

Miguel Civera, Michael Gessler (Eds.)

**Entrepreneurship Education
and Project Management:
Convergence of two Concepts**

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Abstract:

This research report was written within the framework of the innovation transfer project “PIA2 – Project Management as an Instrument with Respect to Labor Market for Development and Assurance of Teaching Quality in Vocational Education” – a Life-Long Learning Programme sponsored by funds from the European Commission (2013 – 2014). The PIA2-Project with representatives from Germany, France, Italy, Spain and Portugal had above all three objectives: (1) The concept “Projektmanagement macht Schule”, which was developed by the Institut Technik und Bildung at the University of Bremen in collaboration with the Landesinstitut für Schule Bremen and the GPM Deutsche Gesellschaft für Projektmanagement, was first subjected to country-specific adaptations and modifications before being implemented in the participating countries in various different segments of vocational training. (2) Parallel to this, the initial concept was further developed using the experience gained from implementation and learning. (3) Implementation and further development was guided by the following joint motto: To what extent can project management contribute to reinforcing Entrepreneurship Education? This research report deals with the third aspect.

Zusammenfassung:

Der Forschungsbericht entstand im Rahmen des Innovationstransferprojekts „PIA2 – Project Management as an Instrument with Respect to Labor Market for Development and Assurance of Teaching Quality in Vocational Education“, Programm Lebenslanges Lernen, gefördert mit Mitteln der Europäischen Kommission (2013 – 2014). Im PIA2-Projekt mit Vertretern aus Deutschland, Frankreich, Italien, Spanien und Portugal ging es um insbesondere drei Zielsetzungen: (1) Das am Institut Technik und Bildung der Universität Bremen in Kooperation mit dem Landesinstitut für Schule Bremen sowie der GPM Deutsche Gesellschaft für Projektmanagement entwickelte Konzept „Projektmanagement macht Schule“ wurde zunächst länderspezifisch angepasst, modifiziert und in den Konsortialländern in verschiedenen Segmenten der beruflichen Ausbildung implementiert. Parallel hierzu wurde (2) das Ausgangskonzept mittels der Implementations- und Lernerfahrungen weiterentwickelt. Die Implementation und Weiterentwicklung stand (3) unter einer gemeinsamen Leitfrage: Welchen Beitrag kann Projektmanagement zur Stärkung einer Entrepreneurship Education leisten? Der Forschungsbericht hat diesen dritten Gesichtspunkt zum Gegenstand.

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1 Introduction

This research report was written within the framework of the innovation transfer project “PIA2 – Project Management as an Instrument with Respect to Labor Market for Development and Assurance of Teaching Quality in Vocational Education” – a Life-Long Learning Programme sponsored by funds from the European Commission (2013 – 2014).

The context of the innovation transfer project PIA2¹ is that project work and its control through programme and project management, particularly in domains that are knowledge-intensive and innovative (e.g. information technology) have seen a massive increase in importance (Rump, Schabel, Alich & Groh, 2010). However, vocational training has so far hardly shown any response to this development and its associated demand for competence. As innovations are implemented in the form of projects with regard to work organisational procedures, this inertia has not only led to a deplorable gap, but even worse to a barrier for innovation.

As part of the introduction of so-called “Total Productive Maintenance” a new guiding principle, “flexible standardisation”, has been introduced (JIPM, 2013). Project management is its complementary counterpart and could be paraphrased as “standardised flexibilisation” in reference to the above guiding principle (Gessler, 2014) – flexibilisation, because the content of project work, namely domain-specific vocational problems, are not amenable to standardisation; standardised because the form of problem solving, namely project management, not only facilitates, but even requires a systematic approach. The form can be standardised, and there are already transnational standards such as the newly created ISO 21500.

The PIA2-Project with representatives from Germany, France, Italy, Spain and Portugal had above all three objectives: (1) The concept “Projektmanagement macht Schule” (project management shows the way) (Gessler & Uhlig-Schönian, 2013), which was developed by the Institut Technik und Bildung at the University of Bremen in collaboration with the Landesinstitut für Schule Bremen and the GPM Deutsche Gesellschaft für Projektmanagement, was first subjected to country-specific adaptations and modifications before being implemented in the participating countries in various different segments of vocational training. (2) Parallel to this, the initial concept was further developed using the experience gained from implementation and learning. (3) Implementation and further development was guided by the following joint motto: To what extent can project management contribute to reinforcing Entrepreneurship Education? This research report deals with the third aspect.

1.1 Entrepreneurship and Entrepreneurship Education

The point of departure in education is based on educational objectives. Educational objectives are normative implementations that receive their legitimation and have an effect on the basis of social consensus. Educational objectives occupy a central position in educational practice by providing guidelines and support for educational activities and thus selectively eliminating alternative objectives. In the case of Entrepreneurship

¹ <http://www.pia-project.eu>

Education its objectives should therefore first of all be clarified: What understanding of “Entrepreneurship” is at the basis of Entrepreneurship Education?

The European Commission defines Entrepreneurship as follows: “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” (European Commission, 2006a, p. 20). And “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” (European Commission, 2006a, p.4).

These definitions provide on the one hand a wide framework by incorporating Entrepreneurship not only from an economic, but also from a social and/or cultural point of view. On the other hand, the definitions are narrow in that the key objective of Entrepreneurship is only achieved when the aspects of “identifying opportunities for innovation” and “transforming ideas into practical and targeted activities” have been combined. Put differently, Entrepreneurship is on the one hand tied up with innovation, on the other hand it is only through practical, targeted activities that it takes shape. The emphasis is on activity (“transforming ideas into practical and targeted activities”) and not necessarily on the role and character of the Entrepreneur.

This definition of Entrepreneurship Education is compatible with that of the OECD: “Entrepreneurship education is important as a crucial determinant of the supply of entrepreneurship by forming (potential) entrepreneurs as well as contributing to a positive entrepreneurship culture. In this respect, entrepreneurship education should not only focus on narrow defined tools (e.g. how to start up a business, financial and human resources management) but also on broader attitudes (like creativity, risk taking, etc.) especially at the lower and secondary level” (OECD, 2008, p. 112).

Although the OECD definition gives Entrepreneur as a key objective, Entrepreneurship Education does not focus exclusively on this goal, but includes in a more comprehensive way contributions to the achievement of an “Entrepreneur Culture”. The differentiation between “narrow defined tools” and “broader attitudes” in this definition is also crucial: the focus is on tools *and* attitudes.

By contrast, the practice of Entrepreneurship Education is often more limited. As early as 2004 a study by Honig revealed that 78 of the 100 universities surveyed equated “Entrepreneurship Education” with “Business Planning” (Honig, 2004, p. 258). Honig assumes that the popularity of “Business Planning” could have its roots in the fact that it is a tool that leads to a definable output which is easily and unambiguously assessable within the framework of a degree course. In addition, it suggests clarity and certainty in an area which is characterised by contingency and uncertainty (ibid. p. 260). Although this conclusion is already ten years old, “Business planning” has lost nothing of its popularity. In contrast to this narrow definition of “Entrepreneurship Education”, this research report is oriented towards the more comprehensive definitions of the European Commission and the OECD.

1.2 Project Management

Any work comprises routine tasks on the one hand, and the necessity to continually develop or innovate products, services, institutions and work processes on the other hand. Important developments and particularly innovations are usually organised in the form of projects. Stability and change, or routine tasks and project work are two sides of the same coin.

What is a project? According to DIN² 69901, a project is defined as a scheme which is characterised by the uniqueness of the conditions in their entirety. This includes above all (1) the objectives, (2) the existing limitations (e.g. temporal, financial, personnel-related), and (3) the required project-specific organisation. The core idea is to solve complex problems in a team within a limited time-frame and with limited resources. The task of the project management (PM) is to ensure the quality of the project work and thus the success of innovations. Project managers combine individual performances into a coherent team performance, monitor the progress of the project and advocate it vis-à-vis principals and clients. If something does not work, they try out something new. Their job is to manage problem-solving within the team. Project managers are temporary contractors.

Project management is not one method, but rather a work system and an attitude shaped by professional practice which requires responsibility, intercultural appreciation, team work, reliability, anticipatory thinking in a particular context, and creativity. PM learning is not conceivable without “learning by doing”. PM learning requires the planning and execution of projects within a team, ensuring the quality of the project work with the team members, and the deliberation of their own learning process and work as well as that of the team. PM learning facilitates a learning experience – such as the ability to solve complex problems in a team – that is rather rare in conventional teaching. The ability to work on projects, solve problems and the ability to ensure the quality of project work and problem solving (= project management) are skills that play a pivotal role in professional and entrepreneurial competence.

1.3 Entrepreneurship Education and Project Management

In the “Entrepreneurship in Vocational Education” report, a programme has to fulfil at least two of the following criteria to qualify as Entrepreneurship Education (European Commission, 2009, p. 10): (1) “Developing those personal attributes and generally applicable (horizontal) skills that form the basis of an entrepreneurial mindset and behaviour”, (2) “Work on practical enterprise projects and activities, for instance students running minicompanies”, (3) “Raising students’ awareness of self-employment and entrepreneurship as possible career options”, (4) “Providing specific business skills and knowledge of how to start and successfully run a company”.

These four aspects can be subdivided: (1) Entrepreneurship Education in a wider sense comprises “entrepreneurial mindset”, “entrepreneurial behaviour” and “practical enterprise projects and activities”; (2) Entrepreneurship Education in a more narrow sense includes “awareness of self-employment” and “starting and running a company”. The wider definition is the foundation and prerequisite for the more narrow definition:

² DIN = Deutsche Industrie Norm = German Industry Norm

someone who wants to establish an enterprise (narrow definition) requires first of all suitable “equipment” (wider definition). The entrepreneur can, but need not, emerge as a person from the wider definition. This basis is also of importance for an intrapreneur. The first group thus forms “transversal skills” that are broadly applicable.

We address these “transversal skills” (RPIC-ViP, 2011) in our project management approach and are thus at the heart of Entrepreneurship Education: “Project management skills: The heart of entrepreneurship education is students setting up and running a project. Teachers require the skills to support students throughout this process, which includes: planning and preparing the project (setting objectives and identifying what exactly is required and how it can be carried out, etc.); anticipating students’ needs at each stage of the project; setting personal targets and goals throughout the project; and doing the final evaluation” (European Commission, 2009, p. 24).

1.4 Reports from individual countries

The reports from individual countries follow a uniform structure. In a first step, the field “Entrepreneurial Education” is extrapolated exemplarily for each country. In another step, an entrepreneurial programme with the focus on project management is – again exemplarily – studied with regard to its weaknesses and strengths. The reports conclude with an evaluation of how and to what extent project management can contribute to Entrepreneurship Education in the individual country. The authors of these reports are:

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1.5 General Principle

The European Commission defines the general principle in their “Smart Guide on promoting and facilitating entrepreneurship education for young people with the help of EU structural funds” as follows: “Entrepreneurship programmes provide an excellent opportunity to connect education systems with the local economy, as they are based on project work and on the voluntary participation of real entrepreneurs. Students who develop contacts with the local business community are more likely to remain in their region or in their country after completing their studies, either as

employees in a local firm or as founders of their own business” (European Commission, 2012, preface).

Entrepreneurship Education is located within the mainstream of neo-liberal concepts such as “Employability” and “Self-Empowerment”. In such a context Entrepreneurship Education pursue a logic of exploitation that instrumentalizes education as a means of serving an operational and entrepreneurial purpose. This point of view is necessitated by the requirements of the labour market which regards labour as a factor of production. Vocational training as a link between the labour market and the education system must meet these requirements. Yet on the other hand vocational training transcends this context by regarding work and jobs as a means of promoting personal and social development, and not just as a management tool. In the context of such an economic goal, Entrepreneurship Education not only promotes manpower potential, but also supports personal development in a modern society with its diverse socio-cultural, technological and ecological challenges. Without denying the narrow definition of Entrepreneurship its *raison d’être*, the general principle of our approach provides a wider definition which includes the intention to help develop and maintain the ability to act responsibly in various different contexts. This includes economic contexts, but not exclusively so.

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2 Country Report Germany

2.1 Entrepreneurship programmes

In Germany there is a variety of parallel programmes with the aim to encourage entrepreneurial thinking and behaviour in schools. This variety demonstrates in an impressive way that there is considerable interest on the part of various different groups. On the other hand, it shows that there is no plan, concept or strategy. This is true of the situations both on a national level and in the individual federal states. There is no lack of intention, but of orientation and structure. An overview of the various different programmes and initiatives can be found on the homepage “Unternehmergeist macht Schule” (entrepreneurial spirit shows the way) of the German Ministry of Economy and Energy.³

In the past 15 years Entrepreneurship Education has seen an increase in interest in different European countries. Nationwide initiatives are in place in Austria, Finland, the Netherlands, Norway and the UK, to name but a few. Looking beyond Europe, relevant programmes were implemented in Australia, New Zealand and other countries and have been running for some time (OECD, 2009). This development with its emergence of a “conceptual framework for entrepreneurship education policy” has today already reached the status of reflexivity (O’Connor, 2013).

In German tertiary education there are tentative approaches, usually in the context of degree courses in economics (Weber & Funke et al, 2012). In vocational education not even these contingent steps have been taken. There is currently no discussion as to how Entrepreneurship Education could be embedded into the vocational education system. Yet it is precisely this well established, efficient German vocational education system with its close vicinity to the labour market which would be predestined to take on a pioneering role. There are, however, some cautious rapprochements: German industry’s advisory board for vocational education came up with its first positive position in 2006 when it wrote: “Companies benefit when skilled employees work independently. When acting in their employers’ best interest, these employees exhibit entrepreneurial skills which have long been the focus of vocational training. However, self-directed, independent activities must be joined by risk acceptance, a sense of responsibility, the will to work and to succeed, and the ability to grasp the initiative when the occasion demands it. This broad spectrum of basic skills and attitudes may be taught in many different ways. Training guides can offer a formal path to the different educational goals” (Kuratorium der Deutschen Wirtschaft, 2006, p. 2). Despite this positioning, the main committee of the federal institute of vocational education has to date neither reached a resolution on this issue nor expressed a recommendation. The stipulation, expressed in 2006, that “Training Guides” could show a pathway of how to achieve various different educational objectives for the purpose of acquiring a “broad spectrum of basic skills” has not yet been fulfilled.

Another compatible reference can be found in the framework curriculum of the KMK (conference of the German ministers of cultural affairs) for school education within the framework of the dual education system: “In order to fulfil its educational

³ <http://www.unternehmergeist-macht-schule.de/>

mandate, vocational schools must ensure that a differentiated syllabus is offered which demonstrates a variety of perspectives on employment, including entrepreneurial independence, with the goal to support self-responsible career and life planning” (KK 2011, 14). This statement only refers to (1) entrepreneurial independence and is thus neither in line with the comprehensive definition of Entrepreneurship by the European Commission mentioned above, nor with the comprehensive definition of Entrepreneurship Education by the OECD which we mentioned earlier. In addition, the statement is (2) unspecific, as it remains unclear as to how this “variety of perspectives on employment” are to be imparted. The statement is also restrictive as it (3) only refers to the in-school education of vocational training within the framework of the dual educational system. The framework curriculum of the KMK does not apply to full-time school-based vocational education.

As the result of a lack of a coherent concept we will subsequently focus on the patchwork of the various different programmes and initiatives of which we will present five as an example.

School enterprises – JUNIOR⁴

In the JUNIOR programme, student teams manage a real enterprise during a school year. The students are responsible for different tasks and can experience working life at school. Looking for business ideas, the business concept, the establishment, the finances and company stock shares, the realisation of products or services, and accounting are milestones to be reached within this programme. The school enterprises of JUNIOR can take part in regional competitions and qualify for competitions in their country or in Europe. The JUNIOR office at the Institute of German Economics in Köln is the main contact, organiser, and supporter for teachers and schools. About 52,000 students and more than 3,800 school enterprises have tested the programme so far.

Project work – TheoPrax⁵

TheoPrax is a programme where student teams work in their own small enterprises integrated in the school year and carry out real projects from industry. To arrange these projects/problems processed by the TheoPrax Center (TPZ), the students lead personal interviews with the client/employer and prepare a detailed offer together with their supervisor from the TPZ. The project work starts when the students receive the project order. At the end, the students will present the results to the client and prepare a final report of the project and an invoice for the work done. The TheoPrax Center at the Fraunhofer Institute works as promoter, contact, organiser, and supporter of this programme. Currently, more than 300 project works have been successfully achieved.

Contests – Ideen machen Schule⁶

In ‘Ideen machen Schule’ (ideas make school) the students develop an enterprise start-up plan (10–15 pages, including company idea, employees/team, market and competitors, marketing and sales, company organisation, finance plan, opportunities and risks) based on the students’ own enterprise idea. During the development of the

4 <http://www.juniorprojekt.de/>

5 <http://www.theo-prax.de/>

6 <http://www.hans-lindner-stiftung.de/jugendfoerderung/ideen-machen-schule.html>

concept and planning, the students are in contact with experts on start-ups and economy (e.g. chamber of commerce, banks, associations, authorities, lawyers, tax advisors, etc.), document the procedures, and develop the step-by-step of the start-up concept that they will hand in for the contest as a team. Under the patronage of the Bavarian Ministry of Education, the foundation Hans Lindner Stiftung acts as promoter, contact, organiser, and supporter for teachers and students. About 2,000 school teams have been participating so far.

Simulation games – ALWIS⁷

The ArbeitsLeben Wirtschaft Schule (ALWIS) association has one target: to put young people in practical contact with working life at an early stage. That happens, among other ways, through simulation games in schools. In the enterprise simulation, ‘Beach Manager’ of the training institute of the Bavarian industry, a fictional water sport and free time centre start-up will be run. The students play the ‘beach manager’ role (businessman and entrepreneur) as well as different roles related to the renting of water sport equipment. During the programme, the students (in their company roles) need to decide the next steps to carry out in the most important company departments in the next periods. Up to 5 teams can operate in the virtual market. A simulation programme collects and processes all the data and decisions to simulate the game competition.

Projektmanagement macht Schule⁸

In the context of the initiative ‘PM macht Schule’ (project management in schools) of the German Project Management Association (GPM), teachers will be put in the situation of using interdisciplinary project management in teaching subjects, without ignoring the target of the current teaching and education plan. Teachers develop in teams special teaching and learning situations in which students plan real project orders and realise them at the end. The project orders come normally from regional enterprises that cannot find innovative solutions to their problems. Therefore, teachers are trained in workshops to apply special teaching materials. They work on the basis of the same action-oriented guideline as the students use. This makes the transfer of the teacher training to the classroom easier. More and more, project management is used for the establishment of school enterprises, because it unifies all the important components of entrepreneurship.

2.2 Best practice

We can find many best practices in the entrepreneurial programmes running in Germany, but we will focus our attention on the TheoPrax programme. As described above, TheoPrax is in charge of putting schools and industry in touch, where students develop real projects based on real project orders coming from real enterprises.

During the school year 2014, as usual, TheoPrax did gather some real companies’ projects to be implemented by the students. P+H Leichtbau, one of the ‘clients’ who gave a project order, is a company specialising in light materials. This company made a folding bed prototype that hangs on the wall and the user can fold it up and down to use it as an extra bed. This first prototype was too heavy and so the company was

⁷ <http://www.alwis-saarland.de/>

⁸ <http://www.pm-schule.de/>

looking for an optimisation of its product. TheoPrax had the solution: finding a school where project management is taught. Finally, students got a project order from P+H Leichtbau: optimise the folding bed prototype. The conditions for the optimisation of the product were clear: not to exceed the budget given, not to exceed the final product weight of 25 kg, and the final prototype had to be able to support a load capacity of 200 kg. Once the students knew the specifications of the project order, they started working on it during the school year. They selected the optimal computer-aided design (CAD) programme, drew the sketches of the prototype dimensions, looked for the most suitable material, and analysed the critical points of their design. Once the first prototype concept was finished, they started with the drafts for the product construction and applying some adaptations to the first sketches. Finally, the students created the physical prototype of the folding bed. After the project completion, the students presented their results to the members of the company P+H Leichtbau in a final conference organised at the headquarters of the Fraunhofer Institute (responsible for the TheoPrax programme) in Bremen. The responsible people of the company (client) evaluated the project work done by the students. The teachers evaluated the students' project work as well, giving them a final mark for their whole work and performance.

2.3 Strengths and weaknesses

TheoPrax makes it possible to put students in contact with the working environment at an early stage during their career. This makes it possible for the students to understand the real working environment. They are working on real project orders submitted by real enterprises, which gives the students extra motivation. Besides, they are being prepared for the real work environment even without realising it. Moreover, they are increasing their capacity to speak and to present in front of an audience, among others in front of the client who ordered the project. The companies are not searching for theoretically prepared employees only, but for ones who are used to working practically. TheoPrax is such a kind of programme which makes it possible. The students taking part in the entrepreneurial programmes mentioned above will be better prepared for the needs of their future employers. We could say that the employability of the students in these programmes rises strongly. Besides, these programmes are a good chance for the companies to carry out more projects that they couldn't accomplish due to the lack of time or resources. The students are a source of creativity and they can achieve results for the companies, sometimes reaching better results than expected by the client. On the other hand, not all the companies are willing to give real projects to students to solve. Among other reasons, the problems that prevent the companies giving projects to entrepreneurial education programmes are as follows: some companies do not trust the students to handle complex tasks and/or project privacy prevents the companies from letting third parties know about the projects, etc.

2.4 Learning Environment

Working on projects in the school means that students must ensure the project's success. The success of a project is guaranteed though the application of project management.

The students work on projects and develop several competences by facing situations during the project work that they wouldn't be able to manage in a conventional way of teaching. The PIA2 project⁹, funded by the European Commission and coordinated by the Institute for Technology and Education (ITB) in Bremen, with a consortium formed by European countries (ES, FR, IT, PT), makes it possible to put students in contact with projects and to manage these using project management.

According to the IPMA Competence Baseline (ICB) (Caupin et al. 2006), a project manager must have specific competences to carry out determined projects. In this way, the projects carried out by the students help them to develop some of the basic competences needed to manage projects, such as technical competences (project requirements and objectives, risk taking, organisation, teamwork, problem resolution, project phases, documentation, etc.). Besides, the students are able to improve, or even discover behavioural competences such as leadership, motivation, creativity, etc.

Project management in combination with the learning environment fosters the engagement of the students, who have the tools needed to achieve the project target. The results obtained so far in the schools participating in the PIA2 project, as well as in the previous project PIA, show the willingness of the students to achieve project success in teamwork. Moreover, they take over specific roles within their teams during the project work, facing and solving problems, showing responsibility within the project team, and taking risks, which converts them into entrepreneurs. Meanwhile, the students are gaining self-confidence, adaptability, and creativity, as well as acquiring entrepreneurial skills and knowledge (Europäische Kommission 2012).

⁹ <http://pia-project.eu/>

3 Country Report Spain

3.1 Entrepreneurship programmes

Although the European community considers entrepreneurship skills as a key competence in the Spanish educational system, entrepreneurship teaching is not officially considered in educational official curricula, except in the case of some vocational training studies.

Elementary and secondary schools

In Spain, the Ministry of Education, as well as the different autonomous communities, are developing entrepreneurship education by establishing regulations on education including it and designing educational initiatives to promote it.

Local and regional strategies for the promotion of an entrepreneurial culture encourage regional education authorities to carry out a wide range of initiatives: sharing of methodologies and educational materials for entrepreneurial education, introducing curricular and extra-curricular activities, and collaborating with regional ministries, chambers of commerce, associations, and other private bodies. In secondary education, the 2011 reform of the core curriculum for lower secondary education includes a new optional subject in the fourth year, named ‘Professional Guidance and Entrepreneurial Initiative’.

Vocational schools

In Spain, entrepreneurship education is included in the national framework curriculum and is compulsory for all VET fields (technical, industrial, commercial, etc.), with a specific module, ‘Enterprise and Entrepreneurship Initiative’, included in the programme for each diploma. It accounts for a minimum of 35 hours per year, distributed as three hours per week in the second year of studies. The 35 hours refer to 55% of curricular content, but autonomous communities can increase this to as much as 100%. Between 15% and 20% of the students who take part in the programme of mini-enterprise creation create their own enterprises. Non-profit organisations play an important role in organising entrepreneurship education in VET schools by offering programmes based on practical experience and working on projects.

Higher education

In Spain, the majority of entrepreneurship courses are offered in Business and Economy studies. There exists a wide range of MBAs oriented to entrepreneurship. Most university programmes are much more focused on training wage earner managers or technicians than offering qualified and responsible entrepreneurs and enterprises to society.

Formal instruction in knowledge and abilities related to new venture creation is usually limited to academic plans of degrees related to business and economic sciences, and is practically absent in the curriculum of other knowledge areas, especially within Humanities and Health Sciences (Vázquez et al., 2006). In most cases, starting a new firm is not even considered as a possible work option for students; thus, there is no awareness of the need for teaching basic entrepreneurial competences, nor a structured action which allows students to learn them in a regulated way.

Each university has their own offer of entrepreneurial learning and linked initiatives. While the creation of graduate start-ups is therefore a desirable outcome, in existing business and entrepreneurship programmes very often only the start-up aspect is considered, while the skills and knowledge needed to manage the growth phase of a small business are neglected.

Continuous training

The main offering of Continuous Training in Entrepreneurship is offered by Business Incubators, Chambers of Commerce, and Local/Rural Development. They are courses from 3 to 9 months, seminars, or workshops. In this case, learning is more connected to the practice, because the qualification of new entrepreneurs is part of the process to support them to create and consolidate their own enterprises. Then, it is usual that in such training there is included a practical part consisting of developing an own business plan. Afterwards, new entrepreneurs are helped and supported to start the new business.

Different studies

In primary, secondary, and VET school, entrepreneurship teaching topics are connected with the development of individual initiative and teamwork, and effort and responsibility in study, as well as self-confidence, critical sense, personal initiative, curiosity, interest, and creativity in learning (ISCED 1); the development of an entrepreneurial spirit and self-confidence, participation, critical sense, personal initiative, and the ability of learning to learn, plan, make decisions, and take on responsibilities (ISCED 2); the consolidation of the entrepreneurial spirit with attitudes based on creativity, flexibility, initiative, teamwork, self-confidence, and critical sense (ISCED 3); and the basic competence 'autonomy and personal initiative' that enables a cross-curricular approach of entrepreneurial skill in all the subjects (in ISCED 1 and 2).

In higher education, entrepreneurship teaching issues are related to other learning objectives, such as developing entrepreneurial drive among students (raising awareness and motivation); training students in what is needed to set up a business, and to manage its growth; and developing the entrepreneurial abilities needed to identify and exploit business opportunities.

Training is covering not so much theory and practice in business administration as such, but the specifics of the entrepreneurial process, stressing the detection of business opportunities and idea definition. This is particularly important in humanities and social sciences, where projects are service-oriented rather than product-oriented, and a potential market definition can be very subtle.

In MBA and Continuous Training, the matters are connected with management, creativity development, enterprise regulations and law, project management, marketing, finances, and human resources.

3.2 Best practice

In Spain, there is a whole range of teaching materials developed by the Spanish Directorate General of SMEs of the Ministry of Industry (DGPYME). Moreover, within the framework of the collaboration agreement between the Ministry of Education and the High Council of Chambers of Commerce, and specifically the programmes Entrepreneurial Round, chambers of commerce have developed teaching

materials for promoting young students' entrepreneurial spirit and to train teachers in entrepreneurship didactical concepts. Finally, several autonomous communities are developing specific entrepreneurship programmes and practical implementation guidelines and tools for primary schools upwards.

The Spanish educational system has begun to take the first steps towards the fulfilment of the purposes marked by the European Commission with regard to entrepreneurship education. Thereby, most public universities have developed and implemented specific extracurricular actions to give support to potential entrepreneurial initiatives emerging from the heart of the university's own fellowship, in the form of an increasing number of university-enterprise foundations, business chairs, spin-off programmes or specific institutional programmes, and centres of entrepreneurship.

Valnalón Educa is an Educational Chain System for Entrepreneurship created in 2010. It links diverse programmes and educational initiatives to encourage an entrepreneurial mind-set for youth and society. It is working to integrate entrepreneurship teaching into Spanish schools' official curriculum, through various educational paths, until the students are prepared to enter the workforce. The main strategy proposed is about building knowledge through practical hands-on experience, which gives responsibility and autonomy to youth within the school framework.

Egin Eta Ekin-Enpresari is a programme launched in 2013 by the Diputación de Bizkaia in Basque Country (Provincial Government) and supported by the EU Social Fund. The aim is to disseminate and encourage the entrepreneurship culture among young VET students. It is developed in the network of VET schools of the province of Bizkaia. Entrepreneurship scholar activities are organised in this framework: an annual competition of best enterprise ideas, creativity workshops, visits to companies, conferences and events, and training for VET teachers.

Empresaula Simulation is a large Spanish network of simulated companies created and managed by vocational training students and others from middle and high-level studies, especially adapted to develop real practices in the official VET curricular module 'Enterprise in a Classroom'. More than 75 VET centres, 1,200 students, and 220 teachers are involved each year. This network provides an online platform of services facilitating students' practice in a simulated company environment.

3.3 Strengths and weaknesses

Strengths

- It is not too difficult for schools to find entrepreneurs and business people willing to come to the classroom and help teachers to explain real experiences and samples.
- At all educational levels – especially in university - students are interested in entrepreneurship issues and express a global desire for a greater curricular and extracurricular treatment of the enterprising spirit.
- More and more teachers are becoming interested in incorporating entrepreneurship issues in their classes to motivate their students and to stimulate personal competences like creativity, personal autonomy, teamwork, and self-confidence.

- There exist many tools connected to enterprise simulation, as networks of simulated companies that provide practical training and business experiences very similar to reality.
- Public administrations, both from educational and economic development areas and at regional and national level, are usually involved in entrepreneurship training initiatives and support them with public funds and resources.

Weaknesses

- The Spanish educational system is not really conducive to fostering entrepreneurship. The Spanish school system is about rote memorisation, instead of stimulating creativity or rational thought.
- The effectiveness of entrepreneurship education in Spanish vocational schools is still far from being fully satisfactory. The identified reasons for the gap are as follows:
 - teaching methods related to entrepreneurship are ineffective;
 - entrepreneurship is not included in all parts of the educational system;
 - student participation is limited;
 - teachers are not fully competent in this topic;
 - business people are not involved;
 - the practical element related to this topic is missing;
 - entrepreneurship teaching is not linked to specific training subjects or professions.
- Partial lack of competence of teachers of entrepreneurship is in many cases perceived as a problem, at least as regards their practical experience of entrepreneurship, if not their theoretical knowledge. Improvement is greatly needed in this area.
- Schools need to be given more support for introducing entrepreneurship into VET programmes, for example by organising and developing curricula and teaching tools; raising awareness among school management; providing counselling for schools and teachers; ensuring initial and continuous training of teachers; and facilitating links and cooperation between schools and the local community.
- Most university programmes are much more focused on training wage earner managers or technicians than offering qualified and responsible entrepreneurs and enterprises to society.
- The annual scholar programmes are very closed and full; it is difficult to include new content and activities related to entrepreneurship.

3.4 Learning Environment

The sense of initiative and entrepreneurship has been recognised by the EU as a key competence for lifelong learning. In education, it is understood as a key factor that turns young people into more creative, self-confident, and socially responsible persons.

According to the EU LLP approach, technical skills such as planning, organising, managing, recording, and communicating, all related to project management, are in the core of entrepreneurship competence. In addition, there are other skills and attitudes that can be provided by teaching students in PM, especially by using the PIA2 Methodology, such as working team, negotiation, autonomous and collaborative work, risk taking and decision making, initiative, proactiveness, and motivation to reach objectives.

Concerning teaching methods, it seems that a project-based approach is by far the most efficient. Projects provide an opportunity to cover a number of different subjects in an entrepreneurial context. An entrepreneurial approach should therefore permeate the whole of education. More and more schools are becoming aware of the importance of embedding entrepreneurship education across the curriculum through work on projects. The initiating and coordinating force behind these projects could be a teacher responsible for entrepreneurship education in the school, with the support of the school management. Project-based work should become a recurring event, especially in VET schools and in the university, since they provide specific professional orientation.

In the case of VET entrepreneurial training, project management could be useful too, such as didactical methodology of the specific module 'Enterprise in a Classroom'. This implementation could be feasible, because this training is included in Spanish official curricula. The PIA 2PM Guideline can be easily used in issues related to project management training MBA or entrepreneurial studies in the university. It could be used in entrepreneurial continuous training, as well, just to support the process to develop the business plan during the training, and the planning of the business creation, after the training.

4 Country Report France

4.1 Entrepreneurship programmes

Entrepreneurship becomes nowadays a subject that preoccupies more and more not only the politicians, decision makers, and economists in France but also researchers, teachers, and students. Actually, entrepreneurship is placed in the public eye at a European and an international level, because the development of entrepreneurial spirit and entrepreneurship among the young people constitutes a great challenge and stake for the economy. Sixty per cent of business creators under 30 years old come from the VET system.¹⁰ Consequently, we can observe a growth of enterprises in ten years (2000: 210,000 vs. 2011: 550,000)¹¹ and a significant investment in actions of education and training of entrepreneurship.¹²

The development of new enterprises boosts the economy by creating new jobs. Thus, entrepreneurship is a vector of revitalisation of the national economy. Moreover, by the development of entrepreneurial spirit, we encourage the development of innovative and creative initiatives. Finally, it can constitute a criterion for the economic and social integration of new generations.

In this framework, many associations and organisations have been created and many transversal government initiatives have been implemented in the educational and lifelong training fields in order to inform, support, follow up, and encourage and promote entrepreneurship initiatives.

An example of an association in entrepreneurship is the Federation of Associations «Entreprendre pour Apprendre»¹³, which encourages the development of entrepreneurial spirit. This programme involves the educational system, teachers, students, and enterprises. The main objective is to create a project in school involving entrepreneurship, initiatives taken in partnership with schools and professionals, and example mini-enterprises in collaboration with the association EPA.

An example of an organisation created in order to develop entrepreneurship is the RETIS network, a French network of innovation which activates all of its members in order to accompany and develop French innovation projects and support start-ups at every stage by providing material help, advice, and coaching.

A practical example of governmental initiative is the legislation voted concerning the self-entrepreneur status, created by the government in 2008. This status simplifies the administration procedure and allows every adult to be a self-entrepreneur, offering at the same time fiscal and administration advantages.

Finally, the universities have integrated a programme (Plan Entrepreneuriat-Etudiant – PEE) of awareness raising, training, and support of students who wish to become entrepreneurs. During the academic year 2011/2012, 150,000 students were involved in this programme. In October 2013, the Minister of Higher Education and Research set new goals in order to foster entrepreneurship through education and especially via universities. These measures have as main goals to educate and train

10 <http://www.redressement-productif.gouv.fr/assises-entrepreneuriat/thematique-1-developper-lesprit-dentreprendre-aupres-des-jeunes>

11 <http://www.redressement-productif.gouv.fr/assises-entrepreneuriat/lentrepreneuriat-france>

12 <http://www.cdmn.ca/wp-content/uploads/2014/01/EY-G20-main-report.pdf>

13 <http://www.entreprendre-pour-apprendre.fr/>

students in entrepreneurship, to recognise the educational value of this training, and to support young people who want to take initiatives and create their own enterprise. The programme Students Pole for Innovation, Transfer and Entrepreneurship (Pole Etudiant Pour l'Innovation, Tranfert et Entrepreneuriat – PEPITE) will be implemented in universities.

4.2 Best practice

The Federation of Associations Entrepreneurship for Learning (« Entreprendre Pour Apprendre »¹⁴ – EPA) is a federation of 20 associations that aims to develop entrepreneurship and entrepreneurial competences in the young (people between 8 and 25 years old).

The goal of this federation is to give the opportunity to pupils and students to gain professional experience in addition to academic experience. Consequently, pupils and students can practice their theoretical knowledge and develop their competences in their professional field. This programme helps them explore the different existing professions and introduces them to the active life and to working in groups.

Their mission is to guide the pupils and students into the realisation of entrepreneurship projects and to give them the opportunity to collaborate with professionals.

Undertaking for Learning is also a member of an international framework, « Junior Achievement Worldwide ». This movement was started in 1919 in the United States in order to prepare the young for the professional world. The basis of this organisation is to mobilise local entrepreneurs to develop programmes that offer the opportunity to pupils and students to be trained in entrepreneurship. France joined this movement in 1990 via EPA.

We chose the example of Undertaking for Learning, because we think that this example is complete in matters of educational materials and programmes, and it is adapted to different target groups (primary, secondary, and higher education). Additionally, this example has a great professional network at an international level. Moreover, the Ministry of National Education has accepted this programme and encourages its implementation as a vector of entrepreneurship.

More specifically, this practice contains three educational programmes based on the method 'learning by doing'.

- 'Our community EPA' is aimed at primary school students (8–10 years old). Goal: develop citizenship and entrepreneurial spirit.
- 'Mini-Enterprise EPA' is aimed at secondary and high school students (11–25 years old). Goal: create and manage an enterprise in high school
- 'Start-up lycée' is aimed at university students (18–25 years old). Goal: create and manage an enterprise.

The materials and programmes developed by EPA are adapted to the needs and the demands both of the pupils or students and of the French educational system. Their

¹⁴ <http://www.entreprendre-pour-apprendre.fr/fr/qui-sommes-nous-/la-federation-epa.html>

programmes meet the demands and objectives of Junior Achievement Worldwide (J. A. Worldwide) as well.

4.3 Strengths and weaknesses

This example is the best practice, because it focuses on different actions of education and training of entrepreneurship. The contents that seem important with reference to these actions can be divided into three main axes:

- Development of emotional capital (EC)¹⁵ (Gendron 2002, 2004b, 2004c): Team spirit, creativity, autonomy, risk and initiative taking, and self-esteem.
- Methodology skills: Management of an enterprise, project management
- Technical skills: Market research, stakes of competition, prospecting opportunities, registering of the company name, creation of a logo, technical development of the enterprise, negotiations with the suppliers or subcontractors, marketing, sales, intellectual property, etc.

Moreover, this programme, based on learning by doing in order to develop entrepreneurship, uses as pedagogic tools project management, role-playing, and case studies. Pupils and students learn about entrepreneurship while creating their own enterprise.

4.4 Learning Environment

The PM Guideline can also create the appropriate learning environment in which students can develop entrepreneurship competences. PM is a necessary tool in order to develop and apply entrepreneurship spirit. More specifically, we have noticed throughout the implementation of the PIA2 project that PM focuses on the development of:

1. Emotional capital (EC), by learning to:
 - work on a team
 - confront our own fears and emotions towards the group
 - communicate with others
 - organise the work load as a team
 - work alone in a group and develop autonomy
 - be responsible for your actions and for the actions of your team
 - deal with risks, stakes
 - be tolerant and flexible towards changes and creative
2. Methodological Competences, by offering a complete and structural method on how to manage a project from A to Z

¹⁵ Emotional Capital (EC) 'set of resources (emotional competences) that inhere to the person useful for his or her cognitive, personal, social, and economical development'.

3. Technical competences, as the PM Guideline offers the opportunity to analyse professional situations and risks, to identify the stakeholders, take actions in order to achieve the goals of the project, and to negotiate

According to the new objectives set by the Ministry of Higher Education and Research in October 2013, a new master degree entitled 'Entrepreneurship and Project Management' is going to be created in every university in order to develop entrepreneurship. This government initiative underlines the relationship between PM and entrepreneurial spirit.

Example PIA2 as a vector of entrepreneurship

PIA2 is used as a project management tool implemented in the establishment of Charles Alliès in Pézenas in a class of Technical Higher Education (BTS) of Negotiation Relationship with clients. This class in particular has been using the PIA2 method and EPA (undertaking for learning) in order to create a mini-enterprise within the establishment.

The teacher in charge of this programme, Marc Steckler, confirmed that the PIA2 method is focused on how to plan and organise a project, while the EPA method is more focused on how to start and run an enterprise. Consequently, those two methods are complementary and essential to the development of entrepreneurship. That is the reason why he plans to implement those two methods in his teaching classes in order to create other mini-enterprises with his students within the establishment in the years to come.

Additionally, PIA2 is perceived as a vector of entrepreneurship, because it enhances teamwork, decision taking, and initiatives, and encourages students to act. Moreover, using the PIA2 method, students can anticipate the consequences of their actions and can measure the risks. The teacher has the essential role of a coach and facilitates the contact between students and professionals (clients). He encourages and motivates the students to achieve their project goals. Students learn to work in autonomy and can develop a multiplicity of competences.

5 Country Report Italy

5.1 Entrepreneurship programmes

The development of entrepreneurship training in our country is implemented particularly through cultural programme proposals offered by Universities that, within their own plan of training, provide courses aimed at supporting start-ups, entrepreneurs, and executives in the development of business projects.

Sometimes, we witness the creation of academies of specialised studies, dedicated to planning work in close contact with entrepreneurs who have launched successful start-ups, members of the financial world (venture capitalists, business angels, etc.), and executives who, within their own companies, deal with corporate entrepreneurship, with the ultimate aim of establishing a continuous cultural benchmark for entrepreneurship in its various meanings in Italy.

Furthermore, in the same way, we are assisting the creation of projects for entrepreneurship in education and vocational training, which are among other things foreseen in the national curriculum, which also includes the possibility of activating forms of partnership between schools and business associations of the territory, as well as incentives for the involvement of other professionals in entrepreneurship education. In school plans, entrepreneurship wants to be seen as the ability of a person to translate ideas into action; thereby including creativity, innovation, and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives.

Programmes and modules for entrepreneurship offer students the tools to think creatively, to solve problems effectively, to objectively analyse a business idea, as well as to communicate, make contacts, carry out, and evaluate each project.

If we put students in a position to test their ideas in an educational and encouraging environment, they will have more confidence in themselves when they decide to start their own business.

5.2 Best practice

The simulated training firm (*Impresa formativa simulata* – IFS) is an innovative learning methodology where students can learn real work processes by simulating the setup and running of virtual enterprises, working in a network and supported by real enterprises.¹⁶ The Italian employers' association *Confindustria*¹⁷ has launched a project in which entrepreneurs become part of school boards in 16 Italian provinces. *Confindustria* itself has developed a Young Entrepreneurs Division as a group of individuals whose aim is to strengthen awareness of the entrepreneur's role and to play the role of 'critical conscience' within the *Confindustria* System, and as 'innovation laboratories' with respect to civil society.

The division today counts 12,500 associations, organised across 105 provinces and in 20 regional committees.

The project called 'learning by doing'¹⁸ involves teachers and students in the resolution of real problems highlighted by several voluntary local companies. It aims at

16 http://www.ifsnetwork.it/portale_ifs/index.php (only IT)

17 For further information: <http://www.confindustria.it/>

18 <http://www.confindustria.it/ADM/EvenNew.nsf/tuttiDoc/C2A2ABFEFD3F9D94C1257A8C0031F259>

sharing methodologies, tools, and values between the industrial and the school worlds. The results are evaluated by educational authorities, industry associations, and local public authorities in order to obtain a prize.

5.3 Strengths and weaknesses

Strengths

- These projects introduce innovative tools in the traditional educational paths. The project work supports the personal learning and links the educational system to the world of work.
- The teachers use educational activities that improve motivation. This is a key factor for an effective learning process and for the future employability of students.
- The students have the opportunity to experience real problems in a real business context. They can approach the world of work in a problem solving oriented approach.
- Companies, students, and teachers work together to solve real problems and to learn and share solutions.
- The project can support the companies in reaching their goals. The educational methodology and the company activities can work closely to support the company's aims. The projects provide added value for the companies and promote innovation.
- Competence based educational activities can be promoted
- Promotion of teamwork

Weaknesses

- Most of the teachers are not well prepared to carry out project work with their classes, although the new regulations stated the introduction of the competence based activities in schools.
- To carry out project work in the Italian Educational System, collaboration of a team of teachers is needed. This is not easy to achieve.
- The standard educational activities do not leave time for other activities within the school period. The schools should implement these activities in the standard curriculum and plan timing and resources.
- The ICT tools used to carry out the projects are not always available in every school.

5.4 Learning Environment

Project management includes the development of entrepreneurial skills, representing two aspects of the same subject of investigation and analysis ('design – planning – structured organisation for the business plan development'), and expressing the exact conjugation of educational and behavioural objectives, so that through the identification of the different objectives of entrepreneurship education, it is possible to have a more

complete picture of the training needs as well as realise better choices in terms of evaluation criteria and pedagogical approaches.

The PM methodology can support the development of entrepreneurship competences as follows:

- Acquiring knowledge finalised at entrepreneurial initiatives: refer to knowledge learning (content and technical) concerning some specific areas or disciplines related to the field of entrepreneurship. This applies, for example, to issues such as ‘evaluation methods of business opportunities’; ‘models for the identification of resources/available opportunities and constraints/threats’; ‘nature of the processes of creation of new businesses’, etc.
- Learning how to use processing techniques and analysis of business situations, as well as designing action plans: the intent is to promote the ability to analyse and summarise the integrated application of the knowledge acquired in the field of accounting, finance, marketing, and general management. Thus, for example, the construction of a business plan for a new enterprise requires the simultaneous integration of skills and functional skills in a single model.
- To identify and promote the stimulus, talent, and entrepreneurial skills: the purpose is to raise people’s awareness of the possibility of entrepreneurship initiatives and to support them in clarifying their business interests, their abilities, and potential.
- Counteracting the high risk aversion: break down the predisposition for risk aversion, aiming to correct the traditional management training, eliminating its typical features of inclination towards quantitative tools and its emphasis on suggesting the actions after all the information available has been collected.
- Developing empathy for the peculiarities of entrepreneurship: fostering a willingness to learn concepts related to entrepreneurship even in individuals who do not have the intention to apply them directly.
- Strengthening the attitude to change: teach individuals how to encourage their colleagues to become innovative. This implies a greater use of ‘emotional’ learning rather than ‘cognitive’ learning.
- Encouraging the creation of new businesses or entrepreneurs’ initiatives: this points to a direct stimulus in the development of new business initiatives, self-employment, and entrepreneurship-oriented careers. This objective usually belongs to civic or university programmes oriented to train those who want to become entrepreneurs.
- Stimulating the ‘emotional socialisation’: create internalisations of attitudes, values, psychological approaches, and strategies needed to fill the role of entrepreneur. The process of socialisation of those who would like to become entrepreneurs should be inclined to a common reflection on what are the duties of that role. This means putting greater and more specific emphasis on the preparation of those who intend to become entrepreneurs against the strong psychological evidences that this role will expose them to.

Summing up, those who hold or would like to hold an entrepreneurial role have objectives that focus on the acquisition of knowledge-oriented business development and/or on the related technical and entrepreneurial skills.

In contrast, students with just an entrepreneurial spirit or an intellectual interest towards entrepreneurship will have different training objectives, which aim at the development of skills, to changes in personal attitudes, to the development of empathy towards entrepreneurship.

6 Country Report Portugal

6.1 Entrepreneurship programmes

Programmes aiming to promote and teach entrepreneurship have become more and more common, both within the formal education framework, from secondary education to higher education, and in certified, advanced, and specialised training for the active population to complement or improve skills.

Pimpão (2011) counted 338 curricular units about entrepreneurship in the Portuguese Superior Education offering and 27 thematic training courses. One remarkable tendency is that, more and more, this issue appears connected to several professional areas, apart from business management. Pinho and Gaspar (2012), in a study on the polytechnic universe, discover that ‘over 70% of the students expressed a positive desire to create their own business’, and rates are higher in studies where the curricular plan includes disciplines of entrepreneurship and marketing.

However, the same authors also state, ‘the Polytechnic Institute is neither supporting nor encouraging the creation of enterprises by students’. This gives reason to those who insist that entrepreneurship training should start in early school years, because the complex combination of skills and capacities take time to consolidate, and in early stages of life, we are more permeable to change and novelty.

The advantages of the experiences undertaken have convinced many schools to adhere to the diversity of challenges, and programmes promoted by ministries, public institutes, and private non-profit associations, and even entrepreneurship business, focus on this issue as their main product/service. We will identify here only some of these programmes, as the myriad of initiatives is much wider.

Junior Achievement Portugal

This is an NGO representing in Portugal the world organisation, since 2005. They offer practical training programmes targeted at each educational level (primary, secondary, and university) as well as national level competitions. This is the most famous and spread out.

Sites: www.japortugal.org.

Programa Escolas Empreendedoras

This initiative of DNA Cascais in partnership with Gesentrepreneur targets secondary schools of Cascais, training teachers and promoting a contest. With eight editions, it worked with 220 teachers, 7,000 students, and 14 schools.

Sites: www.dnacascais.pt; <http://gesentrepreneur.com>.

Interministerial governmental programmes

Several programmes assuming the form of support or contest have been promoted by the governmental institutions to promote, recognise, and compensate entrepreneurship skills and attitudes, finding the best proposals and ideas. However, rarely do they go into teaching and training. The most well-known programmes are the INOV and INOVA programmes.

Sites: <https://juventude.gov.pt/Emprego/Paginas/default.aspx>.

Setubal Polytechnic Institute: ‘IPS Junior Challenge’

Started in 2011, it promotes secondary school students’ training workshops followed by a contest of ideas and projects.

Sites: www.ips.pt/ips_si/web_base.gera_pagina?P_pagina=31108.

Platform for Entrepreneurship Education in Portugal

This organisation focuses both on actions in schools for teaching and training, and on framework and assessment tools development.

Sites: www.peep.pt.

6.2 Best practice

All the above can be considered best practices. To measure its real value would demand a deep study that would analyse both immediate impacts and results, but mostly a longitudinal impact that measures changes and results both in the school context and in the personal life stories of the youngsters.

From our point of view, some traits of these programmes are of best interest to ensure success in the education mission of training excellent professionals and citizens, but also a sustainable and continuous learning process at individual and group level:

- To make of entrepreneurship a regular issue and practice, by giving spaces for training and practicing at several stages of life. This means there are workshops of disciplines devoted to this issue but also practical missions and projects that allow the application, assimilation, and adaptation of entrepreneurship to one’s personality, aspirations, and needs;
- To focus on social and individual skills, as these take longer to acquire and consolidate, like teamwork, idea developing and presentation, assertiveness, changing perspective capacity, among others;
- To encourage and promote entrepreneurs later in a young adult age for the learning of technical and precise skills in project management or in business management, according to their profile and their entrepreneurship ideas, as not all entrepreneurs will create a new business; some might develop ideas, community projects, events, social services, etc.

6.3 Strengths and weaknesses

All these programmes are fundamental, as they create a good ‘environment’ around entrepreneurship: it is considered to be a positive attitude and personality; it is welcomed within the professional sector both for workers as much as for partners; it is a plus in a CV; and it is considered a source of motivation, satisfaction, and self-esteem. This daily proximity to entrepreneurship makes a possible and reachable goal for an adolescent or a young adult still building a life project that will surely change several times. Entrepreneurship will not be an exceptional ‘ending’ to exceptional persons.

On the other hand, the main weaknesses of these programmes are related to their articulation and framework. Most of them are not subject to any intent of articulation or

communication effort, and without this openness, there are fewer conditions for exchange, improvement, and best practice identification to happen. This means that many times they cannot create synergies and have a wider impact and public recognition, or that complementary actions are not possible. Knowing entrepreneurship learning cannot separate theory from practice, the meeting of programmes that focus on one of the aspects would be an advantage for a holistic approach to this issue.

Finally, there is a need for public clarification of the theoretical framework of entrepreneurship, as this is mainly happening at academic investigation level. The definition of entrepreneurship at the level of skills, objectives, attitudes, and context of application would be a major contribution to support entrepreneurship at the whole society level, thus making the mission of schools and other educative actors much easier.

Many myths and mistakes are still quite common regarding entrepreneurs, such as the idea that entrepreneurship will bring either failure or fortune, that entrepreneurs are aggressive, risk favourable, or that they are not team players, motivated solely by money. For instance, it would facilitate and sponsor initiative in other domains apart from business and it would alleviate the guilt and bad feelings around those who fail, valuing the process and the attempt.

6.4 Learning Environment

Project management practice can complement entrepreneurship ideas, as both appeal to the capacity of making things happen according to plans, defend behaviours of autonomy and responsibility, and highlight the need to innovate to reach success.

But one should not forget that there is a strong separating element between both, which relates to the involvement and sense of ownership. Entrepreneurship has for focus, as objective and mission, an idea represented by a service or a product of main interest and controlled by the entrepreneur. Project management is focused on objectives defined aiming at problems previously identified and analysed. These objectives usually give rise to a service or a product, that can be feasible or not, and that sometimes has no special meaning, emotional or professional, to the people in charge of it, who sometimes have little power to decide or change, independently of being an entrepreneur or not.

After the PIA2 experience in Portuguese schools, the main contributions that project management in the context of vocational schools can bring to the acquisition and consolidation of entrepreneurial skills are as follows:

- Facilitates skills related to teamwork and networking, as a means to obtain not only different opinions and perspectives, but also support, sponsor, or several resources that make ideas feasible: communication, negotiation, tolerance, and understanding of the other, delegation, and coordination.
- Promotes planning skills that are based on projection and anticipation of what will happen if it is done this way, the risk associated with this option, and who will be affected by these needs/results. These abstract reflection skills are fundamental for problem solving, flexibility, improvisation, and decision making.
- The encounter with limitations in PM of several orders – time, human resources, equipment, and financial resources – induces creativity and innovation, such as

thinking out of the box, considering as possibilities the impossible or what was never done/thought of.

- The capacity to identify possibilities and to follow an idea until the end, meaning, PM teaches how to analyse an idea, see its potential, exploit its possibilities, plan its development in a sequential and organised way. This is fundamental, because many great ideas fall halfway because they cannot be well presented and defended to collect support or because there is no leadership or plan to make them happen.
- And finally, the acceptance of life as a continuous learning process that starts from problems and challenges and makes us search for and/or create ideas, solutions, and strategies, forcing us to go into new knowledge acquisition and territories, crossing and fertilising all of them. As Dolabela (2003) states, entrepreneurial pedagogy – and it is here that we can find an overlap with PM pedagogy – defines the entrepreneur as someone capable of generating new knowledge from a given platform made of accumulated life knowledge belonging to individuals and that makes up the so-called four pillars of education – learn to learn, learn to do, learn to behave, and learn to be.

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