured in three ways. First, the knowledge and skills of students are assessed through examination. Second, courses and teachers are evaluated through student evaluation surveys. Third, after the course has been completed, data on the employment and income status of the graduate participants can be obtained and evaluated.
- Subjective or questionnaire approach. Westhead et al. (2001) and McMullan et al. (2001) observed that initially researchers attempting to assess the outcomes of training programmes asked participants for their views.
- Longitudinal Study. One means of measuring the behavior of participants following completion of a training course is to employ a model such as that advanced by Jack and Anderson (2001). This is a five-step framework for assessing the effectiveness of entrepreneurship education and training programmes based on an earlier version developed by Block and Stumpf (1992). The model is comprehensive and emphasizes the measurement and impact of different elements of training courses over time, from the outset of a programme to beyond its completion. A number of authors have noted the lack of longitudinal studies conducted within the area of education and training for new business creation and a clear need to evaluate such programmes over time has been identified (Clark, Davies and Harnish (1984); Fleming (1996); Westhead and Storey (1996); Wyckham (1989)).
- Evaluation must be adapted to the objectives and entrepreneurial competencies to be developed (European Commission, 2008).
- Causality approach. Assessment of the relation between cause (Venetoklis, 2002) and effect (Hytti and Kuopusjärvi, 2004).

### **3.1.3 Questions for Evaluations**

The following indicators regarding questionnaires can be summarized from literature:

- An evaluation can be aimed at various points in the process: targets, performance, results or effectiveness of the programme (Laukkanen, 1996).
- Diamond and Spence (1983) acknowledge four basic types of questions for evaluation research: First, programme planning questions; second, programme monitoring

- questions; third, impact assessment questions; fourth, economic efficiency questions. The evaluation focus can be on individual entrepreneurship courses and programmes (quality and effectiveness) but also more broadly on the business link activities of universities and impact on society and economy (Volkman 2009).
- Evaluating quality, effectiveness and impact (Com, 2008; page 53).
  - Increase in knowledge and development of skills (Hytti and Kuopusjärvi, 2004).
  - Economic efficiency. Diamond and Spencer (1986).
  - The performance of university-business links or technology transfers (Nelson, Byers 2005; Wu, 2007).

### 3.1.4 Measures for the Evaluation Studies

For the programme planning purposes, it is quite customary that the participants (students, teachers, stakeholders) are directly asked questions about the programme. These questions typically centre on the different elements of a programme: contents (knowledge and skills the programme aims at providing), methods and materials (the way the knowledge and skills are learned/taught), teachers and tutors (those responsible for teaching/facilitating learning and their relationship with the students) and organization of the programme (the process, timing, rooms and facilities) (Hytti and Kuopusjärvi, 2004).

Monitoring evaluation provides a systematic assessment of whether or not a programme is operating in conformity with its design and whether or not it is reaching the target group. Based on the literature review, the monitoring studies frequently aimed at measuring and reporting the following: number of participants, recognition of participants (who they are), numbers of those returning to further training ('satisfied customer'), costs/participants (linked to economic efficiency), numbers of failed students, strengths and weaknesses of the programme.

Impact evaluation gauges the extent to which a programme instigates change towards the desired direction. This implies that we are not only interested in the effects, but also on their direction (Diamond - Spence, 1983). There are four ways of measuring impact:

- Several authors suggest measuring start-ups, new ventures, entrepreneurs and jobs (Com 2008). The start-up measure is suggested because it is concrete and relatively easy to measure.
- The measurement of attitudes, perceptions and intentions is frequently applied in programmes where the time lag is important in making it difficult to observe or to account for start-ups (Volkman, 2009; Hytti et al., 2004). Hytti et al. have interpreted that the underlying idea with measuring attitudes, beliefs and intentions is derived from the theory of planned behavior (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). The expert group has proposed the following indicators to assess the progress in entrepreneurial attitudes, perceptions and intentions: number of students taking entrepreneurship modules (before and after the programme, and compared to other target groups of students); the general population of higher education students (Com, 2008; page 56).
- Analysis of the causes for impacts. There is a need to assess the Causality relationship between the effect - in example, the emergence of start-ups - and the cause, an intervention aiming at increasing the number of start-ups, or if the companies would have been established irrespective of the intervention. The success rate of the programme will be better when the participants selected possess the necessary basic skills or motivation levels (Greimel, 1998).
- The quality of the start-ups and new workplaces (Volkman, 2009). Increase in knowledge and development of skills is measured assessing if the participants have learned to generate good business ideas and write successful business plans.

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

and profitability'. Diamond and Spencer (1986) divide economic efficiency studies into two different approaches: cost-benefit analysis, measurement of costs against the monetary value of the benefits and; cost-effectiveness: measurement of costs against the qualitative achievements understood as the progress towards goal achievement.

Indicators for measuring the performance of university-business links include commercialized inventions, the number of new patents or licenses, revenues and the number of workplaces created by the new start-ups (Volkman, 2009).

The evaluation of quality and effectiveness according to the point of view of the experts, must be adapted to the objective and to the entrepreneurial competencies to be developed. If the objective is to develop the entrepreneurial intention, the programme quality can be assessed through a questionnaire assigned to students to understand their perceptions of entrepreneurship, their self confidence to engage in an entrepreneurial activity and their perceptions of their capacity to detect opportunities and to exploit them.

If the objective is to learn how to engage in start-up activities, the evaluation can be based on student's performance in developing and presenting a business plan and their capacity to sell their project. However if the objective is to develop soft entrepreneurial skills, it will be more difficult to assess the quality of the programme, as little is known about the required entrepreneurial competencies and how to measure them. In this case, the assessment of the programme quality should be related to the pedagogies and the methods used.

### **3.1.5 Reviews to Evaluation Methods**

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

The limitations of adopting a purely subjective approach to evaluation are highlighted as follows by Westhead et al. (2001). First, there is the issue of whether the participants on a particular course are representative of the target population as a whole. Second, respondents to a survey can be tempted to give answers that they feel the evaluator wants, instead of an honest response. Third, the impact of a programme can only be judged by comparing it with what would have happened had the respondent not participated in the course. Fourth, failure to take into account the personal characteristics of individuals might lead to an exaggeration of the effectiveness of a programme. Fifth, researchers should appreciate that participants self-select participation in programmes, which can lead to inaccurate assessments being produced in the evaluation of courses. Sixth, the subsequent behavior of respondents is actually more informative than the reporting of their opinions. McMullan et al. (2001) indicate that it is likely that most evaluations will continue to employ this approach. However, they do advise that this type of subjective judgment should be confined to determining the satisfaction of participants, and should not be used as a proxy for measuring the performance outcomes of a programme.

There are possible sources of bias of the Longitudinal Study. Garavan and O Cinneide (1994) argue: 'longitudinal research designs, using control groups to compare participants with individuals who did not have entrepreneurial educational experience, are needed to examine the lasting effects of entrepreneurship education and training interventions'. Storey (2000) also advocates such an approach, but suggests that the most appropriate way to assess the effectiveness of support programmes is to include a control sample of matched firms that are identical on the basis of age, sector, ownership and geography. Ideally such matching should take place before a programme commences so that the two groups can be monitored over time. In practice however, such conditions may be difficult to satisfy. Even if such a methodological approach is adopted, researchers need to be aware of inferential problems, so despite the fact that the matching characteristics of the two groups are kept constant, there may be other ways in which they differ. With specific reference to participation in courses and programmes, Storey

(2000) suggests that motivation and selection might be differentiating factors. For example, those firms or individuals seeking assistance or attending courses might be more dynamic and growth-oriented and therefore more open to new ideas.

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

The start-up measure alone is considered to be too limited. It is necessary to take into account causality. To produce a large number of start-ups, is not enough. It was suggested that measures should be put in place to assess the quality of the companies e.g., by measuring the number of sustainable start-ups (companies that are on the market 3-5 years after the start-up), or by measuring if these start-ups are entering prospering or dead-end markets e.g., if university graduates are starting businesses mainly in the traditional service sector or in the high-tech sector (Rosa 2003). Furthermore, the number of jobs created (and the quality of these jobs) was also suggested as a measure reflecting also the question of 'quality' of these companies (Volkman, 2009). A processual approach is suggested to measure the different steps in the process starting from changes in skills, motivation and intentions (Hytti, 2004).

### 3.2 UNED Evaluation Method

Evaluation should assess the overall initiative of entrepreneurship education. Entrepreneurial Education should be evaluated assessing the organization that promotes the entrepreneurial initiative, the resources, the quality, effectiveness and impact of the programme, the methodology of the course and the services offered to the student.

#### 3.2.1 Indicators of the Organization in which the Programme is embedded

UNED offer is limited to a program of technology based companies within the institutional framework of OTRI (UNED) and to the offer of an elective course in business creation that will allow the student to obtain academic credits. UNED is also involved in the project Cross Border Virtual Entrepreneurship (CBVE).

Number of entrepreneurship programs in which the organization is involved.	3
Annual budget of the organization.	201,665,000.00€
Part of the budget dedicated to entrepreneurial programs.	<0.05%
Number of teachers dedicated to entrepreneurship.	4
Number of researches in entrepreneurship.	3
Number of persons that offer administrative support for entrepreneurship courses.	3
Number of students	179,385

**FIGURE 6:** Key Indicators UNED

Items	Indicator
1) Resources	Human and material resources
2) Quality and effectiveness	Methodology Services Students results
3) Degree of Satisfaction of students	Questionnaires
4) Impact	Economic Social

**FIGURE 7:** Programme Indicators

Resources	
Total Budget.	59,836€
Budget for Start-ups	-
Number of teachers	2
Number of researches.	2
Administrative support	1
Number of students.	14
Entrepreneurial and business experience of the teachers.	Medium
Experience of teachers in entrepreneurship education.	Medium
Facilities.	Enough
Online materials and Virtual platform	Yes
Network with business and administration.	Strong possibilities due to the links of the University

**FIGURE 8:** Resources

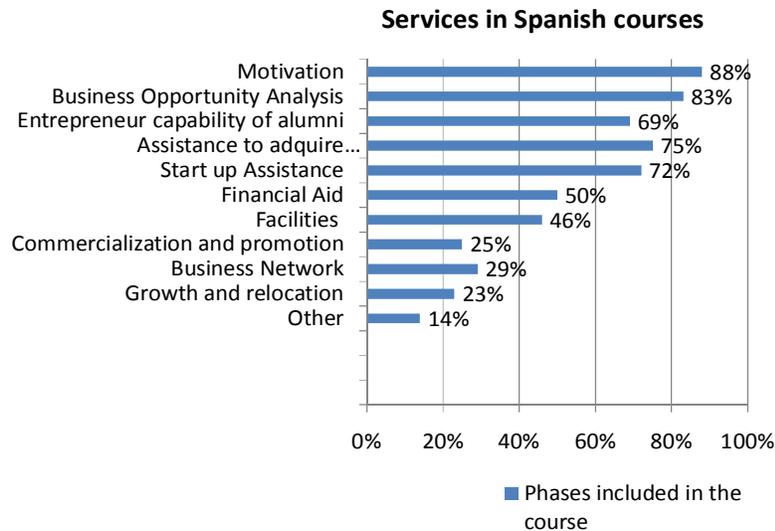
### Quality and effectiveness

UNED methodology has been described in section 2 and includes a combination of three of the most common methodologies that are being used in the most important geographical areas. According to the Final Report of the Expert Group (2008) evaluation of quality and effectiveness must therefore be adapted to the objective and to the entrepreneurial competencies to be developed. If the objective is to learn how to engage in start-up activities, the evaluation can be based on students' performance in developing and presenting a business plan and their capacity to sell their project.

Objectives	Method	Outcomes
<b>Compulsory</b>		
Assess their entrepreneurial competencies	Results of examination	57.14%
Screen business ideas and select the most potentially viable business project	Results of examination	57.14%
To be able to develop a Business Plan	Results of examination	50.00%
Entrepreneurial Skills	Results of examination and the kind of methodology (Business Plan)	50.00%
<b>Additional<sup>1</sup></b>		
Proposals presented to funding institutions	Number of students that have presented a proposal to a funding institution	0.00%-28.57%
Business Creation	Number of students that have started a business	0.00%-28.57%
Entrepreneurial Competences	Number of students that have had an accepted proposal from a funding institution	0.00%-28,57%

**FIGURE 9:** Programme Indicators

We, the authors of this article, have included only information about the services regarding the different entrepreneurship courses, from Spain. Only Spain is included, as the immediate environment and the competitors of this entrepreneurship course, are situated here (Figure 10). However, we do acknowledge that the phases of the course coincide with the phases of any standard course in Business Creation in the USA.



**FIGURE 10:** Services

The UNED course covers: motivation, Business Opportunity Analysis, Entrepreneurship capability of alumni and assessment of entrepreneurial competencies, and start-up assistance.

Start-up assistance could be considered included only if we consider the help that the teachers could give to the student that has joined an Administration Programme for New Entrepreneurs asking for funding for the new venture. The ideal way to implement our course is to make it coincide with any Administration Programme that could provide the necessary funding for the new entrepreneur. Most of the problems that the student will face alone in other circumstances could be solved with the help of the teachers of the course.

***The impact of the UNED course:***

Economic impact (Figure 11)

Concept	Number	% of students
Number of start-ups	4	0.00%-28.57%
Number of jobs created	?	?
Total revenue of the Start-ups created	?	?

**FIGURE 11:** Economic Impact

Economic quality indicators (Figure 12)

Concept	Number	% of students
Survival rate of the Start-ups.	?	?
Wage or income of the new entrepreneur after five years	?	?
Results in I+D	-	-
Results in commercial development	-	-
Number of patents	-	-
Number of innovations	-	-
Number of firms in traditional sectors	0-4	0.00%-28.57%

**FIGURE 12:** Economic quality indicators

Social impact of entrepreneurship indicators (Figure 13)

Concept	Number
Number of universities or organizations that imitate the program or course	-
Economic impact of the program reflected in the media and through other channels	-
New funds received from organizations (Administration, companies, ..)	-
Number of articles in JCR or other journals	-
Number of minutes, pages, and times about the program or course in the media.	24h
Number of conferences and seminars in which the program or course has been presented.	3
Number of students with curriculum in entrepreneurship	10
Number of students with entrepreneurship skills	10
Number of students with entrepreneurship competence.	4

**FIGURE 13:** Social impact of entrepreneurship indicators

The course and its methodology have been analyzed in different conferences and seminars (Leuven 2009, Maastricht 2009 and Villach 2009) for external appraisal and the outcomes of

training has been asking the participants for their views. The Video Lessons of the course have been internationally transmitted through RAINETTUNO.

#### **4. CONCLUDING REMARKS**

We have used the UNED course as an example to present our point of view of the ideal methodology and evaluation method that should be used in business creation courses and also as a proof that it could be put into practice with the normal resources available at university.

Creation of Business Plans is the most popular type of teaching method in entrepreneurship courses/curriculum offered by two- and four-year colleges and universities in the United States.

According to the survey requested by the European Commission, lecturing is the most common teaching method in entrepreneurship in Europe, followed by the use of case study. The teaching methods that are being used in Europe, based in the information provided by the survey requested by the Commission, coincide partially with the methodology that is being used by the traditional business education programmes and universities.

Creation of Business Plans methodology does not assure by itself the active-applied and active-experimentation learning style required by the entrepreneurial education. The approach of the course to the business plan is the key to the achievement of this goal.

In the case of a business creation course the course should lead to the creation of new companies. This objective has been fulfilled in some cases, with backing of financial institutions within the institutional framework of foundations or universities. In absence of this support, the teachers should help the students to use the different programmes for start-ups offered by the public administrations.

The course methodology proved very valuable: not only because is the combination of the three most common teaching methods but also because the course is organized to experience entrepreneurship rather than simply teaching economic knowledge. The weakness one may observe in the methodological scheme, is in the simulation phase because of the difficulty to find adequate software, and because sometimes it is very general while other software is too specific to meet the students' needs. This problem is not just a problem of computer science. Economy as a science must improve the methods supported by software. It is our believe that the simulation phase should provide details about the new firm's viability and not just train the student or give him or her more knowledge about the project.

The business idea should be studied more carefully. Although case study is not the right methodology for the overall course in this phase, it could be used to help the students learn more things about their business idea through the experiences of other people.

The selection of students could improve the number of start-ups because the teachers of the course could elect the students interested in starting a business and not just those interested in following another subject to increase their curriculum. In connection with this last idea we think that if entrepreneurial studies are to become a professional career for students, like the studies that are followed in a business schools, there is need for financial aid otherwise this kind of courses will be demanded but not by the best students.

Finance is as important as the business idea or methodology. However, finance is not going to present itself. The course should include a fourth phase dedicated to advice the students how to get the financial resources for their project or help them to do it. Another way to solve this problem is that the university could provide the students with a business incubator once they have finished the course. In any case the creation of entrepreneurial schools within universities is fundamental to act as the link between firms and students. It is very important to disseminate entrepreneurial activity in other kind of studies that do not have relation with economics and the

inclusion of business creation courses in their curricula is interesting from the point of view of social impact, but cannot substitute the creation of entrepreneurial schools.

For many of the studies, the evaluation has only lasted the length of the initiative, thus providing a one-off snapshot, carried out immediately after programme completion, rather than any attempt to track subjects over successive years. This is a failure of our course that should be corrected keeping in contact with the new entrepreneurs. It is true that the most common focus of evaluations is on the rate of business start-up as an impact measure. This is not the only factor, and in our study we have mentioned many others, but from the economic and political point of view is the most interesting one.

Online distance education courses in business creation and entrepreneurship education are possible and successful (Hanke, 2005). Furthermore to experiences of some distance education universities, some literature review of distant learning and course performance acts also a guarantor for the feasibility of this kind of studies. Kotey (2006), Sooner (1999), Gubernick and Ebeling (1997) found that distance-learning students out-perform internal students, Pool (1996) studied the relation between course performance and distance learning. Didia and Hasnat (1998) found a positive association between age and student performance and argued that maturity is beneficial to the learning process. Adams and Hancock (2000) established that the amount of work experience was a better predictor of successful performance in an MBA programme than GMAT score or undergraduate grade point average. Of course, within the literature there are evidences of the contrary. Given these conflicting results, the only thing that we can say is that there is no conclusive evidence that distance education approach to entrepreneurial education is wrong or unfeasible.

The growth in popularity of distance learning courses is indisputable (Cheung and Kan, 2002). Why should it not be possible to teach entrepreneurship in a distance learning environment, when virtual practices in firms are a reality?

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