ENTRE-FORWARD

Enhancing entrepreneurship skills

Handbook on Entrepreneurial Trainings and Skills

Co-funded by the
Erasmus+ Programme
of the European Union

ENTRE-FORWARD

August, 2020

This REPORT is a product/Intellectual Output produced in the framework of the Erasmus+ Project "ENTRE-FORWARD: Enhancing entrepreneurship skills", project n° 2019-1-FR01-KA204-062880 coordinated by the Coopérative d'Initiative Jeunes (Bastia, France).

Contributors: Teresa Maltese, Rachel Nelson, Agnieszka Antosz, Athanasios Vasilopoulos, Joanna Wanielista

Editor: João Pedro Constâncio, União das Freguesias de Gondomar (S. Cosme), Valbom e Jovim (PT)
Editor contact: joao.constancio@uf-gvj.pt

Cite this final report as follows:

Constâncio, J. P., Maltese, T., Nelson, R., Antosz, A., Vasilopoulos, A., & Wanielista, J. (2020). *Report on the Handbook on Entrepreneurial Trainings and Skills*. Intellectual Output 1 the framework of the Erasmus+ "ENTRE-FORWARD: Enhancing entrepreneurship skills" Project.

Project partners

Coopérative d'Initiative Jeunes, France

www.coop-jeunes.com

Centrum Wspierania Edukacji i Przedsiębiorczości, Poland

www.cwep.eu

DEP Institut, Spain

www.dep.net

ISON Psychometrica, Greece

www.isonconsultants.com

Studio Risorse, Italy

www.studiorisorse.it

União das Freguesias de Gondomar (S. Cosme), Valbom e Jovim, Portugal

www.uf-gvj.pt

Index

PART IV

ANNEXES

Table Index

Figure Index

Graphic Index

Introduction

This intellectual output (#1), hereafter referred to as IO1, focuses on a review and evaluation of best practices and training courses in Europe, as well as a mapping of labor market needs and entrepreneurship prospects in Europe and in partner countries.

The present report-study intends to evaluate existing training practices in the countries of the consortium partners and, through its results and conclusions, to introduce t a new prototype-training program that will fill the gap between education and the labor market in terms of entrepreneurial skills.

Therefore, the report-study consists of a study based on several initially planned activities:

- Review of the best practices and training courses, mapping the skills needed in the labor market and the prospects for entrepreneurship;
- Involvement of the Focus Groups with local Stakeholders;
- Interviews and researches with primary sources such as key ministries, government authorities, experienced entrepreneurs, trade associations, universities, managers from many sectors of the economy, businesses, etc.

The main tools the partnership used for this study consisted in: a review of secondary sources as well as a focus group with experts and stakeholders, surveys and a wide variety of interviews with key government informants, international and local NGOs, skills training providers and individuals in selected companies and trade associations.

In particular, this document (IO1) is structured in four main sections, in the same way indicated in the approved project application form (Project No.: 2019-1-FR01-KA204-062880, Erasmus+) and, according to the method equally shared by each partner.

The first section (or PART I) explains the objective of the analysis, the applied methodology, the research models used and the tools used to obtain its results for the different phases.

The second section (or PART II) analyzes, identifies and evaluates all the best practices and training courses in entrepreneurship that exist in Europe, specifically in the countries of the partners, with the objective of being able to improve them and be included in the training program of the project, under IO3.

The third section (or PART III) refers to the needs of the labor market in terms of entrepreneurial skills. The labor market study analyzes the current entrepreneurial practices and skills that have been proven necessary for those who want to implement and manage a new entrepreneurial business.

Through the consortium, a research was developed in order to obtain all the appropriate information necessary to identify the skills that an entrepreneur should have.

The fourth and final section of the report (or PART IV) reveals, through the information obtained from the previous sections, the gaps between the labor market needs in terms of skills and qualifications of an effective entrepreneur and the existing entrepreneurship training practices/courses, in order to create a new prototype program that will fill these gaps.

Overall, the above sections will later serve as basis on which IO2 (Guidance Tools), IO3 (Entrepreneurship Training Program) and IO4 (E-Guide) will be developed.

All the sections described above, and in addition to the component of statistical analysis of the data to meet the demands established in the approved project application form, this report-study presents in each of the sections, a conceptual component that makes the final report easier to understand and more pleasant to read.

When preparing this report-study, we took into consideration not to do it extensively or, with extreme complexity, only so, that we could all be in tune with what was necessary for the results.

PART I

1. General considerations

The Entrepreneurial competence has become a priority on the political agendas of modern economies and societies, with the belief that it is not just a matter of starting businesses, but also a vital competence within the labor market for people in their daily lives, and even for those who are not classified as "entrepreneurs", in order to create new business opportunities.

The EU's 2020 Entrepreneurship Action Plan states the following[1]:

> *"To bring Europe back to growth and create new jobs, we need more entrepreneurs. The Entrepreneurship 2020 Action Plan is the Commission's answer to challenges brought by the gravest economic crisis in the last 50 years. It is a blueprint for action to unleash Europe's entrepreneurial potential, remove existing obstacles and revolutionize the culture of entrepreneurship in the EU. It aims to ease the creation of new businesses and to create a much more supportive environment for existing entrepreneurs to thrive and grow".*

The European Conference on Entrepreneurship Education in Europe (2006) highlighted that entrepreneurship education should be viewed differently from general business and economics studies, and adding that the relevant elements should include:

- The development of personal attributes and skills that form the basis of an entrepreneurial mindset and behavior (e.g. creativity, sense of initiative, risk-taking, autonomy, self-confidence, leadership and team spirit);
- The improvement of specific business skills and knowledge of how to start a company successfully.

Entrepreneurial skills are currently required in any field of activity. In this regard, IO1 of the ENTRE project, which translates an evaluation report of the existing training practices in the countries of the consortium partners, intends, through its results and conclusions, to allow the introduction of a new prototype-training program that will fill the gap between education and the labor market in terms of entrepreneurial skills. Next, we will begin with the presentation

[1] https://ec.europa.eu/growth/smes/promoting-entrepreneurship/action-plan_en;

and explanation of the objective of the analysis, the methodology applied, the research models used as well as the tools used to obtain its results.

2. Objectives of the report analysis

Although, due to the restrictions/constraints, the general objective that this ambitious and bold report intends to achieve, through its different sections as a 3-sided pyramid, is to:

- Identify and evaluate all the best practices and training courses in entrepreneurship that exist in Europe and especially in the partner countries;
- Conduct a Labor Market Analysis focused on current entrepreneurial practices and skills that have proven necessary for those wishing to run a new business;
- And, define the gaps between the labor market needs in terms of skills and qualifications of an effective entrepreneur and the existing entrepreneurship training practices/courses in order to create a new prototype program that will fill these gaps.

In general, we can state that the object of the analysis of this report-study will essentially reside in differentials analyzed and perceived by its stakeholders (target groups) of what formative context/training offers in terms of curricula and, therefore, training and improvement of entrepreneurial skills that such curricula offer (at least in the partner countries of the consortium). Plus, what in the labor context is felt and perceived as non-existent or poorly trained in terms of entrepreneurial skills due to absence or lack of updating to the constantly evolving labor market, but fundamental to business management, and what the training context, can provide to fill such gaps. It will be around these results/findings that a new prototype program will be projected with the clear intention of filling these gaps.

Aware that the challenges are ambitious, yet, they should be framed within certain restrictions/constraints, especially in the time that this report is being implemented (COVID-19 Pandemic). Therefore, starting with a restriction on the generalization of the data and its conclusions, as for example, the number of participants involved in the different stages didn't

exceed more than 90 individuals overall. However, we believe it is a quality input for the existing discontinuity and, therefore, with disruptive characteristics.

Having a clear concern about the critical moment that the report-study was developed, a guideline was initially projected so that all the partners in the consortium would be "in tune" with what was intended at the different stages and, so that in the end, the results were achieved together more efficiently for what is intended in this report.

3. IO1 methodological approach

As it has been written in the application form, the approach to be followed by everyone will be reviewing existing best practices at least in each partner country; establish contacts with local stakeholders so that each partner can be with experts, entrepreneurs and stakeholders, where interviews can be conducted and, administer questionnaires as reliably as possible through expert focus groups as well as entrepreneurs.

Bottom-up processing approach is a type of information processing based on incoming data from the environment to form a perception. This strategy often resembles a “seed” model, where in early stages are small but eventually grow in complexity and completeness.

The bottom-up approach shows the biggest failure of the top-down approach, i.e., the recognition of the work of the actual implementers (figure of our target group).

In contrast to top-down theorists, they acknowledge the fact that implementers on the micro-level think about their work and come up with their own opinion about the tasks they receive and change in the given programs, in order to improve them or adapt them better to the real circumstances (Berman, 1978).

3.1. IO1 Research Model Approach

The single-job strategy or research model approach, as the competency models, means that it is developed for single jobs and are the most common approach model to competency modeling (Chouhan & Srivastava, 2014).

For the present report, we planned what was fundamentally, the objective of the analysis - Entrepreneurial Skills – that are the cornerstone of the different faces of the object of study and, that are analyzed through the Human Resources point of view through the most common approach model.

The single-job research model approach starts with critical work identified, as in this case as an entrepreneur, and considers that it's necessary to identify entrepreneurs with skills that best suit the entrepreneurial activity, therefore, more easily to be identifiable, to be selected or develop those traits/characteristics.

The data collection usually includes the resource panel or focus group of jobholders and/or their managers and interviews with jobholders.

The data collection phase may also include interviews with entrepreneurs and direct reports, surveys with other professionals and direct observation of professionals at work. Once this is complete, the next step is to analyze the data to distill it into a competency model that typically includes 10 to 20 traits or skills, in our case, each with a definition and list of specific behaviors (skills) that describe what effective performers do and how to achieve effective results.

We understand here the concept of Competency Model as a set of competencies that includes the key behaviors required for excellent performance in a particular role (Lucian Cernusca and Cristina Dima, 2007). As such, a competency model is an organizing structure that lists the skills and other type of behaviors required for effective performance in a specific job (for example, a related work group).

It is worth mentioning here the distinction, according to Anglo-Saxon terminology, between competences and competencies.

According to Boyatzis (1982), competencies are defined by "the underlying characteristics of an individual resulting in effective or superior professional performance" and are measured by outputs, i.e. competencies are seen as observable behaviors or actions.

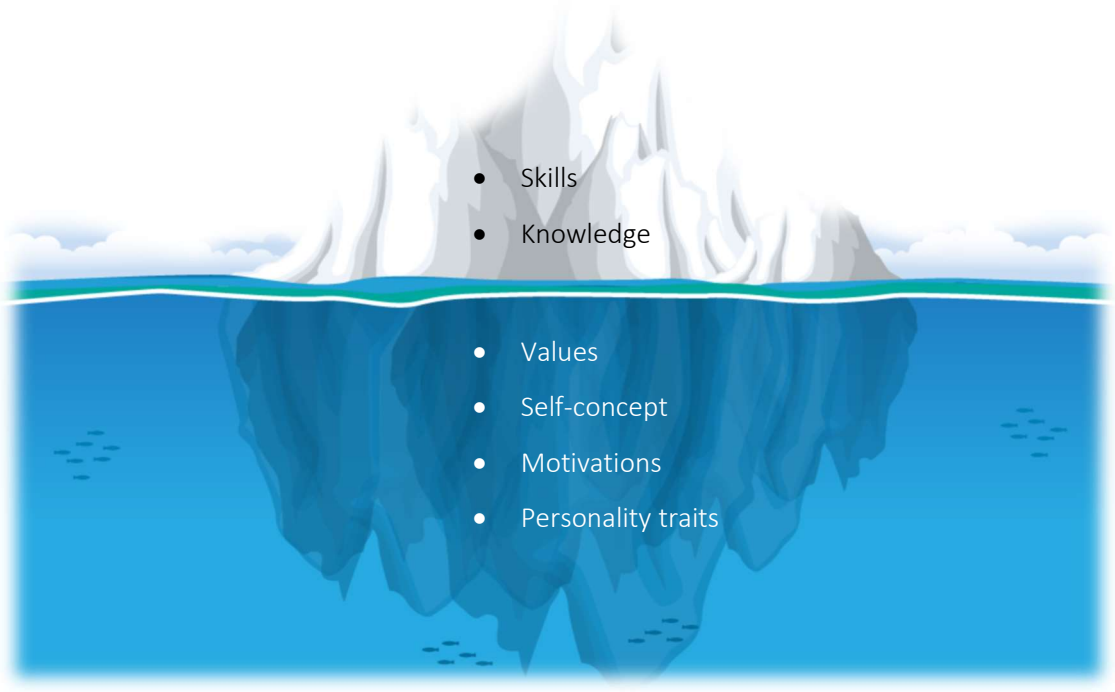
However, for such behaviors to generate superior performance there must be a set of values, personality traits, motivations and self-concept (and their facets: self-image or self-esteem, for example) capable of generating them - inputs.

This corresponds precisely to the distinction existing in Anglo-Saxon terminology, i.e., the outputs measured in terms of the professional performance of the individual, are the competences and the inputs, what allows the individual to start an activity (entrepreneurial), which are likely to result in superior performance (Ramos & Bento in Ceitil, 2006).

That said, undoubtedly, the outputs (behaviors and actions) are easily observable and monitorable, while values (set of rules, principles or norms that guide the behavior of the entrepreneur), self-concept, personality traits and motivations[2] are more difficult to characterize as intrinsic to the individual (inputs).

Finally, at this point to be clearer about the focus of the study to be addressed in our research model approach, it will be about what is represented in Spencer and Spencer's (1993) skills and knowledge model, visible from the iceberg metaphor in the following figure (Figure 1).

Figure 1. *Spencer and Spencer's Competences Iceberg Model*



Source: https://www.cleanpng.com/png-iceberg-ocean-seawater-clip-art-iceberg-ocean-136958/preview.html

[2] For a greater understanding and clarification of the human motivation, a vast topic filled with immense systematized and categorized theories, we stress here only, according to Mucchelli (1981), that the main "human" motives can be conscious or unconscious and irrational, acquired or inherent in human behavior.

We used the metaphor of the iceberg to underline that our object of study via research model approach, will correspond to the outputs of the individual, namely the skills and knowledge, therefore, possible to be observed and measured in terms of professional performance and easier to develop (train them) when compared to personality traits.

3.2. Tools used in IO1

As already described above at the report's main objective of analysis, several activities were proposed for the present report-study that respond to the different parts or sections of the report-study. In order to accomplish this and, once again taking into consideration the different steps/sections and time available, without running away from what is intended in the application form, several tools have been created for this purpose. Nevertheless, there was always the concern, so that we could be more efficient and effective in achieving their results depending on the time available. For this, a good part of the material/results/findings described in one section, were inputs from the following sections, i.e., as an essential part for the tools from the following sections.

At this point, we will only describe the tools used, giving special emphasis to the last tool (Job Analysis Questionnaire) and at a further stage, we will describe the actions implemented for this report-study to have a more clearly general insight of the route to be followed.

In three points, we present the tools considered for the report-study:

- 4 to 6 Experts in a Focus group per country;
- Interviews with 5 entrepreneurs per country;
- Administer at least 15 (Job Analysis) questionnaires to entrepreneurs per country.

For a better appreciation and understanding, we will briefly explain the context of these tools according to the scientific literature and, in which activities they are inserted in the respective section/part of the report-study.

However, for the description of such tools, i.e., the variables that constitute each tool will be explained in detail in the section or part of this report where it is included. Likewise, the steps

involved in the administration of each tool in the respective section, will also be in the following sections.

3.2.1. Expert - Focus group

A focus group is "a group comprised of individuals with certain characteristics who focus discussions on a given issue or topic" (Anderson, 1990, p.241).

According to Denscombe (2007, p.115), "focus group consists of a small group of people, usually around six to nine individuals who are brought together by a trained moderator (the facilitator) to explore attitudes and perceptions, feelings and ideas about a topic".

According to Casey and Krueger (2000) the Focus Group provides "a more natural environment than that of an individual interview because participants are influencing and influenced by others- just as they are in real life" (p.11).

Denscombe (2007) identified three distinctive characteristics of focus groups as follows:

i. Prompt/Stimulus: The sessions usually revolve around a prompt, a trigger, some stimulus introduced by the moderator in order to focus the discussion;
ii. Moderator-not a Neutral Person: There is less emphasis on the moderator to adopt a neutral role in the proceedings than is normally the case with other interview techniques;
iii. Interaction within the Group: Interaction between group members is given a particular value rather than just gathering opinions of people. The collective view is given more importance than the aggregate view.

The Purpose and Rationale behind the Focus group is to aim at collecting high-quality data (Patton, 2002), which primarily help to understand a specific problem from the viewpoint of the participants of research (Khan & Manderson, 1992).

Focus groups are an established mechanism for data collection across qualitative, mixed method, and quantitative methodologies (Pearson & Vossler, 2016, cit in Luke & Goodrich, 2019).

The use of Expert Focus Group in our study was applied in the second section, whose main objective was to analyze, identify and evaluate all the existing entrepreneurship best training practices and training courses in Europe, mainly in the partners' countries, to find out the most effective of them to be improved, used, and implemented.

In Annex A of this report-study, the template created is presented as a partner report for the specific results to be presented in the 2nd section/part and which, of course, will be addressed below. Part of the results obtained (the identified skills that need to be improved) will serve as input for the job analysis questionnaire administered in the fourth section (Part IV) of this report-study.

3.2.2. Semi-structured Interview

Interview is "a specialized form of communication between people for a specific purpose associated with some agreed subject matter" (Anderson, 1990, p.222). By definition, on the qualitative research it serves to "investigate the quality of relationships, activities, situations or materials" (Fraenkel & Wallen, 2003, p.380).

Questionnaires and interviews are often used together in mixed method studies, investigating educational assessment. While questionnaires can provide evidence of patterns amongst large populations, qualitative interview data often gather more in-depth insights on participant attitudes, thoughts and actions (Kendall, 2008, cit in Harris & Brown, 2015).

Semi-structured interviews are often used with mixed method studies to generate confirmatory results despite differences in methods of data collection, analysis, and interpretation (Harris & Brown, 2015). Conducted conversationally with one respondent at a time, the semi-structured interviews employ a blend of closed- and open-ended questions, often accompanied by follow-up why or how questions. The dialogue can meander around the topics on the agenda—rather than adhering slavishly to verbatim questions as in a standardized survey—and may, delve into totally unforeseen issues (Adam, 2015).

Usually, in a semi-structured interview, interviewers begin with a small set of open-ended questions, but spend considerable time probing participant responses, encouraging them to

provide detail and clarification. These data are generally analyzed qualitatively (Harris & Brown, 2015).

In mixed methods research, semi-structured interviews can be useful as an adjunct to supplement and add depth to other approaches.

Semi-structured interviews are perfectly suited for a range of valuable tasks, especially when more than a few of the open-ended questions require follow-up consultations and, are ideal for consideration when (Adam, 2015):

- If you need to ask probing, open-ended questions and want to know the independent thoughts of each individual;
- If you need to conduct a formative program evaluation and want one-on-one interviews with key program managers, staff, and front-line service providers;
- If you are examining uncharted territory with unknown but potential momentous issues and your interviewers, need maximum latitude to spot useful leads and pursue them.

The third section of this study report refers to the labor market needs in terms of entrepreneurial skills. Specifically, the Labor Market Analysis analyzes current entrepreneurial practices and skills that prove to be necessary for anyone who wants to run a new business.

For that, and according to application form, the consortium conducted a survey involving five experienced entrepreneurs in order to come up with all the appropriate information needed for the identification of the skills that an entrepreneurial must have. For that purpose, it was used the semi-structured interview as a tool to be used by the consortium partners of the ENTRE project.

In Annex B of this report-study, the template created is presented as the partner report to: 1) conduct the semi-structured interview in accordance with the script created for the five experienced entrepreneurs of each partner country and, subsequently, to be followed by all partners, and; 2) to provide the specific results to be presented in the 3rd section (Part III) which will be addressed below. Analogous to the previous point (focus group), also here, a good part of the results obtained will serve as input for the job analysis questionnaire administered in the fourth section of this report-study.

3.2.3. Job Analyses Questionnaire

As already mentioned previously, based on the data obtained, either in the expert focus group or in the interview to the experienced entrepreneurs that a Job analysis questionnaire was built, so that in the fourth section of this report-study we will be able to produce a prototype that intends to improve the entrepreneurial training courses.

The objective of this method as a tool, administered to 15 entrepreneurs from each partner country, which in total presented a sample of 90 entrepreneurs, is, through its results, to define the gaps between the labor market needs and the existing entrepreneurship training practices/courses, in order to create a new prototype program that will fill in the gaps.

However, as we have already mentioned, we will review the scientific literature on the complexity of this powerful, widely used tool.

The Job Analysis Questionnaire is a tool that aims to collect data on the: behavior-oriented work; behavior-oriented worker; behaviors involved in interactions with machines, materials and tools, performance evaluation methods; the working environment; and, in general, staffing needs (Harvey, 1991; McCormick, Jeanneret, & Mecham, 1972).

According to Morgeson and Campion (1997, p. 627) Job Analysis is “one of the most widely used organizational data collection techniques”, but its real purpose is to contribute to other areas too (Ash & Levine, 1980).

Brannick et al. (2007) claims that Job Analysis is used for everything, from the creation of job descriptions and developing training and to determine the effectiveness and the implementation of the planning of the work force that characterizes that particular kind of work.

3.2.3.1. Job Analyses Use

The use of Job Analysis for HR is a means that serves the development of all functions HR (Bowen, 2003; Brannick et al., 2007). These HR functions include job descriptions, job classifications, job evaluation, performance evaluation and training, and job specifications (Ash, 1988; Ash & Levine, 1980; Brannick et al., 2007, Levine et al., 1988).

In order to understand the impact that the Job Analysis has, a brief review is used in the following point below as an explanatory summary.

Job Descriptions

Creating job descriptions is the most common use by the Job Analysis (Brannick et al., 2007). Typically, job descriptions are made by compiling the most salient information gather by the Job Analysis. Job descriptions are intended primarily to summarize the analysis of the work, the results and highlight the most important elements.

According to Schwind et al (2013), job descriptions, generally, follows the same style, but between organizations, there are different ways and contents may vary. A simple approach is, to write a narrative description that covers the work in a few paragraphs.

Job Specifications

When recruiting and selecting candidates, employers use the Job Analysis to determine what knowledge, skills and abilities a candidate needs to have to do the job (Brannick et al., 2007). These requirements are referred to as job specifications, or “written description of job requirements” (Brannick et al., 2007, p. 220).

Hughes and Prien (1989) showed that the minimum qualifications, such as education requirements may be established by using a quantification of the Job Analysis designed to measure the level of education required to perform a given task. The study of Hughes and Prien (1989), tells us the relation between the necessary knowledge that binds with educational or training levels.

Jones et al. (2001) say that when looking for the knowledge, skills, abilities, and other characteristics (e.g., personality traits), the individual characteristics relatively stable should be what employers shall, through them, screen applicants using selective tests.

The Job Analysis is used to determine which knowledge, skills and abilities (KSA's) are necessary and, if these KSA that are relatively stable, cannot easily be “trained” and as such are selected as the criteria that a tool selection should be displayed for the characterization. Professional Human Resources (HR) can then, design or purchase a selection instrument that measures such stable KSA's.

The difference between a job description and a job specification lies in the following: a description of the work defines what work is; It is a job profile. While the job specification describes the work, requirements demanded to employees who do such work and the human factors that are needed. It is the profile of human characteristics required for that particular job.

Job Evaluations

Job evaluations are conducted studies to determine the value of a particular job, and they are used to set the base salary to ensure equity in salary (Brannick et al., 2007, Hahn & Dipboye, 1988; Schwab & Heneman, 1986).

Job evaluations are conducted by having analysts evaluating information found in the job description, analysis of the work, or the evaluation of working components (Brannick et al., 2007).

Job evaluations allow to examine what type of tasks are completed as part of the work and what knowledge, skills and abilities are needed to perform that work. Job analysts thereby can determine how complex the job is, to what extent the work is complex, and the relative value of the work that is being performed.

Training

The Job Analysis can also be used to determine the training objectives for a certain job (Brannick et al., 2007). Job Analysis with regard to training refers mainly to curriculum development and assessment of needs (Levine et al., 1988).

The Job Analysis tells the professional or HR trainer that a certain employee in the exercise of their functions will need to, after training, be able to perform a set of core key tasks for the good performance of its activity (Brannick et al., 2007; Ford & Goldstein, 2002).

By showing what the employee needs to know to perform a certain job, the HR professional can therefore determine what knowledge or skills need to be “trained” in training.

Using Job Analysis to develop a training program, organizations can find out what “needs are better assessed, what courses are more job-related, and more of the appropriate population is reached” (Levine et al., 1988, p. 17).

Jones et al. (2001) suggest that the Job Analysis should say what are the KSA's necessary for someone who to perform a particular job.

3.2.3.2. Job Analyses Oriented Methods

Several types of Job Analysis have been used and discussed, by making it important to address different types or methods of Job Analysis.

There are three general methods of Job Analysis, specifically targeted or oriented to the job, oriented to the worker, and the hybrid, a mixing of the other two (Brannick et al., 2007). The method used for the Job Analysis should be determined by the purpose of job analysis itself (Brannick et al., 2007).

Choosing the right method, should therefore take into account the purpose of the Job Analysis, because the method used makes a significant difference in the results obtained on Job Analysis (Cornelius, Carron, & Collins, 1979).

Work Oriented Job Analysis Method

Methods of Job Analysis oriented work, focus mainly on what the worker does as part of his work (Brannick et al., 2007). In some research these methods are referred to as methods task-oriented (Cornelius et al, 1979; Lopez, Kesselman, and Lopez, 1981; Prien & Ronan, 1971) because they refer to any method that analyzes the types of tasks completed by someone at work, as well as the tools and equipment used to do so (Brannick et al., 2007).

The task analysis is performed by evaluators to predict a list of activities that are performed as part of a particular job (Brannick et al., 2007).

Examples of such methods include: Functional Job Analysis (FJA's); task inventories and critical incidents techniques.

Dierdorff and Morgeson (2007), describes that work center analyzes the descriptions of tasks and responsibilities that are required in a particular job. However, the same authors state that, while this analysis may have implications in the behavioral repertoire for the worker, these are centered and what needs to be done, not on what the worker needs to complete the job.

Worker Oriented Job Analysis Method

Methods of Job Analysis oriented to the workers involves the analysis of attributes required by workers to perform a specific job (Brannick et al, 2007; Harvey Friedman, Hagel, and Cornelius, 1988).

Its main focus is on knowledge, skills, abilities and other characteristics that an employee must have in order to carry out their work (KSA's required).

According to Harvey et al. (1988), "the worker-oriented approach to job analysis is one of the most useful methods of work descriptions yet developed" (p. 636).

Here, the Position Analysis Questionnaire (PAQ) is one of the most widely recognized tools for the job analysis-oriented worker (McCormick et al., 1972).

According to Brannick et al. (2007), the oriented methods for workers are the most suitable if used as a selection tool.

Hybrid Job Analysis Method

The hybrid Job Analysis methods use elements of both methods described above, i.e., Work Oriented Job Analysis Method and Worker Oriented Job Analysis Method.

O*NET (Occupational Information Network) is an excellent example of a hybrid method of Job Analysis (Brannick et al., 2007).

3.2.3.3. Considerations in the creation of the Job Analysis Questionnaire

There is no best way to collect the information of the Job Analysis Questionnaires (Schwind et al., 2013). According to these authors, it is up to analysts the duty to assess the optimal tradeoffs[3] between time, cost and accuracy associated with each method, since it is up to them to decide which trade-offs are more suitable and select the best type of data collection method, which can be:

a) interviews;
b) questionnaires;
c) observation as a method;

[3] A balance achieved between two desirable but incompatible features; a compromise.

d) logbooks, or;

e) a combination of these techniques.

Previous studies (Levine, EL, Ash, R & Bennett, N. 1980; Levine, EL, Ash, R, Hall, H. & Sistrunk, F., 1993) indicate that different methods of Job Analysis that better "have served", vary according to the purpose of the goals as displayed in the following table (Table. 1).

Table 1. Different Job Analysis Methods Best Suit for Different HR Goals

DIFFERENT JOB ANALYSIS METHODS					
Method of Data Collection	**Job Description and Design**	**Selection**	**Training**	**Compensation**	**Counselling**
Interviews	✓	✓	✓	✓	✓
Questionnaires	✓	✓	✓	✓	
Employee log	✓				✓
Observation	✓	✓	✓		

Source: Levine, E. L., Ash, R. A. & Bennett, N. (1980); Levine, E. L., Ash, R. A., Hall, H. & Sistrunk, F. (1993).

Considering the foregoing, we use the hybrid questionnaire as the method tool to be followed (Job Analysis) for the purpose of the fourth section of this report-study.

Similarly, to the tools created in the previous sections, the job analysis questionnaire created for the fourth section was "tailor-made" for this report-study.

The assumption inherent in building this last particular tool - Job Analysis - starts from the principles of competency models where they were created to illustrate how competencies/skills lead to performance and, how they often are highly tailored (Mohan, 2013).

However, taking into account the time available for the performance of the activities inherent to the study, partners rigorously planned the orientation to be the most efficient and effective

for the results. Therefore, a good part of the information obtained in second and third sections were combined in the Job Analysis Questionnaire.

For this purpose, and therefore as a disadvantage, there was a certain loss of results-information which could have been requested from the respective target groups that would certainly had allowed us to present more in-depth findings, and perhaps easier to be analyzed and interpreted according to the existing scientific literature.

In Annex C of this report-study, the template created is presented as a partner report to: 1) administer the Hybrid Job Analysis Questionnaire to the 15 entrepreneurs of each partner country, then, to be followed by all partners, and: 2) explain the specific results to be presented in the fourth section, which will be addressed below.

3.3. General Procedure used for IO1

Since this report is divided into 4 sections, we only present at this point the general process inherent in the execution of this report-study. Specifically, regarding the division of labor, i.e., its parts that constitute it, according to efficiency and effectiveness taking into account its fundamental restrictions - time limitation, pandemic restrictions and number of participants involved as well as the number of European partners involved in this study and that, therefore, with certain limitations in generalizing it to all European countries.

Nevertheless, it provides interesting data for further analysis and such is an interesting input.

For better understanding and so that all partners follow the same guidelines to obtain a final product, it was suggested to follow the planned steps via their activities (already described in the project application form) distributed in the four sections or parts of the report. So, the desired results to be achieved, will be more efficient and effective taking into account the time available for IO1 implementation, mainly by the number of hours allocated to each researcher in each partner country (62 days allocated to the partner responsible for IO1 and 30 days allocated to the remaining partners).

Each specific step taken in each section/part of the report will be explained below for a better understanding of the specific actions taken in the respective sections.

On the other hand, to analyze the extracted data and, in order to remove any ambiguity, we recommended the use of statistics as a technique for reading and interpreting the data as input for the following steps.

Moreover, the need for the use of statistics as a resource and a method for obtaining the desired results through the created tool (Job analysis questionnaire), which will later describe in more detail, was accepted to be the best efficient way according to the relationship between the quality, results and associated costs of IO1.

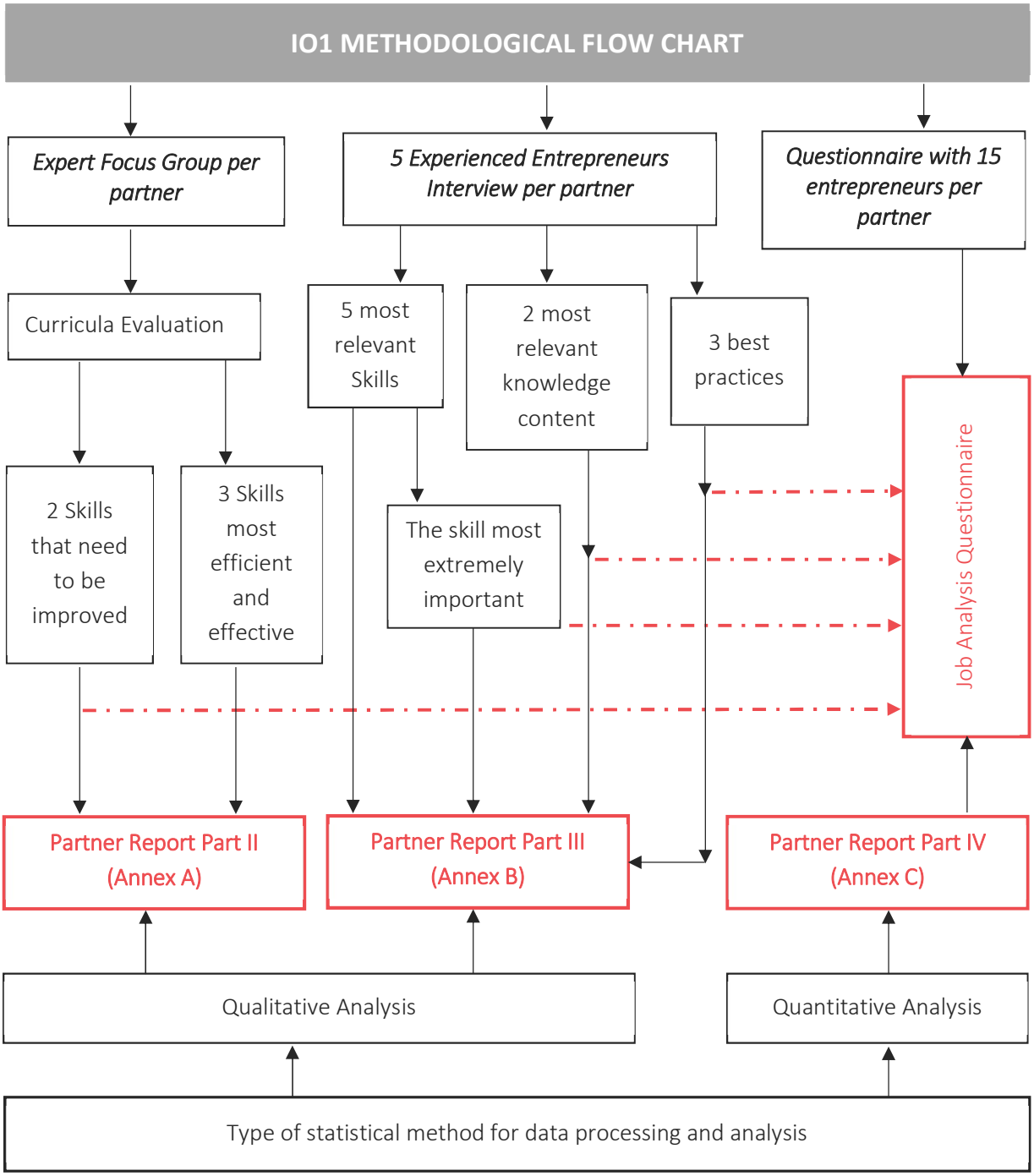
According to Smith (2015), many people consider the statistical analysis as a purely technical exercise related to the application of techniques of collection and analysis of specialized data, however, this perception is incorrect and deceitful. The practice of statistics as a scientific method involves contingent procedures and making shrewd decisions and, not only the mechanical application of formulas is accepted, as it is sometimes assumed (McGinn, 2010).

It is for this reason that, for Bhattacherjee (2012), a scientific method refers to a standardized set of techniques that enables the construction of scientific knowledge such as how to make valid observations considered, how to interpret the results and how to generalize these results.

All methodology was proposed to be followed by all partners (although with some flexibility to adapt to partner organizations and country cultures).

In the following summary table (Table 3), we show what is expected in terms of results to be analyzed by each partner of the consortium at the different times or sessions of this report, as well as the partial information that will be integrated in Part IV (line dotted in red), to analyze the specific and more comprehensive results for this report.

Table 2. Expected results to be analyzed in the sections



PART II

4. Entrepreneurial education and training to support growth and business creation

According to the EU, the primary objective of the 2020 Entrepreneurship Action Plan is to facilitate the creation of new businesses and to create a much more favorable environment for existing entrepreneurs to prosper and grow. To this end, the Action Plan identifies three areas for immediate intervention:

1. Entrepreneurship education and training to support growth and business creation;
2. Remove existing administrative barriers and support entrepreneurs in crucial phases of the business lifecycle;
3. Re-activating the culture of entrepreneurship in Europe and nourishing the new generation of entrepreneurs.

Within point 1, i.e. entrepreneurship education, the EU points out and underlines the following considerations[4]:

> *"Entrepreneurship is a skill that can be learnt. You don't have to be born an entrepreneur to run a successful business. You can become one by developing an entrepreneurial mindset and skills. As Europe needs more entrepreneurs creating jobs, it's necessary to support this type of education in all EU countries.*
>
> *The main objective of the European Commission is to promote entrepreneurship education and stress its importance at all levels from primary school to university and beyond."*

Thus, for the EU, entrepreneurship education prepares people to be more entrepreneurial individuals and helps them develop the skills, knowledge and attitudes necessary to achieve the goals they set for themselves.

[4] https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education_en;

This foundation is supported by evidence that also shows that people with entrepreneurial education are more employable or have more employability opportunities[5].

Therefore, and through entrepreneurship, the Commission's objective is to encourage people to become entrepreneurs and also to facilitate the creation and growth of their businesses.

For the EU, entrepreneurship creates new businesses, opens new markets and nurtures new skills. The most important sources of employment in the EU are small and medium-sized enterprises (SMEs).

However, and going back a bit in time, during the 2000s entrepreneurship training was subject to multiple dynamics that overlapped and grew successful. The first was to promote a balance between theoretical and practical lessons, which contributed greatly to the empowerment and recognition of entrepreneurship education (Bainée, 2013).

The objective of such theoretical approaches, known as theory-based education (Fiet, 2000), was to build a consistent and systematized structure to maximize the probability of success for entrepreneurs. Specifically, they mobilized concepts and theories that have an explanatory and applied nature, such as agency theory, resource theory, or transaction cost economics (ibid.). In addition, to the deepening of theoretical knowledge that mainly concerns the teaching of management, the entrepreneurship trainings drastically expanded the range of topics covered, such as **legal aspects** (protection of ideas), **technical aspects** (development of new products, technological innovation), organizational aspects, **marketing and sales aspects** and, mainly, **financial aspects** (→ Business Project; → Angel Investors; → Business Incubator) and **individual stimulus** (negotiation, leadership).

These theories, among others, provided convincing intellectual premises that students could use to analyze complex scenarios. Still, most of these areas of research had either not been developed until recently or had not been applied to the study of entrepreneurs, and, although we have come a long way in our understanding of entrepreneurs, we still do not know much about them (Fiet, 2000).

[5] https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education_en.

The architectural side of entrepreneurship education (construction of curricula), highlighting its dependence on **certain factors** such as the **dominant culture** (engineering school, business school, etc.) and according to other **contingency** factors (size, composition of the workforce), its emphasis or point of view was placed on some of these particular situations in education and, in addition, focused on its essence on the question of creation or the resumption of business - main umbrella (Bainée, 2013).

Thus, the teachings were based on projects, that is, actual, real or simulated scenarios, based on collaborative or individual learning, and which resonated very much in the "teaching teams" (specialization of hordes). Often, based on an original business idea, a gradual approach required students to identify the main trends in the environment, prioritize those most likely to affect the development of the idea, and finally, explore possible changes or variations. In addition, on many occasions, multidisciplinary approaches (→ interdisciplinarity and innovation) and those that claimed "design thinking", combining empathy and iterative process, were widely mentioned (Bainée, 2013).

The corollary is that, even for some entrepreneurship training, pedagogical considerations predominate, and, in an increasing number of other cases, territorial considerations seem to prevail (Silicon Valley of Bavaria in Germany, Silicon Valley of user-driven innovation in Otaniemi, Finland etc.), especially in the context of Clusters (→ Milieux Innovative and Entrepreneurship) (Bainée, 2013).

However, according to Solomon (2007):

> *"Compared to many other disciplines, the discipline of entrepreneurship is in its infancy, with no standard framework or agreed upon best practices for entrepreneurial education".*

For Bainée (2013), even if the learning curve for teaching entrepreneurship is still long, it seems clear that experiential learning practices/methodologies are already well established, just as "learning by studying" from the beginning has been replaced by "learning by experiencing", "learning by interacting" or "learning by doing".

New perspectives probably depend on a "territorialization" of the teachings marking a de-compartmentalization of entrepreneurship training that yesterday freed itself from the shackles of traditional disciplines and, that now probably tends to emancipate itself from these same shackles of higher education.

The challenge now, is to articulate this education with all stakeholders - stakeholders - who constitute the ecosystem of the entrepreneur (education and research institutions, national and local policy makers, entrepreneurs, private sector, etc.).

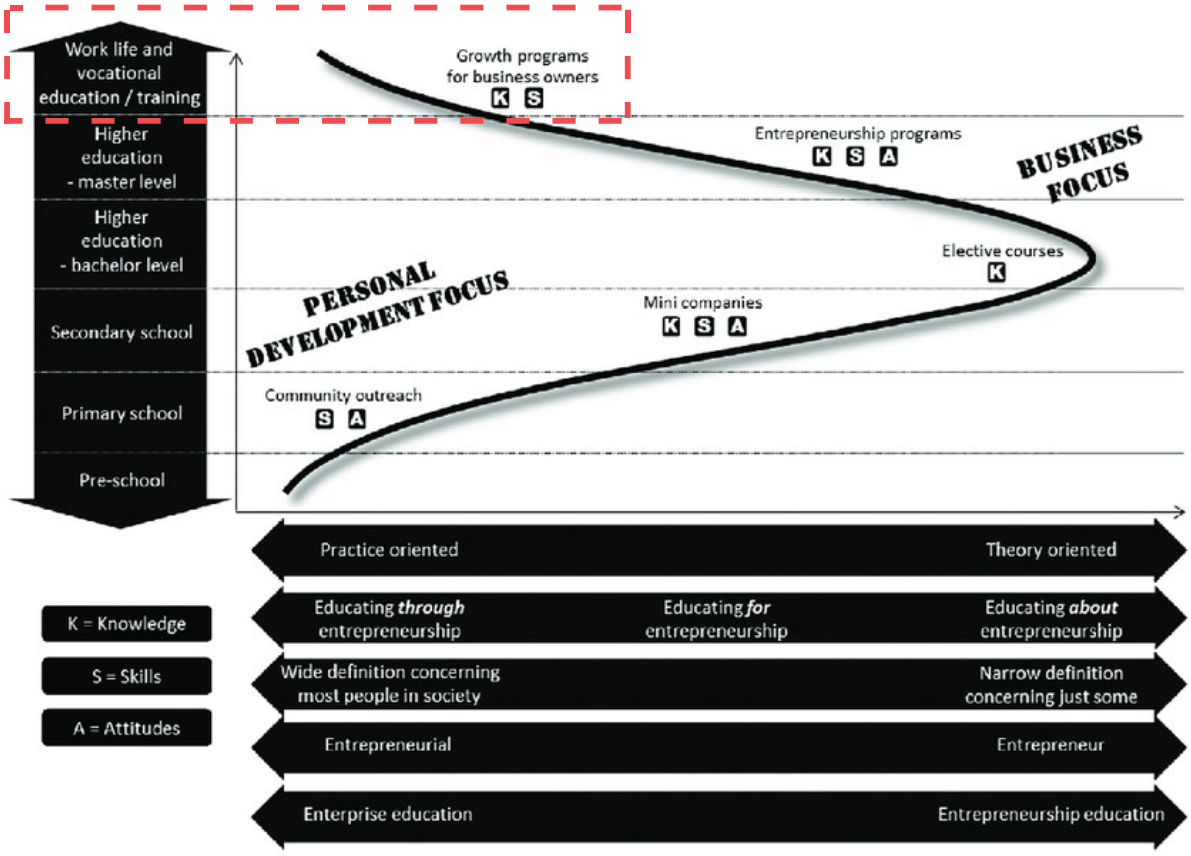
4.1. Terminology of entrepreneurship in education

The two terms most commonly used in the field of entrepreneurship education are business education and entrepreneurship education. However, the term entrepreneurial education, used mainly in the UK, has been defined as a broader focus in terms of personal development, mindset, skills and abilities, while entrepreneurship education has been defined to focus more on the specific context of starting a business and becoming self-employed (Mathieu, 2006).

In the United States, according to Erkkilä (2000), the only term used is education for entrepreneurship. Entrepreneurial education and entrepreneurship education are sometimes discussed using only the term entrepreneurship education, which usually opens misunderstandings.

Erkkilä (2000) proposed the unifying term entrepreneurial education as covering both entrepreneurial education and entrepreneurship education. For a more enlightening overview of the terms, the following figure provides a summary (figure 2).

Figure 2. Overview of terms currently used in entrepreneurial education



Source: Report from M. Lackéus (2015).

In Northern and Eastern Europe, some additional terms are used. For example, in Sweden and the Balkans, the term entrepreneurial learning is often used as the equivalent of business education (Leffler and Falk-Lundqvist, 2013, Heder et al., 2011). This sometimes causes confusion, since it is the same term used in the research field of entrepreneurial learning, which consists of studying how entrepreneurs learn outside the educational domain.

Another set of terms used in Finland is **internal education** and **external education** for entrepreneurship (Seikkula-Leino et al., 2010). Internal entrepreneurship education is synonymous for entrepreneurship education, and external entrepreneurship education is synonymous for entrepreneurship education. Adding to the confusion here is the fact that internal entrepreneurship is sometimes used as a synonym for intra-entrepreneurship, that is, when it acts in an entrepreneurial way in an established organization (Burgelman, 1983).

Finally, it is pointed out that entrepreneurial education is often categorized into three approaches:

- Teaching “about” entrepreneurship;
- Teaching “for” entrepreneurship;
- Teaching “through” entrepreneurship.

Teaching "about" entrepreneurship means a content-loaded and theoretical approach, with the aim of providing a general understanding of the phenomenon. It is the most common approach in higher education institutions (Mwasalwiba, 2010).

Teaching "to" entrepreneurship means a work-oriented approach, with the aim of providing to entrepreneurs’ beginners with the knowledge and skills needed for the most work life and vocational education/training-oriented effect under the subject Business Focus. In Figure 1, there is a rectangle with a red line drawn precisely to emphasize the framing of terminology with the nature of the project report-study that is part of the Erasmus+ -Strategic Partnerships for adult education program. In this regard, for the present and next section (Part III and Part IV), it will be about the K (Knowledge) and S (Skills) and, in its essence the study will focus in taking into account the availability of time for this purpose.

Teaching "through" entrepreneurship means a process-based and often experiential approach in which students/learners go through a real business learning process (Kyrö, 2005). It occurs in the context of pre-school education; primary school; high school through to tertiary education under the personal development umbrella.

4.2. Attributes around Entrepreneurial Education and Training

To identify "what" should be taught in entrepreneurship education, some views and opinions of several academics are described below. According to Gartner and Vesper (1998), it seems that entrepreneurship should be treated differently from general management and, that it is essential to focus on developing the basic skills necessary to be a successful entrepreneur.

McMullan and Long (1987) pointed out that these are often skills associated with leadership, guiding a product development process, exploring and exploiting innovations etc., but also skills to obtain resources to start a business (Vesper and McMullen, 1988; Zeithaml and Rice, 1987).

Other areas to be included in educational programs are associated with entrepreneurship as a career possibility (Donckels, 1991; Hills, 1988) and, above all, with the protection of ideas and patents (Vesper and MacMullen, 1988).

The opinions of McMullan and Long (1987) and Plashka and Welsch (1990) highlight the importance of challenges at each stage of the venture process (Solomon et al., 2002). Gibb (2002) argues that entrepreneurship education must deal with complexity and uncertainty and, that educational programs must be incorporated into a globalization framework to present lectures in an appropriate context.

In addition to classroom learning, there are several approaches in entrepreneurial education to provide a more practical education. This can include computer simulations, virtual initiation competitions, real business plan competitions, entrepreneurial workshops, discussions and knowledge exchange with participating entrepreneurs, as well as work experience and internship in a company's start-up activities. Ramsden (1992) argues that it is necessary to increase what he calls "deep" learning opportunities through a change of mindset towards a more active involvement of learning entrepreneurs.

Garvan and O'Cinneide (1994) recommend the need to focus on acquiring knowledge relevant to entrepreneurship, developing skills and using techniques, identifying and stimulating entrepreneurial motivation and talent, risk assessment and analytical techniques.

However, most educational programmes in Europe highlight the positive impacts of entrepreneurial behavior on economic growth and the motivation of people to become entrepreneurs.

Aspects such as development, satisfaction and support a company, development of attitudes to change and incentive to the creation of companies and enterprises were emphasized. However, none of the elements are associated with the skills needed to expand a business, from

the initial phase to a more mature stage of the business (Lewrick et al., 2010) - a theme further explored in the following section - Part III.

Along with the US, Europe encouraged entrepreneurs to explore the venture process by developing a business plan (Gartner and Vesper, 1998; Hills and Morris, 1998). However, Gibb stated that the business plan may not be the appropriate metaphor for the entrepreneurial act. For Gibb (1996):

> *"…the business plan is more a reflection of the attempt by the providers of banking, accounting, and commercial services to the entrepreneur and owner-manager to reduce the world and make sense of things in their terms".*

From an ontological perspective, it may be necessary to discuss the educational approach by the context offered to learners.

Kyro (2000), asserts that the theory that the entrepreneurial paradigm must be fundamental to the postmodern world. He suggested including emotions, values and interests, rather than characterizing the entrepreneur as a rational thinking decision maker.

In line with other scholars, such as Chia (1996), that argue that entrepreneurial education should stay away from solving analytical problems and have suggested characterizing the entrepreneur as an "intellectual entrepreneur" or as someone creating relationships between sets of ideas.

In contrast, Fiet (2001, p. 101), denies the importance of theory in the social sciences, arguing that:

> *"Entrepreneurship theory as a set of empirical generalizations about the world economy and how entrepreneurs should behave that allows for prediction of true outcomes".*

For Fiet (2000, p. 106), these are pedagogical problems associated with the teaching of theoretical concepts in which, at times, they are the result of a lack of knowledge, a "Theory is

boring! Lectures are boring! School is boring!". All three of these — theory, lecture, and school can also be irrelevant."

However, these different authors, currents and theories reflect the diversity and complexity of the human factor in its multiple rational, cognitive, emotional, personal and organizational dimensions that embrace the ambient context, available resources and opportunities to run an entrepreneurial business.

4.3. Part II specific procedures

As already mentioned, the main objective of this second section (or PART II) is to analyze, identify and evaluate the best practices and training courses in entrepreneurship that exist in Europe, specifically in the partner countries.

Despite the transversality of the different parts that structure Part II, Part III and Part IV, as the methodological approach - bottom-up approach - and the research model approach - single-job strategy - taking into consideration the tools chosen in each of the sections mentioned, the consortium partners, to obtain the desired outcomes for this report-study, conducted other specific measures.

The Focus Group with local stakeholders (key ministries, government authorities, entrepreneurs, trade associations, universities, managers from various sectors of the economy, companies, etc.) were the methodological tool chosen for Part II.

Given the time available for this section, only two sessions with the focus group were planned, which was previously described in the guidelines delivered to all partners.

The two suggested sessions were the two steps performed by all partners in order to achieve the results to be achieved in this section.

First step: *Purpose* - Identification of existing practices in each partner country regarding entrepreneurship education/training in their country. It includes gathering at least between 3 to 5 best practices through curricula of training institutions.

For this, the **expert focus group** included 4 to 6 participants (stakeholders, government authorities, entrepreneurs, trade associations, universities, managers of several sectors in the Economy, enterprises) where in a first brief moment this project was presented, and specifically the objectives of this IO1 activity.

Then, they were asked, in their opinion as agents deeply involved in entrepreneurship, which were according to their knowledge, the best 3 to 5 entrepreneurship training institutions. Collectively the group reached an agreement /consensus with the help of the facilitator.

Because most of the members of the expert group could not be available for two meetings in a short period of time due to their job positions, it was suggested that all partners could do this step through a virtual meeting.

Results Obtained: Identification of at least 3 to 5 entrepreneurship-training institutions from each partner country viewed as excellent in the field of entrepreneurship training by their group of experts.

Second step: *Purpose* - After identification, a second session was held with the same persons of the focus group for a more detailed analysis of the curriculum and underlying skills to be achieved after the training period of the courses identified in the previous step.

For this, a template was created to be uniform to its subsequent presentation to the target group that will have to evaluate. In the template it was detailed the curriculum and skills that should reach the trainees after its conclusion (see Annex A). This template was the worksheet that helped to guide the focus group by the facilitator.

Afterwards, the researched curricula were analyzed and evaluated, through the same focus group (stakeholders, government authorities, entrepreneurs, trade associations, universities, managers of various sectors of the economy, companies).

Thus, in this second session, they evaluated, scale 1 to 5, how updated (the curricula) they believed it to be in the context of the labor market (need to improve) and specifically, in the field of entrepreneurship.

4.3.1. Worksheet created for the Part II Tool

From the very beginning, it was created a template - **Annex A** - so that all partners could follow the same steps and their results for later to be examined.

Accordingly, in the **Annex A** it was shared the document that served as a partner report for the specific results to be presented in the 2nd section/part and that will naturally be addressed further ahead.

Part of the results obtained will serve as input for the job analysis questionnaire administered in the fourth section of this report-study (see summary table on page 27 about the general procedures of this study).

The following results represent the evaluations of the curricula assigned globally by the respective focus groups, as well as by each partner:

a) The three skills of all curricula exposed that the experts agree to be the most efficient and effective to “run” an entrepreneurship business in today's world, and;
b) The two skills of all curricula that experts agree need to be improved to “run” an entrepreneurship business in today's world.

4.4. Results of Part II

With the six partners of this consortium, and through several institutions of their countries, 27 curricula on entrepreneurship training were analyzed by six focus groups, one per partner.

In the following table (Table 3), we present the institutions, courses analyzed by the focus groups of each project partner country.

Table 3. Analyzed curricula on entrepreneurship training

Partner country	Name of training institution	Name of training course
Greece	Center for Entrepreneurship, Development and Innovation	Neuro Marketing
	Center for Entrepreneurship, Development and Innovation	Consumer Behavior in the Digital Age
	Centre for Young Entrepreneurship	The Entrepreneurship of today
	Center for Entrepreneurship, Development and Innovation	Risk Management and Social Media
	SciFY Science Academy	Social Entrepreneurship and Social Impact
Portugal	Instituto Superior de Contabilidade e Administração do Porto	Master in Entrepreneurship and Internationalization
	Faculdade de Economia da Universidade do Porto	Master in Innovation and Technological Entrepreneurship
	Academia de Formação do Porto	Entrepreneurship Course
	Porto Business School	Digital Business Postgraduate Studies
	Faculty of Psychology and Educational Sciences of the University of Coimbra	Master in Social Intervention, Innovation and Entrepreneurship
France	CREACTIFS	5 days to start your business
	KIOSE Entreprendre	KIKRE
	Réseau National d'Appui à la Création d'Entreprise	Build and manage an entrepreneurial project
	Incubateur de la Belle de Mai - Marseille	La manufacture
	Initiative Pays d'AIX dit PAI - Aix en Provence	Ma boutique à l'essai/Ma boutique, mon quartier
Italy	Basilicata University	CLabUnibas - Contamination Lab - Basilicata University
	MANDS - Masterandskills	Start Up, Europroject e Project Management
	Ente IeFP 5 (High Schools from Prato take part to this project)	EYE - Ethics and Young Entrepreneurs
	CFP Villaggio del Ragazzo di Chiavari (Ge)	Bellacoopia - training path through the building of a virtual cooperative
Poland	Entrepreneur Incubator of Lublin University of Technology	Entrepreneurship
	Faculty of Economics, University of Rzeszow	Managerial competence course
	University of Economy in Bydgoszcz	ABC Entrepreneurship
	PeZeT Training	ABC Entrepreneurship Training
	Polish Agency for Enterprise Development	Planning your own career (online course)
Spain	City of Valnalon, Asturias/Spain and a similar programme in the Province of Barcelona – CuEmE - Primary schools	Emprendre en la escuela
	MONDRAGON UNIBERTSITATEA & Team Labs	Leadership, Entrepreneurship and Innovation
	ARACOOP and the Generalitat de Catalunya	Student Cooperatives (Programa de Cooperatives d'Alumnes)

Five focus groups were created by the 6 project partners. Overall, the elements that characterize the focus groups reflect the provenance of the different stakeholders, as illustrated in the table below (Table 4).

Table 4. Characterization of the six Focus Groups

Partner country	Age	Gender	Organisation and position	Years of experience
Spain	48	Female	Diputació de Barcelona (Economic Promotion)	15
	45	Female	Diputació de Barcelona (Education)	13
	48	Male	Pantheonwork/EADA Business School (Consultant and associate professor)	18
	23	Female	Autoocupació (Consultant)	1
Greece	50	Female	Fly Consulting - CEO	20
	45	Female	Hellenic Banking Institute - Special counsel	15
	60	Male	Propsis Consulting S.A - CEO	30
	75	Male	Association for International & European Affairs - Vice president	25
	65	Female	Athens Business Uni. - Emeritus Professor	30
France	47	Female	Entrepreneur (marketing and communication)	27
	40	Female	Manager (regional network of business creation consultancy)	13
	33	Male	Entrepreneur (mobile app Startup)	7
	35	Male	Manager (consultancy and training)	10
	65	Male	Director (training institution)	35
	52	Female	Project manager/consultant	30
Italy	60	Male	Prof. Tommaso Cozzi, Teacher of “Economics and Business Management” and “Businesses Strategy” at Bari University, Training Science Department	30
	50	Male	Prof. Giovanni Schiuma, Basilicata University	20
	47	Male	Prof. Roberto Linzalone, Calabria University	15
	41	Male	Prof. Antonio Lerro, Basilicata University	15
	51	Female	Dott.ssa Cristina Menichelli, Co-Founder & Business School Director Masterandskills, La Sapienza Roma	30
	41	Male	Dott. Alessandro Martemucci, Officinae Matera, Consultant/Trainer	20
	53	Female	Dott.ssa Marirosa Gioia, Counselor, Career Guidance professional – Italian Educator Association	30
	*	Male	Dott. Pasquale Latorre, Deputy Director Confapi Matera	30
Portugal	39	Female	Instituto do Emprego e Inserção Profissional – Financial department Counsellor	14
	42	Male	Instituto do Emprego e Inserção Profissional – Analyst adviser	17
	51	Female	Instituto do Emprego e Inserção Profissional – Financial department Counsellor	29

	33	Female	Instituto do Emprego e Inserção Profissional – Analyst adviser	11
	50	Female	Instituto do Emprego e Inserção Profissional – Financial department Counsellor	20
Poland	*	Male	Rzeszow Regional Development Agency/Director	*
	52	Male	Info-Projekt Sp. z o.o./Director	29
	*	Female	Rzeszow University of Technology/Professor	*
	51	Female	Self-employed/Coach, Trainer	28
	*	Male	CK Edukator/President	*

** Data not provided by participants*

The following table (Table 5) shows, after the evaluations of the curricula made by the respective focus groups, the three Skills that the experts agree to be the most efficient and effective to "run" an entrepreneurship business, and the 2 skills of all curricula that experts agree need to be improved to "run" an entrepreneurship business in today's world, by partner country.

Table 5. Skills selected by the six Focus Groups

Partner country	3 most efficient and effective skills to "run" an entrepreneurship business	2 skills that need to be improved to "run" an entrepreneurship business
France	Taking the initiative	Mobilizing resources
	Motivation & perseverance	Coping with ambiguity, uncertainty & risk
	Working with others	
Greece	Be able to use in a proper way the method of Story Telling in order to achieve better product sales (Marketing Skill)	Be able to understand the emotional levels of my employees to be sure that everyone is fine. (Emotional Skill)
	Be able to follow the strategic planning of my company in order to achieve better growth (Management Skill)	Be able to use in a proper way the statistical analysis tools for a better understanding of my company (Soft Skills)
	Be able to use in a proper way the financial ratios in order to draw conclusions of the company status (Economic Skill)	
Spain	Search for opportunities and the identification of needs/resources – alone or in a team	Creativity – in a wider sense – to find solutions, transform, collectively create and work as a team
	Communication – many dimensions – to express the idea, sell, but also to listen	Self-confidence – to manage errors and assume responsibility
	Risk assumption – willing to take risks	
Portugal	Be able to promote the internationalization of the business	To be able to adapt into a multidisciplinary and cultural environment

	Be able to work creative tools for a business out of box	To be available to identify the right conditions to run a business in an ambiguous environment
	To be able to digital business transformation skills	
Italy	To identify a model of business and financial sustainability	To develop useful relationships to implement the project through networking techniques
	To conduct a market/economic sector need analysis and be ready to the change (constant focus on goal)	To overcome limits and cultural prejudices, to be self-confident and trust in our skills, facing the risk and overcoming future obstacles with bravery (resilience)
	To develop creative thought, cooperation/relation abilities and problem-solving skills, leadership and control skills	
Poland	Communication skills	Marketing skills
	Stress resistance	The ability to analyze the environment
	Ability to set long and short-term goals	

Initially, we understand that the curricula submitted to analysis by the respective focus groups came from target institutions that are characterized by Universities, VET institutions, agencies, incubators, cooperatives, etc. Naturally, these courses reflect a diversity of course curricula with different nuances as to their overall objective in the training offer within the field of entrepreneurship such as, Neuro Marketing, Consumer Behavior, Social Entrepreneurship, Entrepreneurship and Internationalization, Innovation and Technological Entrepreneurship, Digital Business, Planning your own career, Entrepreneurship at school; My test store/My shop, my neighborhood, etc.

Thus, the approaches followed in entrepreneurial training, mirror the Teaching "about" entrepreneurship, Teaching "for" entrepreneurship and Teaching "through" entrepreneurship, underlining its dependence on certain factors, such as the dominant culture, etc. in which it highlights entrepreneurship in its most entrepreneurial teaching/training category (internal education) and, in other analyzed courses clearly focused on the exclusive entrepreneurship (external education).

On the other hand, in the analysis of the skills, as initially stated and planned (see IO1 methodological flowchart of Table 3, p. 40), we want to highlight the skills that need to be

improved from the respective curricula presented and, that will make up/will be part of the information to be provided in the fourth section.

What is intended here is to display the perceived contrast between the actors (target groups) of what the training context offers in terms of curricula and, which is felt and perceived as non-existent or poorly trained in terms of entrepreneurial skills, but fundamental to business management.

Thereby, it will be possible to define the existing gaps in the training context, of course, restricted to 27 curricula of some formative institutions in the field of entrepreneurship (in its internal and external education aspects) in some European countries.

In the following Table (Table 6), after content analysis, through semantic analysis of the discriminated skills, we will present these skills in a clearer and more consistent way so that, those that presented themselves in a major category of skills and more comprehensive and inclusive of other sub-skills, such as marketing skills, are more understandable, since they will be part of object in section IV.

Table 6. Skills from the training/education context that need to be improved

TWO SKILLS THAT NEED TO BE IMPROVED TO "RUN" AN ENTREPRENEURSHIP BUSINESS
To be able to understand the emotional levels of my employees
To able to use in a proper way the statistical analysis tools for a better understanding of my company
To be able to mobilize resources
To be able to deal with ambiguity, uncertainty and risk
To be able to adapt into a multidisciplinary and cultural environment
To be available to identify the right conditions to run a business in an ambiguous environment
To be able to develop and maintain useful relationships to implement a business through networking techniques and strategies
To be able to overcome limits and cultural prejudices, to be self-confident and trust in our skills, facing the risk and overcoming future obstacles with bravery
To be able to analyze the environment
To be able to design and implement a marketing plan
To be to able find solutions, transform, collectively create and work as a team
To be able to manage errors and assume responsibility

Here, it was also possible to verify that between the different focus groups there was no repetition of skills, so the 12 skills mentioned will be part of the questionnaire developed in the fourth section (Annex C).

In the following section (Part III), we will address the labor market needs in terms of entrepreneurial skills perceived by another target group in this report - five experienced entrepreneurs from each project partner country. The final goal is to, with the results obtained in these two sections (II and III), with different target groups, to be possible to highlight or contrast what the formative/training context and, in the work context, is felt or perceived as non-existent or poorly trained in terms of entrepreneurial skills, but fundamental to business management.

PART III

5. Entrepreneurial Businesses activity in Europe

In this third section we explored the contents, based on the needs of the labor market in terms of entrepreneurial skills, however, we emphasize again, the limitations by the constraints mentioned, by the time available to execute the report and by the number of individuals who were part of the target group (five experienced entrepreneurs per partner).

Therefore, we were limited, essentially by the analysis of the Labor Market in terms of the "best" practices, entrepreneurial skills and knowledge that a current entrepreneur should have or be in order to implement and manage a new entrepreneurial business.

Similarly, we highlighted a number of characteristics or attributes of entrepreneurship, particularly European entrepreneurship, as well as the socio-demographic characteristics of the European entrepreneur profile.

Given the current economic challenges that many countries are facing around the world, the notion of generating better entrepreneurial activity has become a prominent goal for many national governments.

The relevance of entrepreneurship for economic development has been emphasized by many researchers (e.g. Davidsson et al, 2006) and, it is now recognized that education and training opportunities play a key role in growing future entrepreneurs and developing the skills of existing entrepreneurs to expand their businesses to higher levels of success (Henry et al, 2003).

Moreover, while entrepreneurship provides benefits in terms of social and economic growth, it also offers benefits in terms of individual achievement, with entrepreneurship tearing down barriers of class, age, gender, sexual orientation and race.

The concept of an entrepreneurial Europe promoting the creation and development of innovative enterprises, already mentioned in Part II of this report, has led many EU Member States to strengthen their SME policies as academics, politicians and policy makers increasingly recognizing the substantial contribution entrepreneurship can make to the economy (Bruyat and Julien, 2001).

Small and medium-sized enterprises (SMEs), defined as having fewer than 250 employees (2003/361/EC), make up a large part of Europe's economy: there are some 21 million of them in the European Union, providing around 75 million jobs and accounting for 99% of all enterprises. SMEs are a key part of European industry and they contribute up to approx. 80% of employment in some industrial sectors, such as textiles, construction or furniture. SME are a major source of entrepreneurial skills, innovation and contribute to economic and social cohesion. (COM (2005) 551 final pp.1[6]).

According to the annual Report on European SMEs 20017/2018[7], Member States differ considerably in terms of the SME size class and which made the largest contribution to economic recovery from 2009 to 2017.

- In the EU-28 overall, medium-sized SMEs made the largest contribution, followed closely by micro SMEs;
- Medium-sized SMEs also made the largest contribution in nine Member States (AT, CZ, DE, DK, FI, LU, NL, PL and PT);
- In contrast, micro SMEs made the largest contribution in eleven Member States (BE, BG, EE, IE, IT, MT, LT, LV, RO, SI and SE);
- Small SMEs made the largest contribution in only 4 Member States (FR, HR, HU and UK).

5.1. Entrepreneurship determinants and growth factors

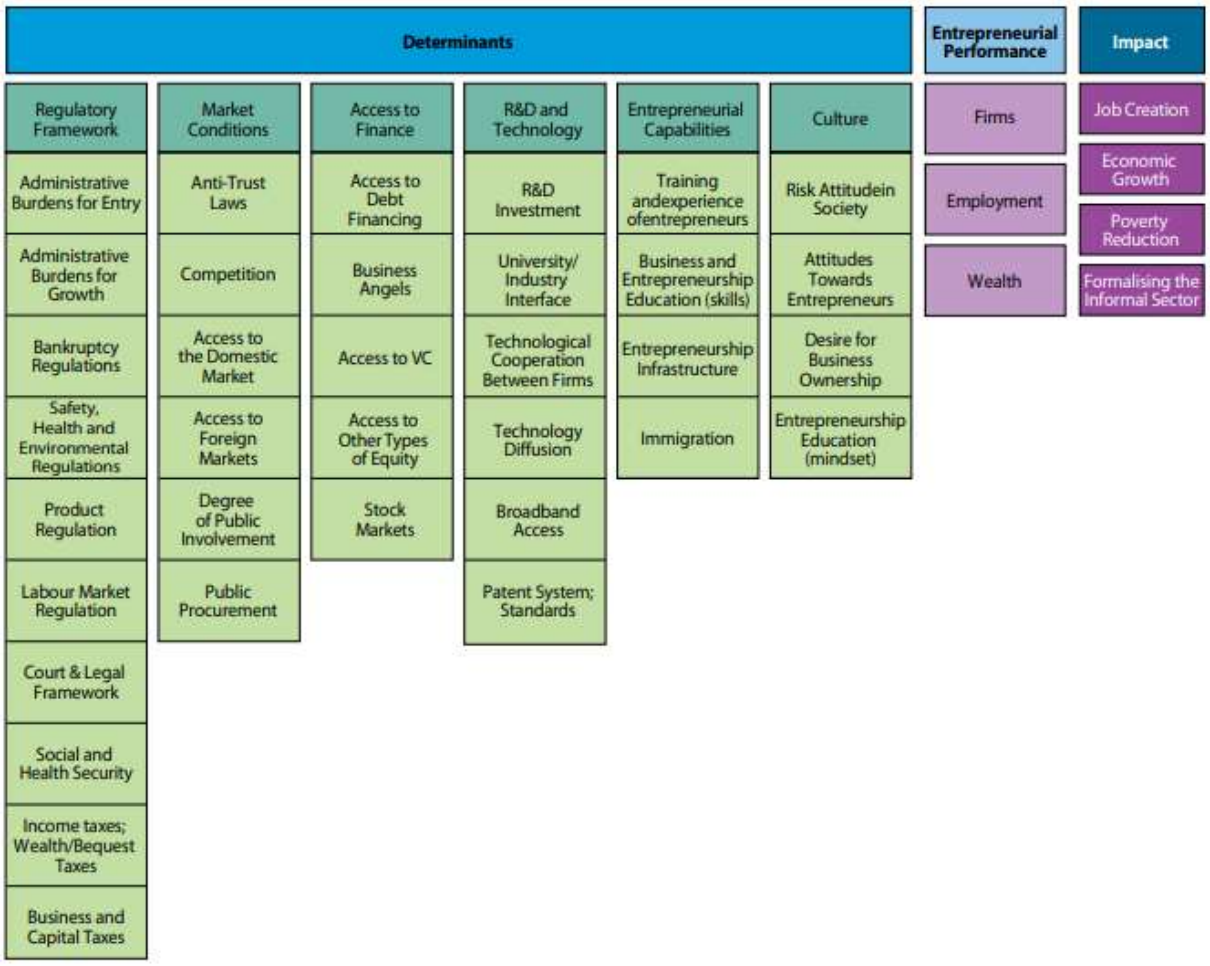
According to Eurostat (European Union, 2012a) data, we present below, through a model, that its structure identifies, three separate but interconnected flows, all important in the formulation, evaluation and assessment of policy measures in entrepreneurial activity: "determinants"; "entrepreneurial performance", and; "impact", where:

- The "determinants" reflect the main factors that affect "entrepreneurial performance" and, in turn, the "drivers";

[6] Implementing the Community Lisbon Programme – Modern SME policy for Growth and Employment", 10.11.2005. COM (2005) 551 final;
[7] https://op.europa.eu/en/publication-detail/-/publication/a435b6ed-e888-11e8-b690-01aa75ed71a1.

- The “Entrepreneurial performance" reflects indicators that show what policy makers believe to have an impact on some or many final objectives (impacts).

Figure 3. The OECD/Eurostat framework for entrepreneurship indicators – adding policy areas for entrepreneurial determinants (European Union, 2012a, p.26)



Source: https://ec.europa.eu/eurostat/documents/3217494/5748437/KS-31-12-758-EN.PDF/99dba9d4-b7a2-4206-b588-14e7c62ebf0b?version=1.0

The six main determinants or thematic factors of entrepreneurship described above are affected by many different policy areas.

The model recognizes other relationships among the main components, besides those flowing from left to right (in fact, also among the subcomponents). For example, the model claims that the determinants can change the amount and type of entrepreneurial performance, which in turn leads to changes in an Impact category, such as economic growth.

Still, economic growth itself will have an impact on determinants, affecting how easily companies/entrepreneurs can have access to finance, for example, or, a dynamic economy may encourage more entrepreneurs to take steps to implement a business idea, even if the determinants remain unchanged (European Union, 2012a).

On the other hand, Storey (1994) sought to classify the main internal factors influencing company growth into identifiable categories and suggested that, instead of examining descriptive models, researchers should use prescriptive paradigms combining the following components: entrepreneur, company and strategy.

As it can be seen in Table 7, Storey identified the key elements of each component and argued that, all components needed to be properly combined for the company to achieve growth.

Faster growing, with no growing or unsuccessful companies may have some appropriate characteristics in the areas of entrepreneur, company or strategy, but it is only where all three effectively come together, that a company with high growth will be found. Each component offers indicators of where weaknesses may exist and the changes needed to create a successful (high growth) company.

Table 7. *Factors Influencing Growth in Small Firms*

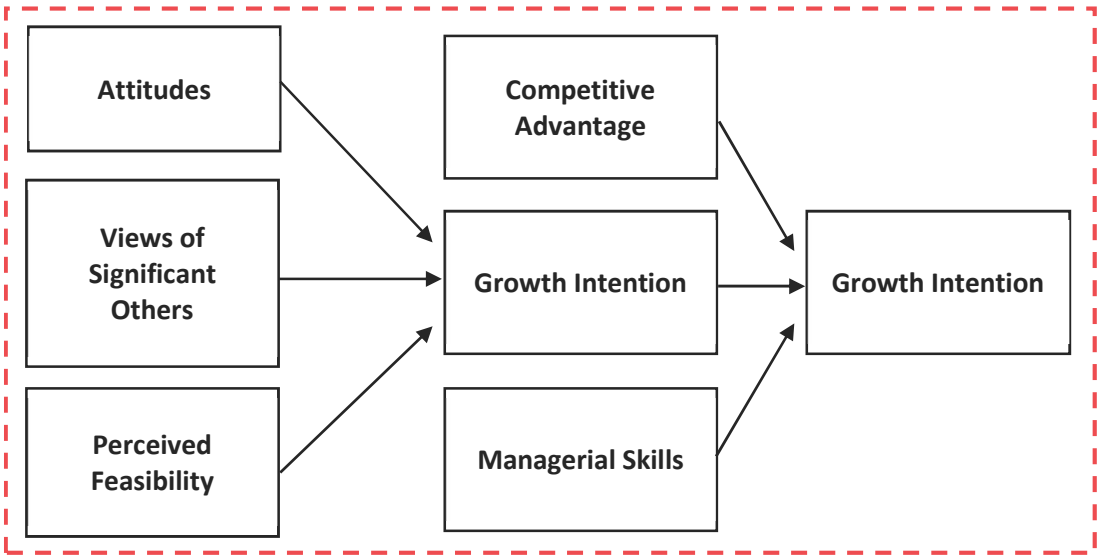
ENTREPRENEUR	FIRM	STRATEGY
Motivation	Age	Workforce Training
Unemployment	Sector	Management Training
Education	Legal form	External equity
Management experience	Location	Technology
Number of founders	Size	Market positioning
Prior self-employment	Ownership	Market adjustments
Family history		Planning
Social marginality		New products
Functional skills		Management recruitment
Training		State support
Age		Customer concentration
Prior business failure		Competition
Prior sector experience		Information and advice
Prior firm size experience		Exporting
Gender		

Source: Storey (1994)

In addition, a study by Orser (1997) found out that, the SMEs studied in his research, those whose owners had declared five years earlier that they wanted to expand the business, were now more successful, while most companies belonging to entrepreneurs who did not prioritize growth had not grown or were unsuccessful.

Orser (1997) found out that an entrepreneur's growth intentions were influenced by his own attitudes, the opinions of others (such as spouse, business partner, accountant or banker) and the perceived feasibility of success (figure 4).

Figure 4. Growth Intentions



The attitudes of the entrepreneur were influenced by positive factors, such as financial implications, contribution to the community and recognition of the community, but were negatively influenced by factors such as work-family balance, additional stress and potential loss of control. The combination of these aspects contributed to the accumulation of an entrepreneur's growth intentions, which combined with competitive advantage and management skills, determined the company's growth outcome (Orser, 1997).

5.2. Entrepreneurs Profile in Europe

Many Europeans want to take the opportunity (and the risk) to be self-employed and enjoy the benefits of being their own boss (Cedefop, 2011).

European entrepreneurs are a heterogeneous group (European Commission, 2003). They come from diverse backgrounds and represent people from all areas. However, a typical entrepreneur in Europe is male and has finished high school.

The **gender gap** is very clear. According to Eurostat data (2010), 70% of EU entrepreneurs were male, compared to just 30% of females.

There are many reasons why fewer women than men wish to start and run their own businesses. Eurobarometer research on family entrepreneurship has found that women seem less attracted to the idea of becoming entrepreneurs, and many have never thought about starting a business: according to the survey, 39% of women prefer to be self-employed compared to 51% of men (The Gallup Organization, 2009).

The motivations/reasons why men and women want to become entrepreneurs are also, often different. For women, reasons to avoid unemployment, combining work and private, seem to be more important than for men (Schrör, 2006). Women also face more difficulties than men do in dealing with banks and entering informal financial networks (GHK and Technopolis, 2008).

At **education level**, a growing share of European entrepreneurs are highly educated; just over a quarter (28%) of European entrepreneurs are educated to a tertiary level. Young Europeans are seen to have particularly strong entrepreneurial tendencies (Volkmann et al., 2009).

Some of the key barriers to entry, such as those linked to geography, have been removed with ICT developments. As global popular culture continues to be centered on youth, many young people have been able to exploit their fluency in digital technology to create successful businesses in music, video games, internet retail and other industries (Volkmann et al., 2009).

Entrepreneurship is also common among many migrant communities as it can contribute to reduce social exclusion and raise living standards (CEEDR[8], 2000). Studies show that, in certain EU countries, migrants demonstrate notably higher rates of self-employment than the native population (Cedefop, 2011).

[8] Centre for Enterprise and Economic Development Research

Employment background also matters to entrepreneurial activity in Europe. For example, the likelihood of being involved in entrepreneurial activity is three to four times higher for those women who also are employed in a wage job (whether full or part time) compared to those who are not working, are retired, or are students (Allen et al., 2008).

Another significant potential for Europe is the fact that, young people in the EU-25 are more attracted to self-employment than their older counterparts (variable age); over half (51%) of 15-24-year-old and half of those are still in education favored self-employment (The Gallup Organization, 2007).

5.3. Business training skills

Surveys indicate that most Europeans do not feel ready to start their own business venture. Only around **40% of Europeans feel that they have the skills necessary to start a business** (Allen et al., 2008; Bosma and Levie, 2009).

In relation to skills, the availability of opportunities for setting up businesses plays a factor in their aspirations. Less than one third of Europeans feel that there are opportunities to start a firm in the area where they live (30%), across innovation-driven economies more broadly and only one-fifth of inhabitants think such opportunities exist (Allen et al., 2008; Bosma and Levie, 2009).

Around a third (35%) of Europeans who feel that there are opportunities to set up a business in their area, state that a fear of failure would prevent them of doing so (Cedefop, 2011).

In addition, the economic crisis plays a role, as the attitudes of early-stage entrepreneurs towards starting a new business were more pessimistic in 2010 compared to the year before. More than half of the entrepreneurs stated that turbulent economic conditions could diminish new start-ups and reduce risk-taking (Cedefop, 2011).

Europeans have also been asked in the global GEM surveys[9] to indicate how they feel about entrepreneurship as a career choice (Kelley et al, 2010).

[9] The Global Entrepreneurship Monitor (GEM) is the largest single study of entrepreneurial activity in the world. Available from Internet: http://www.gemconsortium.org/.

Across the countries that participated in the GEM 2010 survey, around 59% feel that starting a new business in their country is considered a desirable career choice. Across the EU, the level who feel entrepreneurship is a good career choice varies (Kelley et al, 2010).

5.4. Entrepreneurship learning access in Europe

Entrepreneurship is seen today as a key competence for all, and is linked to individual's ability to turn ideas into actions.

Such skills and attitudes are directly linked to concepts such as creativity, sense of initiative, innovation, pro-activity, determination, independence, responsibility, risk acceptance and the ability to plan and manage projects (Cedefop, 2011).

Across Europe, entrepreneurship is being taught through four routes:

- As a separate subject/course/qualification, with a focus on learning the skills and know-how of setting up and running a business, or having a more theoretical focus;
- As an extra-curricular, usually voluntary/elective, subject;
- As a mainstream subject in the curriculum, typically focusing on the development of transversal competences related to entrepreneurship such as initiative, confidence and creativity;
- As a non-formal course delivered in the adult education or private sphere.

So far, entrepreneurship learning practices in Europe tends to be ad hoc. The key reason for the ad hoc approach is the lack of appropriate national strategies, but the inclusion of entrepreneurship in the curriculum and/or national strategy usually is a good indicator of political commitment.

In 2007, only six Member States incorporated entrepreneurship into the national curriculum for compulsory education. Among them, Spain, Ireland, Cyprus, Poland, Finland and the United Kingdom (Rodríguez, 2009).

The situation improved considerably in 2009, with more countries incorporating entrepreneurship into the curriculum (e.g. Austria, Hungary) (McCoshan et al., 2010). In addition, about one-third of European countries created a national strategy for

entrepreneurship learning (as in Table 8) and another nine countries were in the process of doing so. Several other countries have integrated entrepreneurship into other key strategies, such as lifelong learning (e.g. Bulgaria, Czech Republic, Estonia, Latvia and Luxembourg).

Table 8. National strategies for entrepreneurship learning

National strategy in place	National strategy planned
Belgium (Flanders), Denmark, Finland, Lithuania, Netherlands, Norway, Portugal, Sweden and UK	Austria, Belgium (Walloon), Estonia, Iceland, Ireland, Malta, Poland, Slovenia and Spain

Source: McCoshan et al., 2010

From a general point of view, the entrepreneurial learning pedagogy is typically characterized by interactive and experiential methods, which require learners to actively participate in the learning process, based on real-life situations and simulations.

These include: group learning and tasks; interactive methods with companies and entrepreneurs, including company visits; practical and hands-on learning (trial and error); developing creativity; problem solving; business and game simulations; companies run by students; and business competitions (Cedefop, 2011).

5.5. Entrepreneurship Skills Required

The European Commission, through a top-down approach, has proposed "A New Skills Agenda for Europe: Working together to strengthen human capital, employability and competitiveness" to address the skills challenges facing Europe today.

The Joint Research Centre, in partnership with DG Employment, Social Affairs and Inclusion, has developed EntreComp: The Entrepreneurship Competence Framework.

EntreComp describes entrepreneurship as a lifelong competence, identifies what are the elements that make someone entrepreneurial and describes them to establish a common reference for initiatives dealing with entrepreneurial learning.

Based on the premise that:

> *"Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social".*

This premise is part of the definition of Danish Foundation for Entrepreneurship & Young Enterprise.

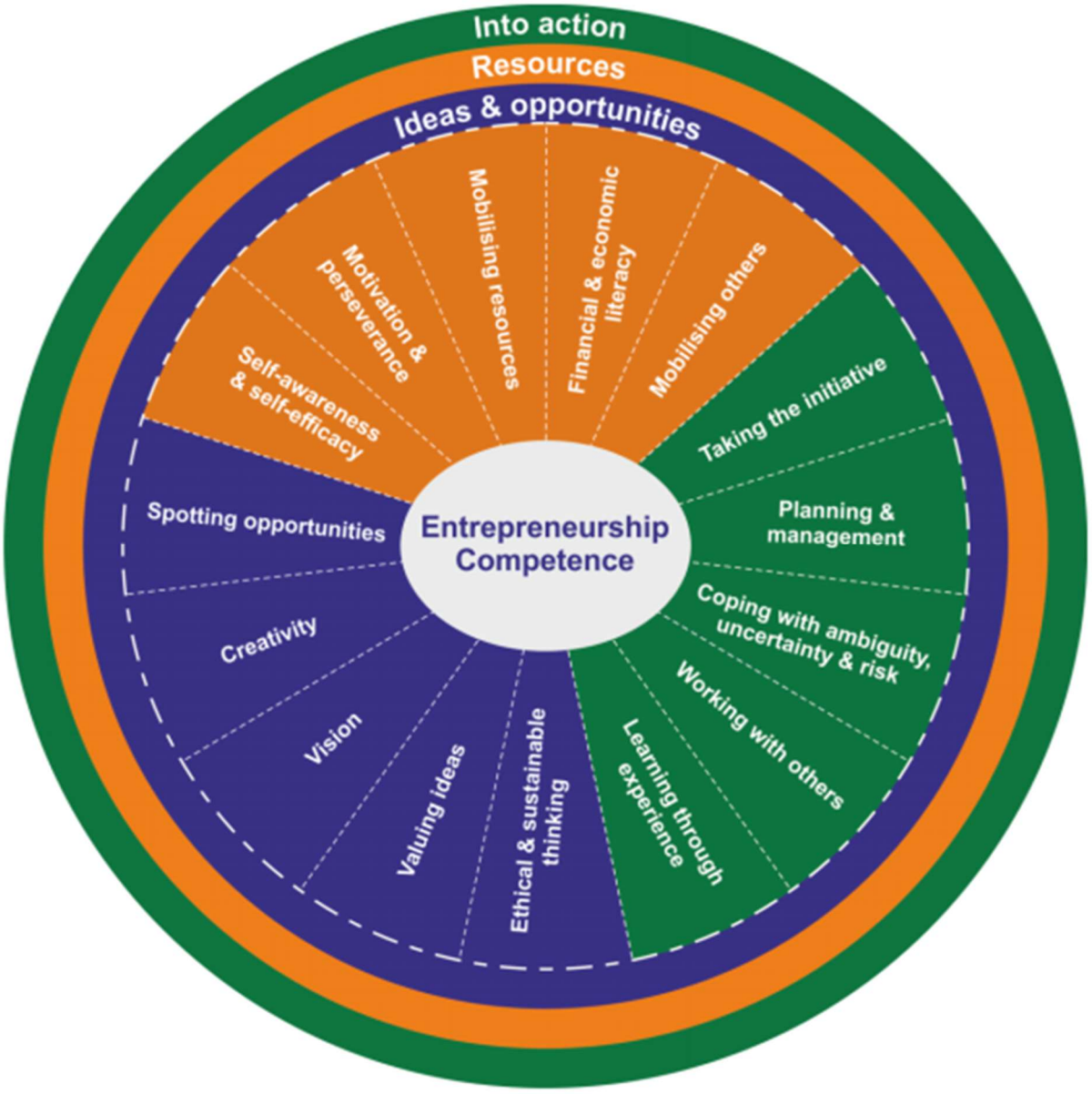
The EntreComp structure aims to build consensus around a common understanding of entrepreneurship competence by defining 3 skills areas, a list of 15 competences, learning outcomes and proficiency levels to which current and future initiatives can refer.

By focusing on the development of competences through the actual creation of entrepreneurial value, EntreComp breaks down the boundaries between education, work and civic engagement.

In this respect, the EntreComp is transversal to formal, non-formal and informal learning contexts and, applies equally to education and training systems from primary to vocational education and training. It also extends, to non-structured learning contexts including civil society, communities, youth work, start-ups and existing organization such as corporations, non-governmental organizations or public administrations.

At the end, the framework prints 15 skills in an 8-level progression model and proposes a comprehensive list of 442 learning outcomes as shown in the figure below (Figure 5).

Figure 5. Areas and competences



Source: Bacigalupo, et al. (2016)

The first component of entrepreneurial competence in the EntreComp model is "Ideas & Opportunity Recognition". This area consists of entrepreneurial skills to identify, seize and create opportunities, and pursue them vigorously: spotting opportunities, creativity, vision, valuing ideas, ethical and sustainability thinking.

Shane and Venkataraman (2000) argued that identifying and exploiting opportunities are focal concepts in entrepreneurship that distinguishes entrepreneurship from management. Entrepreneurial ideas include creativity, innovation, risk-taking, and the capability to understand successful entrepreneurial role models and opportunity identification (Bagigalupo et al., 2016)

The second component of entrepreneurial competencies in the EntreComp model is "Resources", which represents the entrepreneurial 'know-how', skills or knowledge, and includes self-awareness and efficacy, motivation and perseverance, mobilizing resources, financial and economic literacy, and mobilizing others. These resources support problem solving and decision-making, the capabilities and enhance interpersonal relationships, cooperation, and money management.

The third component of entrepreneurial competencies in the EntreComp model is "Actions", that includes the ability to mobilize and inspire others, take initiatives, planning and managing, making decisions dealing with uncertainty, team up, collaborate and learn though experience.

With no intention to extend the multiplicity of existing competence models (see Chouhan & Srivastava, 2014), in a summary table, we present the conclusions that Gianesini, et al. (2018), based on three different models (which includes EntreComp), highlights what competencies are assumed as key aspects in entrepreneurship.

It is therefore a study that compares and contrasts three traditional models (Morris et al., 2013; Bartram's, 2005; with the EU Entrepreneurship Competence Framework - EntreComp, Bacigalupo et al., 2016).

Morris et al. (2013) distinguished a core set of 13 entrepreneurial competencies as the results of interactions between the individual and environment, employing a Delphi methodology and pre- and post-measures in a sample of students. It's called the 13 Entrepreneurial Competencies Model.

The 13 Entrepreneurial Competencies Model provides a framework to understand competency development by capturing the recursive process and explaining how scripts develop into competencies and the factors that can enable or prevent this development. Scripts are defined

into three broad categories: signification, legitimation, and domination (Giddens, 1984). Signification scripts influence how individuals search for environmental change, legitimation scripts influence how individuals interpret and evaluate this change and domination scripts influence how individuals respond to this change.

On the other hand, Bartram's (2005) model is based on the criterion-centric model that explores the validity of several potential predictors of workplace performance. The author refers to this model as the Great Eight.

These eight broad competence factors have emerged from factor analyses and multidimensional scaling analyses of self- and manager ratings of workplace performance. The author has explored the predictor-outcome relationships through a meta-analysis of 29 validity studies. The model showed a complete and consistent pattern of relationships between predictors and workplace performance (Gianesini, et al., 2018).

Gianesini, et al. (2018), in the following table (Table 9), compared and contrasted the three models and taxonomies of entrepreneurial skills. The author critically analyzed them in light of the main groups of variables that predict entrepreneurship, as recently revised literature and the competence components (knowledge-**K**, skills-**S**, personality-**P**).

Table 9. *Three Entrepreneurial Models Compared: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model*

	EntreComp Model	The Great Eight Model	13 Entrepreneurial Competence Model	Type
IDEAS	1.1. Spotting opportunities	8.2.2. Identifying Business Opportunities	1 & 2. Opportunity recognition & assessment	S
	1.2. Creativity	5.2. Innovating	5. Creative problem solving/imaginativeness	P
	1.3. Vision	5.2.4. Visioning	4. Conveying a compelling vision	S
	1.4. Valuing ideas	5.3.1. Thinking broadly		S
	1.5. Ethical and sustainable thinking	2.2. Adhering to principles and values	9. Value creation	S
RESOURCES	2.1. Self-awareness & self-efficacy	1. Leading & deciding	12.Self-efficacy	P
	2.2. Motivation and perseverance	8.1. Achieving Personal work goals and objectives	5. Tenacity/perseverance	P
	2.3. Mobilizing resources	4. Analyzing & Interpreting	7. Resource leveraging	S

	2.4. Financial & economic literacy	8.2.2. Entrepreneurial and commercial thinking		K
	2.5. Mobilizing others	2.1. Working with people		S
			11. Resilience	S
ACTIONS	3.1. Taking the initiative	1.1. Deciding & Initiating Action	3. Risk management/mitigation	S
	3.2. Planning & management	6.1. Planning & Organizing		S
	3.3. Coping with uncertainty, ambiguity and risk	7. Adapting & coping	10. Maintain focus yet adapt	P
	3.4. Working with others	3. Interacting & Presenting	13. Building and using networks	S
	3.5. Learning through experience	5.1. Learning & Researching		S
			8. Guerrilla skills	S

Note: Numbering refers to the original for each model; Caption: P= Personality, K= knowledge, S= Skills

For Gianesini, et al. (2018), Entrepreneurship is a way of thinking, but also a planned and intentional behavior – to be and to know how to be.

However, certain specific attitudes (pre-dispositional behavior) and personality traits predict the intention and the way new opportunities are perceived by the mind of the entrepreneur and, consequently sought - oriented behavior (Krueger, Reilly & Carsrud, 2000; Orser, 1997).

This is why, for Gianesini, et al. (2018), the complexity of the role of the entrepreneur requires a comprehensive and detailed taxonomy of entrepreneurial skills. In addition, no single cluster of entrepreneurial competencies, defined as Personality, Knowledge and Skills, or just Ideas, Resources and Actions, can in fact significantly predict activity and success in an entrepreneurial business. Although, the three models analyzed by the authors seem to agree on the domains of competencies, they showed different levels of specificity and detail, which no model examined, was clearly superior to another in all aspects (Gianesini, et al., 2018).

Nevertheless, the three models analyzed offered different (or no) measures for the assessment of such competencies, which at the individual level seem to offer a promising arena for future research.

The taxonomy proposed by Gianesini, et al. (2018) and his conclusions, should constitute a balance between personality characteristics, knowledge and skills, and an excessive emphasis on skills in the three models examined, is underlined.

5.6. Part III specific procedures

As already mentioned, the main objective of this third section (or PART III) is to meet the needs felt in the labor market in terms of entrepreneurial skills.

The bottom-up approach followed and operated through semi-structured interviews with the target group - 5 experienced entrepreneurs from each partner country, although with some constraints to the conclusions obtained, allowed us to collect and sum such needs felt "first hand" by entrepreneurs with experience in the activity of creating a business.

However, in the Labor Market Analysis we extended a little more to a better understand and frame a set of characteristics or attributes of entrepreneurship, mainly European, such as its socio-demographic characteristics.

STEP: Experienced Entrepreneurs Interview – Each partner country conducted interviews with five experienced entrepreneurs through a structured interview guide so that, the following information could be obtained from their experience:

- What are the top 5 skills that experienced entrepreneur can stand out as the most relevant to run their entrepreneurial work business, however, indicating in an ordinal scale, as a priority position (e.g. Skill A – 1st; Skill B 2nd; Skill C 3rd; Skill 4th; and Skill 5th);
- Of the 5 skills indicated, regardless of the position the entrepreneur was assigned, which one he believes to be extremely important for starting a business and which, in his opinion, is not or was clearly not trained in the context of training;
- Lastly, what are/were the three best practices that have enabled the experienced entrepreneur to run his business (e.g., join a tribe: Entrepreneurs need membership in physical communities; or iterate: Entrepreneurship requires iteration and experimentation, etc.) (O1/A3; IO1/A5).

Results: Analysis of the results obtained from the entrepreneurs Interview will provide:

1. The top 5 "skills" that allows experienced entrepreneurs to run their business (25 Skills per partner);
2. The best skill that the experienced entrepreneur believes it is extremely important to start a business, but that in his opinion, is not or has not been trained in the training context (per partner can be up to 5 Skills and in partnership up to 30 Skills - total gap from the entrepreneur's point of view).

5.6.1. Worksheet created for the Part III Tool

A template - **Annex B** - was created from the outset so that all partners, following the same method, could reach the desired results to be explored, namely, the script of the semi-structured interview.

Analogous to the previous point (focus group), also here a good part of the results obtained will serve as input for the job analysis questionnaire administered in the fourth and last section of this report-study.

5.7. Results of Part III

In the following table (Table 10), we show the target group that was part of this section - 5 experienced entrepreneurs from each partner of this consortium, therefore with 30 participants.

Table 10. *Characterization of the experienced entrepreneurs*

Partner Country	Age	Gender	Education Level	Years of entrepreneurship	Successful ratio
France	31	Male	Business School - Master in Financial Engineering	4	60%
	33	Male	Masters in Economics and Management	9	50%
	43	Male	Master in Management/Business	+10	80%
	37	Female	Bachelor in Law	8	75%
	45	Male	Bachelor in Business	12	70%

Poland	50	Female	Higher education	15	*
	65	Female	Secondary education	25	*
	47	Male	Higher education	14	*
	58	Male	Secondary education	30	*
	50	Female	Higher education	20	*
Spain	45	Male	Business Administration, MBA	7	20%
	46	Female	Economics, teaching, IESE Management Programme	18	*
	54	Male	Psychology, Postgraduate degree in Psychology & Business Management	25	*
	25	Male	Civil Engineering	6	*
	48	Male	*	20	*
Greece	46	Female	BSc Sociology	13	70%
	28	Female	B.A International & European Studies	7	70%
	55	Male	B.A Economics	20	70%
	34	Male	Msc Business Administration	10	70%
	33	Female	B.A Graphic	8	60%
Italy	57	Male	High Scholl Diploma	35	70%
	62	Male	Degree	40	80%
	59	Male	High Scholl Diploma	40	80%
	57	Male	High Scholl Diploma	30	70%
	33	Male	Degree	10	70%
Portugal	43	Male	Degree in management and MBA	33	10%
	35	Male	Graduated in Physical Education	6	30%
	29	Female	Nurse graduation	5	20%
	41	Male	Degree in Physical Education and Sport	20	10%
	49	Female	Degree in Economics	14	50%

** Data not provided by participants*

In the following table (Table 11), in the same order of partner countries and experienced entrepreneurs interviewed according to the previous table, we show the characterization of the business that each of these entrepreneurs runs.

Table 11. Characterization of the experienced entrepreneurs' business

Partner Country	Type of business	Number of employees	Involved in continuing education
France	Financial advisory, Project Development and Management	3	No
	Mobile app	5	Yes
	Content writing, localization, translation and Desktop Publishing (DTP) services	2	Yes
	Real estate agency	3	Yes
	Clothing stores	5	Yes
Poland	IT company	15	Yes
	Catering/Gastronomy	30	Yes
	Logistic company	200	Yes
	Windows production	30	Yes
	Accounting office	20	Yes
Spain	Education consultancy	65	Yes
	Technology innovation - education & different areas (with 3 partners)	7	Yes
	Technology- software - quality management (most mature entrepreneurial project)	72	Yes
	Education sector	65	No
	Accelerator/fund for social startup projects	*	Yes
Greece	Center for special treatments	5	Yes
	Bakery Coffee Shop	25	Yes
	Ready-made garment	40	No
	Finance – Accounting Office	3	Yes
	Graphic Design office	2	Yes
Italy	Winery	6	Yes
	IT Company	120	Yes
	Window and door production	39	Yes
	Vocational and training centre	4	Yes
	IT/ R&D Company	18	Yes
Portugal	Men's underwear	4	Yes
	CrossFit Box	25	Yes
	Pregnant, newborn, baby and family photography	0	Yes
	Rural Tourism Entrepreneur	1	Yes
	Health Prevention and Training	12	Yes

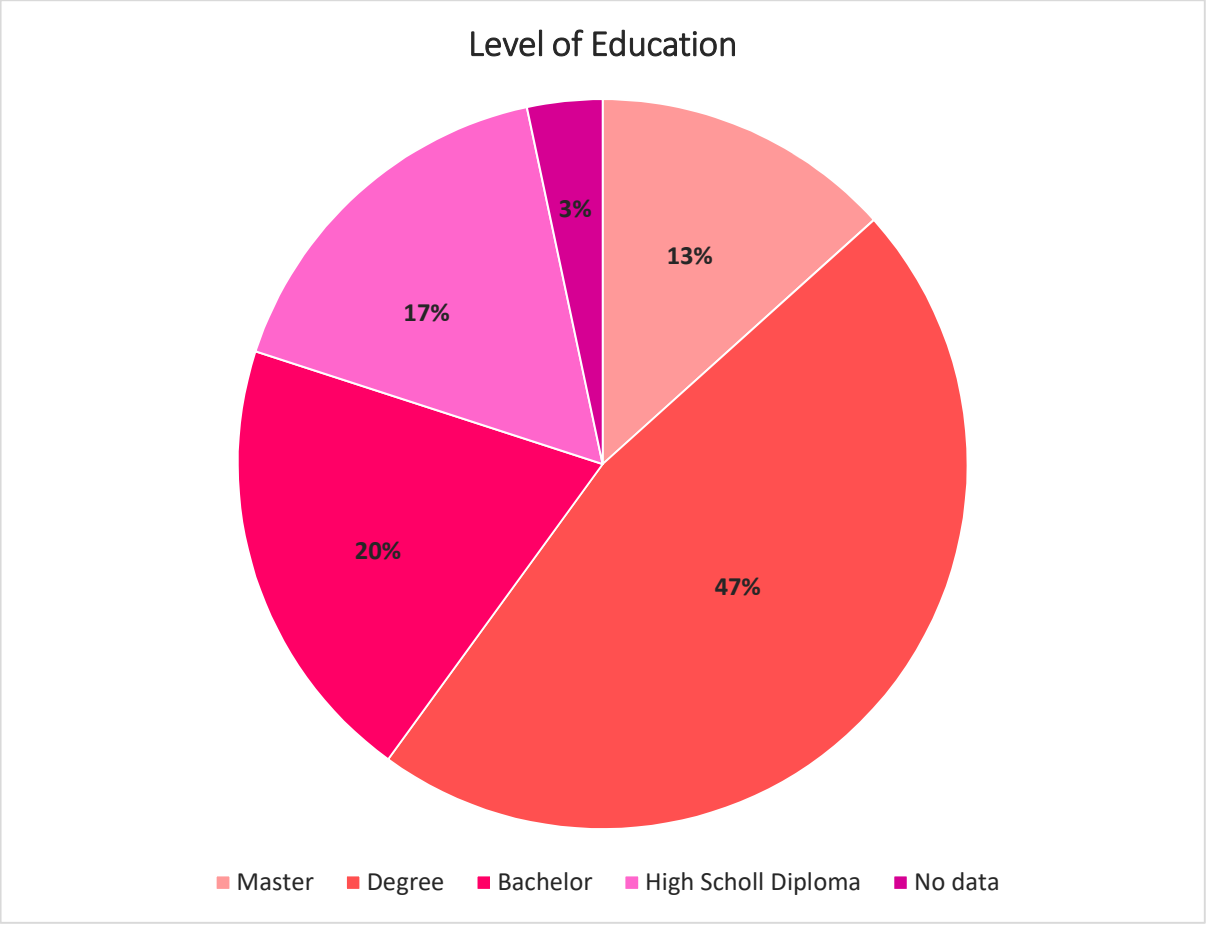
** Data not provided by participants*

In a first analysis, we can see that out of 30 participants, 20 are men (67%) and 10 are women (33%) - Table 11.

The average age of the participants is 45, the youngest being 25 and the oldest 65 - Table 11.

The following chart (Graphic 1) shows the percentage distribution of participants in terms of their level of education (from Table 11).

Graphic 1. *Distribution of participants in terms of their level of education (%)*



The majority of participants, 80% have a higher level of education, which in terms of the European Qualifications Framework (EQF) means having level 6 or higher (Table 11).

Sixteen out of thirty experienced entrepreneurs (53%) when asked about their perception of the success ratio, they believe they have achieved in their entrepreneurial activities (outcome

of self-efficacy), on a hypothetical scale of 1 to 10 (10 being equivalent to 100%), indicated having a success ratio of 50% or more; nine entrepreneurs (30%) indicated having a success ratio of less than 50%; and the remaining five experienced entrepreneurs did not respond (17%) - Table 11.

In table 11 about the characterization of what type of business the 30 experienced entrepreneurs "run", as the number of employees they employ, 13 entrepreneurs (43%) say they have up to 10 employees; 10 (33%) have between 10 and 50 employees; 5 entrepreneurs have more than 50 employees; and 1 none and in another case the entrepreneur did not respond.

The characteristics of the type of business as displayed in Table 12 shows, the sector and type of services sold: IT services, health, hotel & restaurant, education, sports, etc., presenting a heterogeneous group of 30 entrepreneurs.

Next, we will present, in a qualitative analysis, the following characteristics questioned to the interviewees:

- Which are the 5 top skills that are relevant to run a business (indicating an ordinal scale, as a priority position);
- Of the 5 skills indicated, the one that is extremely important for starting a business and which, is not or was clearly not trained in the context of training;
- Which are the 3 best practices that have enabled the experienced entrepreneur to run his/her business.

In the following table (Table 12), we detailed the top 5 skills that the 30 experienced entrepreneurs said that can stand out as the most relevant for running their entrepreneurial work business, indicating in ordinal scale, as a priority position (e.g. Skill A – 1st; Skill B 2nd; Skill C 3rd; Skill 4th; and Skill 5th).

Table 12. Characterization of the top 5 skills indicated by 30 experienced entrepreneurs

Partners Country	Skills	INTERVIEWS				
		1st INTERVIEW	2nd INTERVIEW	3rd INTERVIEW	4th INTERVIEW	5th INTERVIEW
France	1st	Hard-working	Network creation/management	Planning/organizational skills	Local knowledge	Industry expertise
	2nd	Planning & management	Financial and economic literacy	Risk taking	Professionalism	Budgeting skills
	3rd	Adaptability	Sales force	Customer focus	Ability to listen to clients	Sales skills
	4th	Relational	Vision	Perseverance	Patience	Communication skills
	5th	Stress management	Perseverance	Ability to listen	Negotiation	Ability to multitask
Poland	1st	Recognizing and exploiting opportunities	Organizational and leadership skills and decision-making	Ability to maintain good relations with people (employees and clients)	Knowledge of marketing techniques	Analytical thinking
	2nd	Ability to manage multiple tasks	Ability to adapt to customer requirements, market trends	Interpersonal skills	Motivational skills	Ability to cope with stress
	3rd	Good communication and openness to other people/partners	Risk-taking skills	Flexible adaptation to changes in the environment	Skillful monitoring and control of costs and profits	Good relations with employees - ability to build a trusted team
	4th	Resource management and decision-making skills	Readiness to absorb new knowledge and seek new solutions	Vision and marketing	Ability to manage time	Seizing opportunities to enter new markets
	5th	Management skills	Ability to analyze the economic situation and ability to make changes	Risk-taking	Openness to acquire new knowledge, creativity	Knowledge of tax law
Spain	1st	Resilience	Focus	Negotiation (make agreements)	Convince/communicate	Commercial/Sell
	2nd	Acceptance of risk - you will have to continue to take risks	Overcome challenges and self-guidance -- Effort	Know how to adapt to opportunities and change	Innovation	Innovation Confidence
	3rd	No risk aversion	Adaptability	Being able to manage adverse situations	Know how to look for opportunities, help, partners	*
	4th	Leadership	Treatment of people and empathy	Analytical capacity	Persistence	Be smart, clever, looking for opportunities
	5th	Criteria – common sense – Critical thinking	Teamwork	Leadership – capacity to transmit, communicate	Prioritization – be able to focus	Flexibility
Greece	1st	Emotional Intelligence	Creativity	Economics	Decisiveness	Economics

	2nd	Marketing	Flexibility	Negotiation	Adaptation	Management
	3rd	Economical	Willingness to learn	Foreign languages	Marketing	Determination
	4th	General business	Management	Computers	Management	Leadership
	5th	Responsibility	Communication	Formal Education	Leadership	Team Player
Italy	1st	Project Management	HR Management	HR Management	HR Management	Innovative Vision
	2nd	Benchmarking techniques	Project Management	Technological innovation	Networking	Openness to continuing education
	3rd	Problem Solving, enterprising spirit (spirit of initiative)	Internal and external communication and networking	Marketing	Vision	Loyalty and trust
	4th	Technological innovation	Economics	Financial skills	Tenacity	Fiscal and legal skills
	5th	Business management and accounting	Creativity, enterprising spirit (spirit of initiative)	Administrative skills	Problem solving	Language skills
Portugal	1st	Vision – to be able to present a clear picture of what the entrepreneur wants	Integrity – to be able, through a set of values, to be ethical in the business that runs	Planning – ability to plan and implement short, medium and long-term plans	Persistence – to be able to persist in the development of the business even with the daily adversities	Self-motivation – to able to encouraging yourself to continue making progress towards a goal even when it feels challenging
	2nd	Tenacity – to be able to grip something firmly	Setting Goals – to be able to set measurable and realistic goals to generate results	Adaptation – to be able to create simple and effective alternatives to the obstacles detected	Focus - to be able to maintain focus on the business and its various activities to be developed	Creativity
	3rd	Persistence - to be able to persist in the development of the business even with the daily adversities	Digital skills – be able to design strategies within digital media	Resilience – to be able to be resilient against losses and failures	Resilience – to be able to be resilient against losses and failures	Resilience – to be able to be resilient against losses and failures
	4th	Negotiation – be able to negotiate with suppliers and customers	Communication – to be able to present a business in a clear and attractive way to potential clients	Empathy – to be able to feel what another person would feel if they were in the same situation	Observation - being able to read markets, people and their needs where you can get new opportunities	Empathy – to be able to feel what another person would feel if they were in the same situation
	5th	Networking - be able to establish a network that is beneficial to our business	Economic feasibility - to be able to interpret the economic feasibility of business opportunities in advance	Priority setting – to be able to define and set priorities	Professional Value - be able, through a set of values, to be ethical in the business that runs	Autonomy & Confidence – being able to respond in a boldly way to the risks taken

** Data not provided by the participants*

Presented in the following table (Table 13), are the 149 skills indicated by the 30 experienced entrepreneurs in order of priority. They indicated those that are extremely important for starting a business and those that are not or clearly have not been practiced in training/learning context.

Table 13. *The skills indicated by 30 experienced entrepreneurs has the most important one*

Partners Country	INTERVIEWS				
	1st INTERVIEW	2nd INTERVIEW	3rd INTERVIEW	4th INTERVIEW	5th INTERVIEW
France	Hard-working	Network creation/ management	Perseverance	Ability to listen to clients	Efficiency and multi-tasking
Poland	Decision-making	Ability to adapt to customer requirements, market trends	Risk-taking skills	Decision-making skills	Capacity to take risks
Spain	Focus - focus in your product/entrepreneurship project. You cannot do it all. This was not talked about. The other would be to SELL. Financing, was in the programme, but not a commercial or sales plan, etc.	The culture of effort - to change, to change your idea and adapt it until you carry it out. It is a mental effort and a work effort.	Management of the project - evaluating the viability of your idea and taking care of the management.	Any of the skills named are not found normally in the formal education system. Leadership and empathy are extremely important.	It is very difficult to choose/all of the soft skills.
Greece	Emotional Intelligence - To be able to understand better the emotions of the employees	Communication - To be able to communicate better with the employees	Negotiation - To negotiate better with the suppliers	Decisiveness - To have the determination to achieve the business goals	Leadership - To be able to lead a company into success
Italy	Problem Solving, enterprising spirit (spirit of initiative)	Creativity, enterprising spirit (spirit of initiative)	Technological innovation	Vision	Innovative Vision
Portugal	Vision	Economic feasibility	Resilience	Persistence	Creativity

In the following Table (Table 14), similarly to the previous section, after a semantic analysis of the discriminated skills and their repetitions by the different actors, we will present the skills in a more concise way so that, those skills that presented themselves in a major category that is more comprehensive and inclusive of other sub-skills, such as Economics skills, are more comprehensible, since they will be part of object in section IV (Job Analysis Questionnaire).

Table 14. Skills that experienced entrepreneurs considered the most important to run a business

Of the 5 skills indicated, the one to be extremely important for starting a business and which, is not or was clearly not trained in the training context:
To be able to present a clear picture of what the entrepreneur wants in an innovative way
To be able to interpret the economic feasibility of business opportunities in advance
To be able to be resilient against losses and failures
To be able to persist in the development of the business even with the daily adversities
To be able to explore the 'inner' set of resources - knowledge, insight, information, inspiration and all the fragments that populate our minds - that have been accumulated over the years to combine them in extraordinarily new ways
To be able to communicate better with the employees?
To be able to negotiate better with the suppliers
To be able to lead a company into success
To be able to have the determination to achieve the business goals
To be able to be technologically innovative
To be able to solve problems with enterprising spirit
To be able to focus in your product/entrepreneurship project as well a commercial or sales plan for it
To be able to change your idea and adapt it until you carry it out
To be able to assess the feasibility of your idea and take care of its management
To be able to listen to clients
To be able to be efficient, multi-task and hard worker
To be able to adapt to customer requirements and market trends
To be able to select between two or more alternatives to reach the best outcome in the shortest time

In this analysis, as you can see, the skills that were already selected in the previous section, were also taken into account and therefore, will not need to be repeated here because they are already included in the questionnaire in the following section. Thus, taking into account the results obtained from sections II and III, that is, the 12 skills of section II and the 18 Skills of this section, 30 skills that will be the skills required to "run" a business, and which are the variables that will be present in the Job Analysis Questionnaire of fourth section.

Next, we will explore which two types of knowledge the 30 experienced entrepreneurs consider relevant in the management of their business, which will also be included in the fourth section. Therefore, in the following table (Table 15), we display the knowledge mentioned by the interviewees.

Table 15. The most relevant knowledge considered by the experienced entrepreneurs for running entrepreneurial business

Partners Country	Knowledges	1st INTERVIEW	2nd INTERVIEW	3rd INTERVIEW	4th INTERVIEW	5th INTERVIEW
France	1st knowledge content	Administrative and financial management	Administrative/ accounting knowledge	Time management	Priority management	Deep local knowledge
	2nd knowledge content	Business law	Sales techniques	Strategic thinking	Time management	Deep product/industry knowledge
Spain	1st knowledge content	Commercial/Sales	Legal/bureaucratic	Looking for partners, networking, and external help. You cannot do it all on your own	Management of people	Defining the minimum viable product is very key
	2nd knowledge content	Finance and costs. Know how to analyze the results, review and reduce costs	Content that presents success/effort and also non-success stories to learn what didn't work and what corrective actions can be taken.	*	Depends on the project	Working with lots of practical cases – real cases to learn how others have learned and corrected from errors.
Greece	1st knowledge content	Knowledge of the business sector	Marketing knowledge	Finance skills	Economic skills	Competitive skills
	2nd knowledge content	HR management	Financial knowledge	Business skills	Technology knowledge	Emotional intelligence
Italy	1st knowledge content	Technology knowledge	Management knowledge	Technology knowledge	Business strategies knowledge (Vision)	Innovation
	2nd knowledge content	Marketing and communication knowledge	Business strategies knowledge (Vision)	Financial and administrative knowledge	HR Management knowledge	Fiscal and legal knowledge
Portugal	1st knowledge content	Knowledge about marketing for a new product	Knowledge about your business inside out	Knowledge about the labor market	Knowledge about Tools for shared decision making and problem/challenge resolution	Knowledge about the customers and potential customers of my business
	2nd knowledge content	Knowledge about financial management/ asset allocation	Knowledge about human resources - to hire the right people	Knowledge about the target group we want to attract	Knowledge about Science of Scenarios and Market Trends	Knowledge about how the market you want to operate works

** Data not provided by participants. The participants from Poland did not answer this point.*

In the analysis of the standard knowledge that an entrepreneur should have in order to run his business, according to the interviews conducted with experienced entrepreneurs, they pointed out a set of important knowledge.

Through the same method of semantic analysis, it was possible to synthesize them into fourteen types of knowledge that we present in the table below (Table 16) and, that later will join the Job Analysis Questionnaire of the fourth section.

Table 16. Synthesis of the most relevant knowledge content to manage an entrepreneurial business

SYNTHESIS OF THE MOST RELEVANT KNOWLEDGE CONTENT
Knowledge about business sector inside out and strategic thinking
Knowledge about marketing and communication
Knowledge about business financial and accounting domain
Knowledge about economy and competitiveness
Knowledge about human resources and manage people
Knowledge about technology and innovation
Knowledge about the labor market and market Trends
Knowledge about tools for shared decision making and problem/challenge resolution
Knowledge about the customers and potential customers of my business
Knowledge about management and administration domain
Knowledge about business bureaucracy and legal aspects
Knowledge about commercial aspects and product sales
Knowledge about experiences of entrepreneurial activities and their positive and negative results
Knowledge of techniques and strategies to manage time and priorities

It is part of the analysis of this third section or PART III, through interviews with experienced entrepreneurs, to understand and analyze the current context of what are the main restrictions or constraints that they feel in their daily lives.

However, we will do this analysis as well according to the semantic analysis content and, according to the determinants already established by the OECD/Eurostat framework for entrepreneurship indicators (see figure 3, p. 49 of this section III). Below we present the top three constraints/restrictions found in running entrepreneurial business that the 30 experienced entrepreneurs pointed out in the interviews conducted (Table 17). In each constraint/restriction, we indicate in bold according to the content analysis, its determinants categorization to which it belongs.

Table 17. Top constraints/restrictions found according to the experienced entrepreneurs'

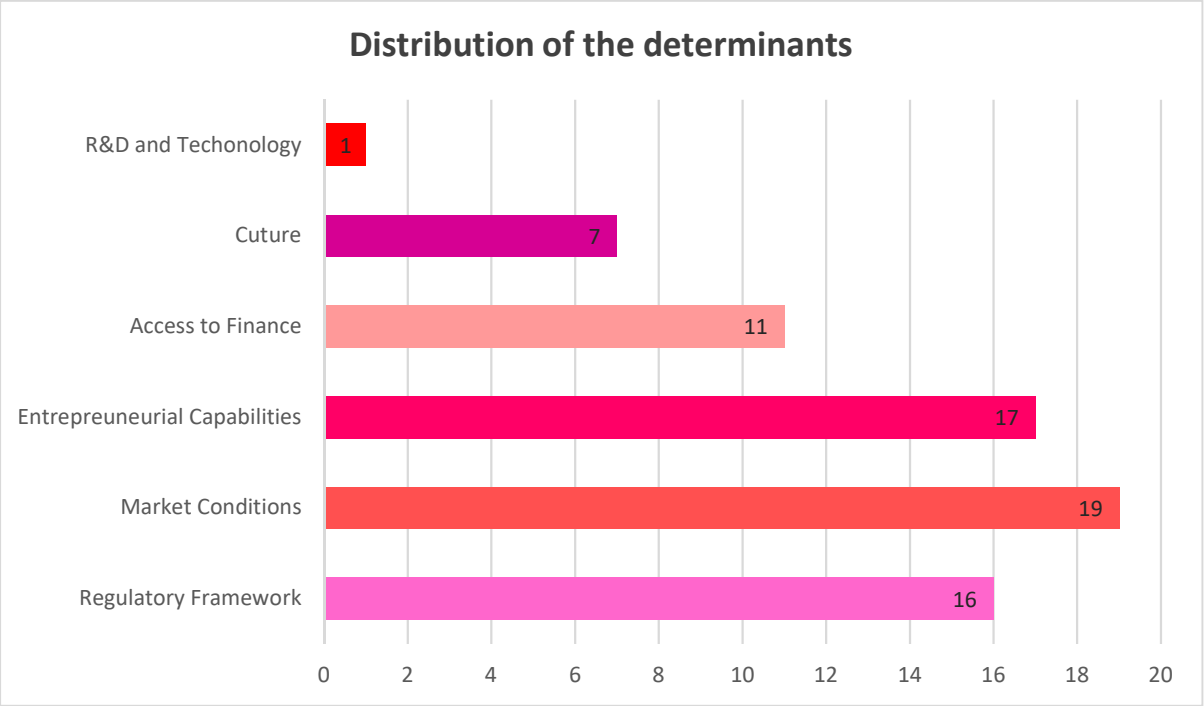
Partner Country	# Interview	Constraints/Restrictions from the experienced entrepreneurs		
		1st constraint indicated	2nd constraint indicated	3rd constraint indicated
France	1st	Administrative charges (URSSAF, Taxes, etc.) – Regulatory Framework	Competitive sector (Competition) – Market Conditions	Difficulties related to geographic isolation (transport, higher costs, problems with recruitment) - Entrepreneurial Capabilities
	2nd	Lack of time and its management - Entrepreneurial Capabilities	The right balance between private and professional life - Culture	Legal and administrative obstacles - Regulatory Framework
	3rd	Dealing with the unknown - Market Conditions	Cash flow management – Access to Finance	Hiring and/or relying on reliable employees - Entrepreneurial Capabilities
	4th	Balancing business and family life - Culture	Relying on reliable employees - Entrepreneurial Capabilities	Coping with a fear of failure - Culture
	5th	Making initial investment Money - Access to Finance	Managing cash flow in an efficient way - Access to Finance	Dealing with online Competitors - Market Conditions
Spain	1st	Achieve the product -market fit - Market Conditions	Survive "Death Valley" or the time without income - Entrepreneurial Capabilities	*
	2nd	Financing - ways to access it at the beginning - Access to Finance	Public contracts- it is difficult at the beginning because you are small and you don't meet the administrative requirements even if you may have the best technological solution/offer - Regulatory Framework	Hiring personnel - difficult. There are some public programmes, but they come with a lot of administrative burden so the cost/benefit is not very good - Regulatory Framework
	3rd	Financing - Access to Finance	Administrative problems -Regulatory Framework	Tax and fiscal policy - Regulatory Framework
	4th	Find a good team - Entrepreneurial Capabilities	Financing - Access to Finance	Emotional stability/persistence - Entrepreneurial Capabilities
	5th	Find a good team - Entrepreneurial Capabilities	Definition of the project-product - Entrepreneurial Capabilities	Time to market- Going to market and finding the right moment - Market Conditions
Greece	1st	Taxes - Regulatory Framework	Economy Crisis - Market Conditions	Heavy Competition - Market Conditions
	2nd	Difficult to find experienced and trustworthy persons to work in your business - Entrepreneurial Capabilities	Ups and downs of the purchasing power of the consumer people" - Market Conditions	Economy Crisis - Market Conditions

	3rd	Lack of qualified personnel - Entrepreneurial Capabilities	Lack of common sense - Culture	Lack of sense of urgency - Culture
	4th	High taxes - Regulatory Framework	Difficulties with clients - Market Conditions	Bureaucracy - Regulatory Framework
	5th	High taxes - Regulatory Framework	Hard to find new clients - Market Conditions	Economy Crisis - Market Conditions
Italy	1st	Lack of support policies in the sector - Regulatory Framework	High taxes - Regulatory Framework	Bureaucracy - Regulatory Framework
	2nd	Poorly prepared managers - Entrepreneurial Capabilities	Bureaucracy - Regulatory Framework	Unfair competition - Market Conditions
	3rd	Competitiveness in the market - Market Conditions	Innovation in the sector – R&D and Technology	Unfair competition - Market Conditions
	4th	Lack of qualified personnel - Entrepreneurial Capabilities	High taxes - Regulatory Framework	Capital (financial restrictions) - Access to Finance
	5th	Bureaucracy - Regulatory Framework	Skepticism towards a young company (under 30) - Culture	Skepticism towards smart working and teleworking - Culture
Portugal	1st	Capital - Access to Finance	Skills for building the team - Entrepreneurial Capabilities	Right partners to help the business grow (networking) - Market Conditions
	2nd	Financing constraints -Access to Finance	Being/access in a new market/activity - Market Conditions	Make my employees understand and believe in the company's mission and goals - Entrepreneurial Capabilities
	3rd	Capital for the investment in material, photography courses, workshops, etc. (financial restrictions) - Access to Finance	Very strong competition in my local area - Market Conditions	To found the ideal workspace (facilities restrictions) - Entrepreneurial Capabilities
	4th	Competitiveness in the market - Market Conditions	Management risk in the sector, sometimes seasonal - Entrepreneurial Capabilities	Difficulties in salary guarantees (financial restrictions) - Access to Finance
	5th	*	*	*

** Data not provided by participants. The participants from Poland did not answer this point.*

In the following graphic (Graphic 2), we show in terms of frequency, the determinants pointed out by experienced entrepreneurs in terms the main constraints/restrictions encountered in managing their businesses, referred by the experienced entrepreneurs.

Graphic 2. Distribution of the determinants appointed by experienced entrepreneurs



As we can see, the determinants within the **Market Conditions** category were the most pointed out by experienced entrepreneurs, representing 27%, followed by the **Entrepreneurial Capabilities** category which represents 24%, soon after **Regulatory Framework** with 23% as its representative weight, **Access to Finance** with 15%, **Culture** with 10% and **R&D and Technology** representing only 1%.

If we add the determinants of **Entrepreneurial Capabilities** & **Culture**, these together hold about 34%, whereas from an external perspective to the individual, although extremely important for entrepreneurship, and if we join the **Market Conditions, Regulatory Framework** & **Access to Finance**, their final representative weight is 65%.

Finally, and also as part of this third section, in the interviews with the 30 experienced entrepreneurs, we looked for the three best practices that they consider the most important to run their business.

It is a behavioral component that in an exploratory perspective we wanted to analyze and, therefore, we display it in the following table (Table 18) such best practices that are associated with the cognitive component of the entrepreneur - Skills, reinforcing them mutually: Behavior - Cognition.

Table 18. Experienced Entrepreneurs' Best Practices

Partner Country	# Interview	BEST PRATICES		
		1st Best practice	2nd Best practice	3rd Best practice
France	1st	Use of collaboration tools (project software, Google Suite, etc.) for the transmission of information	Processes outsourcing (especially accounting)	Team Building
	2nd	Personal organization, time management	Know how to supervise, respect and frame the relationship with employees	Goals setting
	3rd	Benchmarking, i.e. comparing my business to other businesses in my specific industry	Making improvements, i.e. welcoming innovation in my business	Networking, i.e. connecting via social media or other social platforms can establish communication and cultivate a growing list of new and returning prospects/potential customers
	4th	Keeping Everything Transparent	Providing Excellent Customer Service	Building long-term relationships with customers and business partners
	5th	Benchmarking (keeping an eye on direct competitors, both local and online ones)	Networking (relying on local ambassadors and partners that advertise my business)	Improvement and innovation (new collections, new suppliers, new brands)
Poland	1st	Introducing innovations	Meetings with employees and division of tasks	Cooperation with a trusted team of employees
	2nd	Clear management system, technology support	Cooperation with a loyal team	Using special forums for entrepreneurs
	3rd	Use of technological tools	Introducing clear procedures within the company	Creating document templates
	4th	Use of IT systems for management	Introducing clear procedures	Use of an accounting office
	5th	Automation of tasks	Knowledge of economic and legal information	Introduction of an efficient control system
Spain	1st	Connect and make a network	Have a mentor - everyone should have at least one	Know yourself - would recommend first doing a personality or entrepreneurship test. Not everyone has the mindset
	2nd	Understand/know the sector/environment	Network and understand the market	Collaborate and be active looking for things - go out and look for things

	3rd	Work for others - create good working habits and time management skills	Get in touch early on with sector and entrepreneurship networks. BEFORE you start your project	General comment -- entrepreneurship is not the same as self-occupation (self-employment). I feel that entrepreneurship is those that want their idea to grow, employ people, and expand. Not just be a freelancer
	4th	Capacity to work hard	Be very persistent	Focus on selling
	5th	Interact and work with entrepreneurs	Learning on the ground	Get to know the sector
Greece	1st	To follow the trends	To be flexible	To experiment with new ideas
	2nd	To be an active member of your business society.	A business needs an entrepreneur who is not afraid to take risks and to set high goals in order to upgrade their products or their image in the market.	Run a business is traveling to other countries with the common market ground in order to inspire your business mentality with new ideas and techniques to make your business unique and successful.
	3rd	Delegation ability	To find the right people	To sustain your personnel
	4th	Membership Union	To have the latest technology	To have a clear goal
	5th	Continue Education	To find the right people	To be open for new ideas
Italy	1st	Invest in Research and Innovation	Tenacity and resilience	Networking
	2nd	Business networks	Invest in Research and Innovation	Tenacity, perseverance and realism
	3rd	Resource management	Invest in Research and Innovation	Team working
	4th	HR management	Networking	Invest in Research and Innovation
	5th	Loyalty and transparency	Update and distributed awareness of risk	Experimental development
Portugal	1st	Whenever possible be involved in workshops, fairs or conferences on entrepreneurship	To belong to a network of partners that allows me to present and expand my business	Have a mentor or have been involve in a mentoring process
	2nd	Always seek to improve in your craft (self-improvement)	Find something you're good at and passionate about	Spend time seeking stakeholders to your business
	3rd	Initiative, proactivity and constant search for relevant information	Keep in constantly development so that you can be always on top	Establish partnerships and negotiations with medium- and long-term vision
	4th	Interest in new solutions	Invest in communication	Do not mix personal and business finance
	5th	Understand continuously the market where you want your business to operate	Define the performance indicators	Study and meet your direct competitors - competitiveness

Of the 90 best practices indicated in semi-structured interviews with experienced entrepreneurs, some fell into major or repeated categories and others quite comprehensive.

Once again here, through the same method of semantic content analysis was used, it was possible to synthesize the 90 best practices indicated and summarize them in 20 best practices – that we present in the following table (Table 19). Later they will be included in the Job Analysis Questionnaire of section IV.

Table 19. Synthesis of the Best Practices required to run a business

SYNTHESIS OF THE BEST PRACTICES
To follow the trends
To be flexible
Experiment new ideas
Being involved in workshops, fairs, or conferences on entrepreneurship
Belong to a network of partners that allows me to present and expand my business
Have a mentor or have been involve in a mentoring process
Use of IT systems for management and automation of tasks
Team working/Team Building
Invest and improve in Research and Innovation
Interact and work with entrepreneurs in different ways (like forums)
Interact and explore the market sector/environment
Collaborate and be active looking for things
Understand oneself in the many dimensions as a human being as cognitive, social and personal skills
Understanding oneself in the different facets as a human being - cognitive, social and personality
Supervise, respect and frame the relationship with employees
Use of collaboration tools to share information
Invest and improve Benchmarking i.e. comparing my business to other businesses in my specific industry
Process Outsourcing like using an accounting office
Have meetings with employees and share tasks
Cooperate with a loyal and trusted team of employees

After analyzing section I and II, we will go to the fourth and final section of the report. Through the information received from the previous sections, we will highlight the gaps between the needs of the labor market, in terms of skills and qualifications of an effective entrepreneur with the purpose of creating a new prototype program that will fill these gaps in terms of skills.

PART IV

6. PART IV Conceptual and Empirical Framework

In the final section of this report-study (or PART IV), we aim to present the gaps between the needs of the labor market, in terms of skills and qualifications that are fundamental to business management and, the training context, in order to create a new prototype program that will fill these gaps.

Therefore, we address, although with certain limitations, to the fundamental target focus of this report: to introduce a new prototype programme that resulted from the differentials analyzed and perceived by its stakeholders (different target groups) from the different sections (Part II and Part III), of what the training context offers in terms of curricula.

With this report-study, we intend to display, using statistical models and algorithms for the design of a new prototype, a framework as appropriate as possible within the European Credit system for Vocational Education and Training (ECVET), that is, with the respective points awarded in the new program provided at the end of this report. Accordingly, we added in this report an additional punctuation value for all European Education and training institutions/organizations with this new input for the entrepreneurship area.

6.1. European Credit system for Vocational Education and Training

The European Credit System for Vocational Education and Training, often referred to as ECVET, is a technical framework for the transfer, recognition and (when appropriate) accumulation of individuals' learning outcomes with a view to achieving a qualification (European Commission DG EAC, 2011).

Guided by a European-level Recommendation, ECVET relies on the description of qualifications in units of learning outcomes, on transfer, recognition and accumulation processes and, on a series of complementary documents such as a Memorandum of Understanding and Learning Agreement (European Commission DG EAC, 2009).

ECVET is part of the development of common European tools for education and training: the European qualifications framework and the related national qualifications frameworks, the European quality assurance reference framework for VET (EQAVET), and Europass (European

Union, 2012b). ECVET is also linked to the implementation of the European Credit Transfer and European Credit Transfer and Accumulation System (ECTS) in higher education.

All of those tools related in the an ECVET are based to promote learning outcomes as a fundamental principle in defining and describing qualifications, and they all emphasize guidance on ECVET and describes ECVET as a process by which tasks are allocated to different existing actors (Cedefop, 2010).

Most European countries are developing or have developed comprehensive national qualifications frameworks (NQF) covering all types and levels of qualification. National qualifications frameworks aim to make national qualifications systems easier to understand and to make relationships between qualifications more transparent, thereby facilitating access and progression. They rely upon learning outcomes-based level descriptors and constitute a reliable basis for the transfer of learning outcomes European Union (2012b). Moreover, Reform frameworks may involve developing new pathways and programmes or changing the allocation of roles and responsibilities among stakeholders (Cedefop, 2012b), thereby providing a new institutional framework for implementation of ECVET.

In recent years, the learning outcomes approach to qualifications emerged as a way of ensuring transparent qualifications and qualifications systems. It is now applied to a wide range of qualification-related activities, from the definition of specific work practices to the description of the broadest qualifications' levels.

Learning outcomes can be used in different contexts: in definitions of occupational and educational standards, descriptions of curricula/programmes, assessment specifications, qualification descriptors, national qualifications frameworks and for other purposes, such as credit arrangements, curricula vitae, job advertisements, information, advice and guidance or the management of education and quality assurance (European Union, 2011).

In essence, ECVET has two broad objectives:

- To help transfer and recognize learning that has taken place during a stay abroad (geographical mobility), and;

- To support lifelong learning, by allowing people to transfer and accumulate learning outcomes achieved in different contexts and places to build up to, update or upgrade recognized qualifications.

6.2. PART IV Assumptions

With the assumption of creating a new prototype program that can, as an additional value to this report-study, be adjusted and adapted to ECVET, we highlight and underline a set of assumptions/concepts well defined, that is, a set of points assigned in the new program presented.

Therefore, we based the procedures for this following IO1 – PART IV, taking into account a set of assumptions that will be describe.

It is known or it is written that ECVET points means (European Commission DG EAC, 2009, p. 6):

> *"Numerical representation of the overall weight of learning outcomes in a qualification and of the relative weight of units in relation to the qualification."*

In their turn, the learning outcomes means (European Commission DG EAC, 2009, p. 6):

> *"Statements of what a learner knows, understands and is able to do on completion of a learning process defined in terms of **knowledge**, **skills** and **competence**."*

Therefore, it is also highlighted the Assessment of learning outcomes through (European Commission DG EAC, 2009, p. 6):

> *"Methods and processes used to establish the extent to which a learner has attained particular **knowledge**, **skills** and **competence**."*

Underlining the last three words, that means:

- **Knowledge** (European Commission DG EAC, 2009, p. 6)

> *"The outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study."*

- **Skills** (European Commission DG EAC, 2009, p.7)

> *"The ability to apply knowledge and use know-how to complete tasks and solve problems."*

- **Competence** (European Commission DG EAC, 2009, p. 6)

> *"The proven ability to use knowledge, skills and personal, social and/or methodological abilities in work or study situations and in professional and personal development."*

- **Unit of learning outcomes** (European Commission DG EAC, 2009, p. 7)

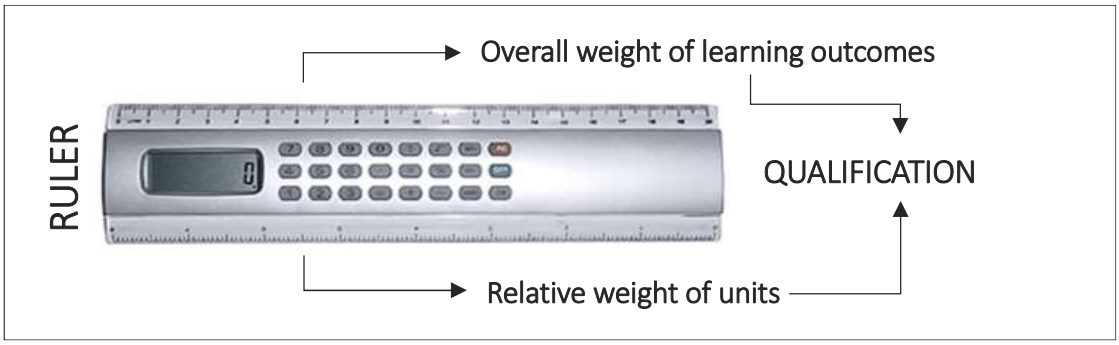
> *"Component of a qualification, consisting of a coherent set of **knowledge**, **skills** and **competence**, which can be assessed and validated."*

6.3. Part IV specific procedures

Based on the assumptions mentioned in the previous point, we assume here that the entrepreneurial skills will be converted into the competences/cluster of units after the statistical treatment of the obtained data. Therefore, they will be, in the end, the "Numerical representation of the overall weight of learning outcomes in a qualification and, of the relative weight of units in relation to the qualification", i.e., later they will be converted in ECVET points to be allocate. In other words, here the ECVET points will be our "ruler" as it is show in the

figure below (Figure 6), which will lead to what is intended, to measure the overall weight of learning outcomes and the relative weight of units.

Figure 6. *Ruler of ECVET points implemented*



The Job Analysis Questionnaire (**Annex - C**), in the section D, E and F, will allow us to have a representational number (perceived by the entrepreneur) of the: Competences (clusters of Skills related); knowledges and Entrepreneurial Best Practices (behavioral component) used in their daily basis working as entrepreneurs, respectively.

On the other hand, ECVET suggests 120 credits per year, while the ECTS assigns 60 credits per year in the university system.

ECVET points provide complementary information about qualifications and units in numerical form. They have no value regardless of the acquired learning outcomes of a particular qualification to which they refer, as they reflect the achievement and accumulation of units.

To enable a common approach to the use of ECVET points, a common agreement can be achieved according to which **120 points** shall be allocated to the expected learning outcomes (require skills) be achieved in a year in formal VET system and full-time. However, this score to be assigned, depends on the expected learning results that can be achieved in a certain time.

However, and according to the European Commission (European Commission, DG EAC, 2009, p. 14), *"There is no ideal size for a unit".* Basically, it depends on the number of learning results and, we may add too, that also according to the time to be carried out.

This dependency between the points to be allocated and the number of learning outcomes versus time, brings some advantages as well as disadvantages in terms of the size of the numbers that we present below, according to the European Commission DG EAC (2009, p. 14):

	ADVANTAGES	DISADVANTAGES
Small number of learning outcomes	• Units can be obtained in a rather short time of learning and therefore are particularly suitable for geographical mobility; • They can also be suitable for adult learners who combine learning and employment or, learners who are at risk of dropping out from longer programs.	• Because of the greater number of units in a qualification, this approach implies putting in place a large number of assessments; • Fragmentation of qualifications and of assessments may make it more difficult to identify whether the learner can combine all the knowledge, skills and competence in a more complex manner.
Large number of learning outcomes	• Assessment of a larger unit enables learners to demonstrate their capacity to combine knowledge, skills and competence in view of delivering a more complex service or a product; • The number of summative assessments is small.	• More substantial amount of learning activities is required to prepare for a unit. Hence, it may be difficult to achieve a full unit in the context of short transnational mobility period; • The duration of learning activities prepared for the unit may be too substantial for learners outside the initial VET, to be able to benefit from accumulation.

In any case, the allocation of ECVET points usually includes two phases:

a) ECVET points are allocated first to a qualification as a whole (absolute points), and then;
b) For units that compose it (relative points).

Here in this project, we assume the particular qualification in the context of formal learning and full-time as a reference and, based on the Convention on ECVET (120 points for a year) the total number of points is assigned for that qualification. Of this total, ECVET points are then allocated to each unit according to their relative weight in qualifying.

In the following point (Procedure to allocate ECVET points), we will demonstrate how to convert the data obtained in the Job Analysis Questionnaire in the proper proportion and allocate it to the ECVET system.

However, the relative weight of each unit of learning results, with regard to the qualification, should be established according to the following criteria or a combination of all:

- The relative importance of the learning outcomes which constitute the unit in terms of the labor market, for progression to other qualification levels;
- The complexity, scope and volume of learning outcomes in the unit;
- The effort necessary for a learner to acquire the knowledge and skills required for the unit.

With the directions indicated in the methodological approach, in the point below we explain the procedures followed in the allocation of ECVET points.

6.3.1. Process to allocate ECVET points

Through the results obtained globally in the previous stages (PART II and PART III), i.e. from all partners, it's now possible to know and indicate:

- In the maximum limit up to 12 skills of all curricula selected by the experts that need to be improved (partial gap in the curriculum offer given by the experts);
- Up to 30 "best" skills considered by experienced entrepreneurs who believe they are extremely important to start a business but which, in their opinion, are not or have not been practiced in the training context (full gap according to entrepreneurs experienced).

Thus, these skills already derive from the perception of the (partial) gap in the curricula identified, analyzed and evaluated by expert groups and, on the other hand, the skills that clearly experienced entrepreneurs consider being of utmost importance to run their business, which have not been practiced in a training context. From this knowledge and from the point of view of skill gaps[10], the curriculum context needs to be improved. All these skills will be in a

[10] The concept of gap here consists of the entrepreneur's perception of the distance between the degree of achievement of this skill at a given time and, as a rule, is established in the ideal profile of an entrepreneur's

questionnaire and administered to 15 entrepreneurs from each partner country – Job Analysis Questionnaire (Annex C).

So, within this questionnaire, with the data obtained in Section D (Competences Required in the Annex - C: Job Analysis Questionnaire for Entrepreneurs) we operate them below, considering the weight of each item as a variable (Key Competences Required) and the results from a sum of two factors:

a) One is given by the type of classified basis where the activity take place - Daily (D), weekly (W), monthly (M), or annually (A). This system represents a degree of the activities that are most routine or which are less routine, i.e., represents their presence in the entrepreneurial activity. The numerical representation for this system is the following: D = 4; W = 3; M = 2; A = 1. It also will be added % of time related with the specific skill-activity, also associated with chronological component, so these two variables will constitute two factors.
b) The other part will be weighted by two other variables that will also constitute two factors (Importance and Difficulty perceptions levels): Importance Level associated (1 to 5); and by the Difficulty Level associated (1 to 5).

Thus, the weight perceived for each Skill Require (*WpSR*) will be formed as follows:

WpSR = (type of classified basis X % of time) + (Importance Level associated X Difficulty Level associated)

Therefore, only at this point the factor analysis will be completed with the items that structure section D through the weight that takes each Key-skill to the final score.

As for **Section E**, we also assume a formula in which is represents the weight of each **Knowledge** item that make up the respective section and, has or contributes to the total score in the respective section.

business activity. In human resources, gap identification as an ideal profile typically occurs at the time of individual assessment (Camara, 2017).

Then, we have the weight realized for each knowledge Required (*WpKR*), by the following formula:

WpKR = Importance Level associated X Training need Level associated

Finally, in section F, operated by a list of best practices in entrepreneurship, we assumed a formula that is representative of the weight of each Best Practice item that make up the respective section, that has, or contributes to the total score in the respective section.

Then, we have the weight carried out for each Best Practice (*WpBP*), by the following formula:

WpBP = Importance Level associated X Performance - Reward ratio level associated

The Performance-Reward ratio level, means, the entrepreneur's perception of the relationship between performing a practice and experiencing a certain result adapted from the Vroom's Expectancy Theory of Motivation (Rosenfeld & Wilson, 1999; Robbins, 2002; Pina and Cunha et al., 2014).

On both scales, 1 is the lowest level and 5 is the level highest, respectively. Where: 1 - Weak; 2 - Reasonable; 3 - Good; 4 - Very good; 5 – Excellent.

In a global perspective, it is an interesting system of scoring allocation from a statistical point of view, because it allows us to:

1. Obtain an individual final score with a wider range;
2. Evaluate the reliability analysis of the obtained data of all Partners, which means analyze all questionnaires data;
3. Evaluate the dimensionality of the items that make up the section D, section E and F (from Annex - C).

This last topic allows us to check the assumption about the one-dimensionality that implies that all the items of an instrument (here Section D, E and E from the Annex - C) is related to only a single cluster or node, or more than one that establishes the individuals total score (Pestana & Gageiro, 2014; Hutz, Bandeira & Trentini, 2015).

We assume that the maximum limit of the ECVET points will be 120 ECVET points (one year).

From this point, we calculate the number of the Cluster ECVET points correspondent, given by the product of the total ECTS (120 points) multiplied by relative weight of the cluster on the overall weight of learning outcomes - required Skills.

For example, let´s imagine that a certain Cluster of skills – Cluster 1 (formed by the Skill 1 + skill 2 + skill n, which means WpSR 1+ WpSR 2+ WpSR n, or just saying formed by WpSR's), on the overall weight of learning outcomes (set of require skills that saturate such a cluster) is 30%, then the number of the Cluster ECVET points correspondent, will be = 120*0,30 = 36 ECVET points for Cluster 1.

Following the same logic, and take into account of the **36 ECVET points for Cluster 1**, to calculate the ECVET points of a certain item (skill required) of that cluster, let´s imagine that the **WpSR 1** and its value is **10 points** of the **60 points of the Sum of the items that saturate Cluster 1**, the formula that we will use for the specific variables (a certain skill required) is:

$$\textit{ECVET number correspondent of WpSR 1} = \frac{\textit{Value of the WpSR 1} \times \textit{ECVET value of the Cluster 1}}{\textit{SUM of the WpSR's of Cluster 1}}$$

In this case by the given example:

The ECVET number correspondent of *WpSR* 1= (10 points x 36 ECVET points) / 60 points that is the sum of all items of Cluster 1 = 6 ECVET points.

6.3.2. Process to create the clusters of the required Skills, Knowledge and Best Practices clusters

To create clusters of the skills that are carried out by the entrepreneurs on their business activities, and for those key-skills that represent units of learning outcomes on which the ECVET points will be allocated with appropriate weight, i.e., with relative weight of units correspondent to each unit, from a statistical point of view, a method that will be here exploited

according with the results of the data obtained through the Section D, E and F of Job Analysis Questionnaire is the Decision Tree Procedure that creates a tree-based classification model[11].

Decision Trees helps the analysts/researchers to create a classification system/model and allows them to create and identify groups, discover relationships between groups and predict future events.

For the analysts/researchers, the Decision Trees classification can be used for (Pestana & Gageiro, 2009):

- Segmentation
- Stratification
- Prediction
- Data reduction and variable screening
- Interaction identification
- Category merging
- Discretizing continuous variable

These trees enable the analysts/researchers to explore the results and visually determine how its model flows. Visual results can help to find specific subgroups and connections that might not be uncovered when using statistics that are more traditional. Because classification trees break the data down into branches and nodes (here translated by clusters), it can easily be seen where a group splits and end. Therefore, in this way, it allows us to establish one or more groups or clusters (nodes) of these Units of learning outcomes that make up the section D into units and/or sub-units. In this way, the reference units are defined as coherent groupings results, where we can also find other coherences.

6.3.3. Worksheet created for the Part IV Tool

A Job Analysis Questionnaire template - Annex C - was created from the outset so that all partners could follow the same methods and provide the data to be explored later, through statistical analysis. In each existing section of the Job Analysis Questionnaire, there are clear

[11] Here in this procedure using the algorithm CHAID (CHi-squared Automatic Interaction Detection) that is a type of decision tree technique based upon adjusted significance of Bonferroni testing (Pestana & Gageiro, 2009).

instructions so that each responding entrepreneur understands what is intended to be answered.

After all entrepreneurs have answered the questionnaire, all partners should send the data obtained from the responses given by entrepreneurs through a template created to register that data. The template is a file support PSPP[12] created by the entity responsible for IO1 for this purpose or, in alternative, in an excel file version.

6.4. Results of Part IV

6.4.1. Sample

This sample is intended and sequential and it is used as a process to help answer the main research question, since all entrepreneurs from the different partner countries who follow the fundamental characteristic intended for this study (individuals who hold an activity or develop an entrepreneurial activity), were considered eligible to participate in this report-study.

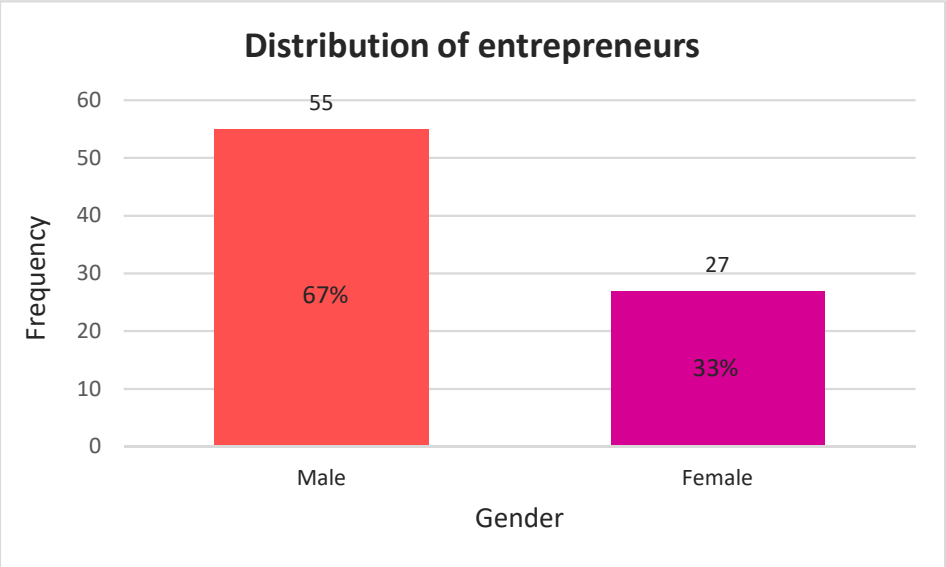
This intentional sample is made not so much by "representativeness", but because the participants hold an entrepreneurial activity – and can provide the collaboration needed through the instrument created for this purpose (Job Analysis Questionnaire - Annex C) and answer to the gaps between the needs of the labor market in terms of skills and qualifications of an entrepreneur with the intention of creating a new prototype program.

6.4.2. Sociodemographic Characterization of the Sample

The sample of this report-study consists of 82 entrepreneurs from the 90 participants invited to partake in this study from the different countries of the consortium, namely Portugal, Spain, Poland, France, Italy and Greece, aged between 22 and 70 (M=42.57; SD=10.44), of both genders (see Chart 3 and Chart 4), with a degree of schooling ranging from high school to higher education (see Graphic 3).

[12] PSPP is a free software application for analysis of sampled data, intended as a free alternative version for IBM SPSS Statistics, available in Linux systems.

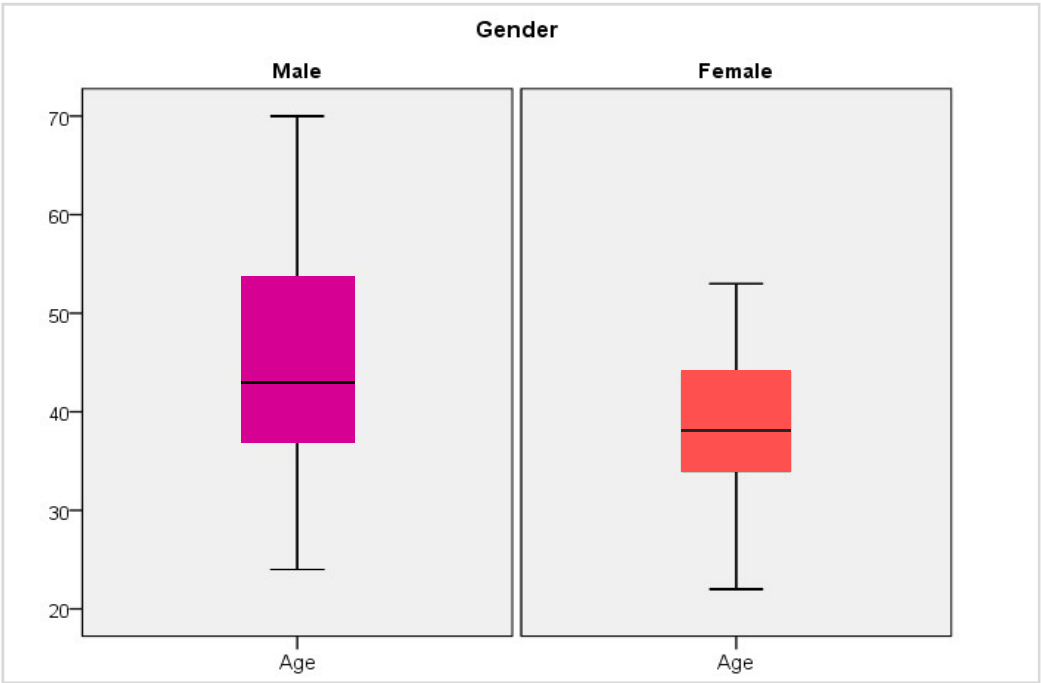
Graphic 3. *Distribution of entrepreneurs according to gender*



We can observe in this report-study, that the sample according to gender, it is filled more by males (67%) than females (33%). Similar to this uneven distribution, this can also be seen in the age range of female participants that, it is lower and slightly more concentrated around the median than male participants.

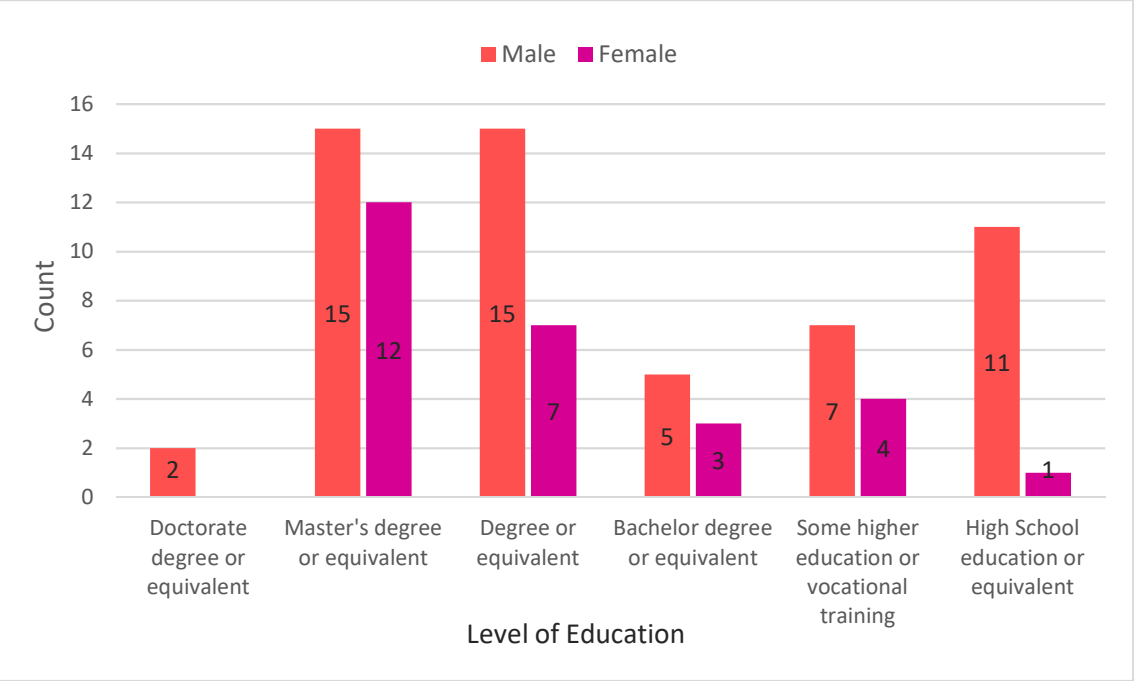
The median female gender is 38 years and the age range is 31 years compared with the median male gender, which is 43 years with a range of 46 years (Graphic 4).

Graphic 4. *Distribution of entrepreneurs according to age*



The distribution of the sample of entrepreneurs by gender according to the variable level of education, follows next distribution (Graphic 5).

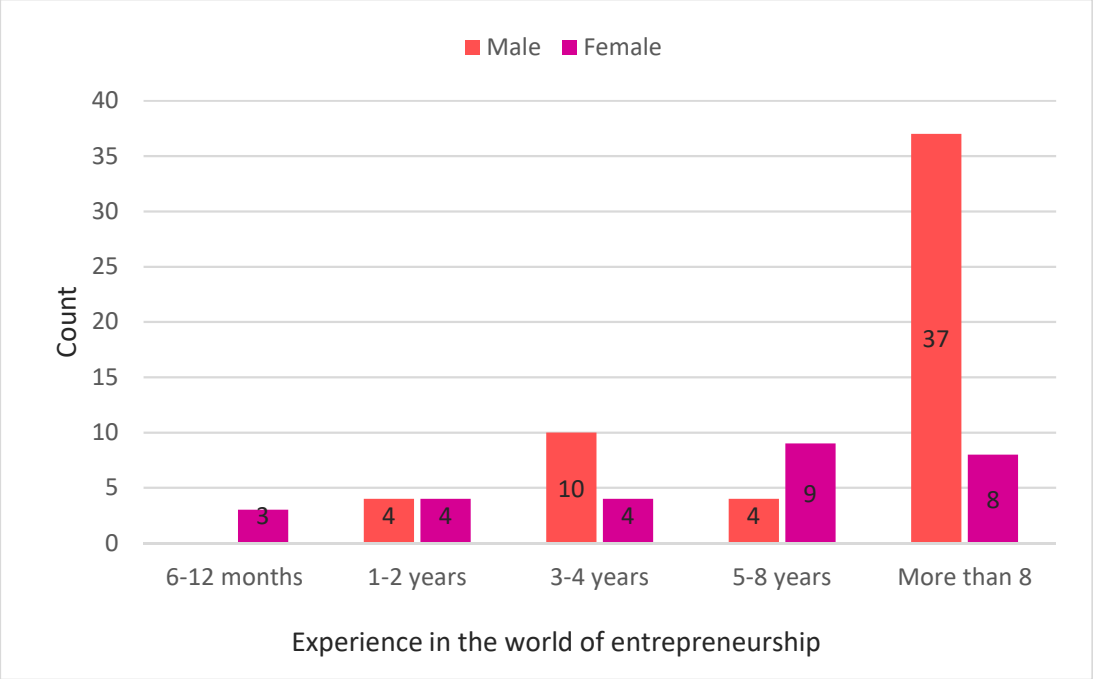
Graphic 5. *Distribution of the sample of entrepreneurs by gender according to the variable level of education*



We can verify that the participants in the sample hold the majority of the level of higher education (EQF ≥ 6).

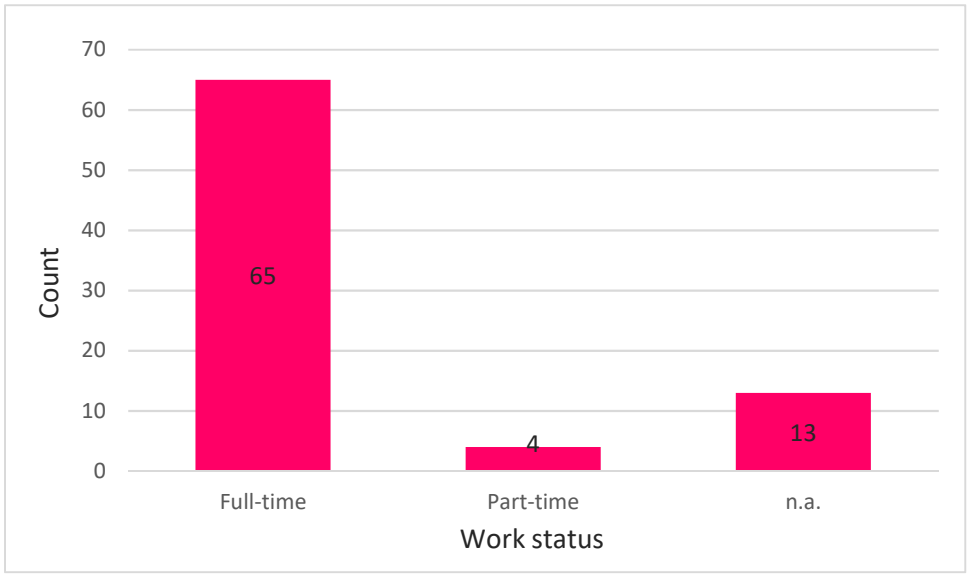
As for the distribution of the sample according to gender and time of experience as entrepreneurs, we can see that most of the participants have more than 3 years of experience (Graphic 6).

Graphic 6. *Distribution of the sample of entrepreneurs by gender according to the variable Experience*



In addition, according to the Work Status variable, most of the sample participants work full-time in their entrepreneurial company (Graphic 7).

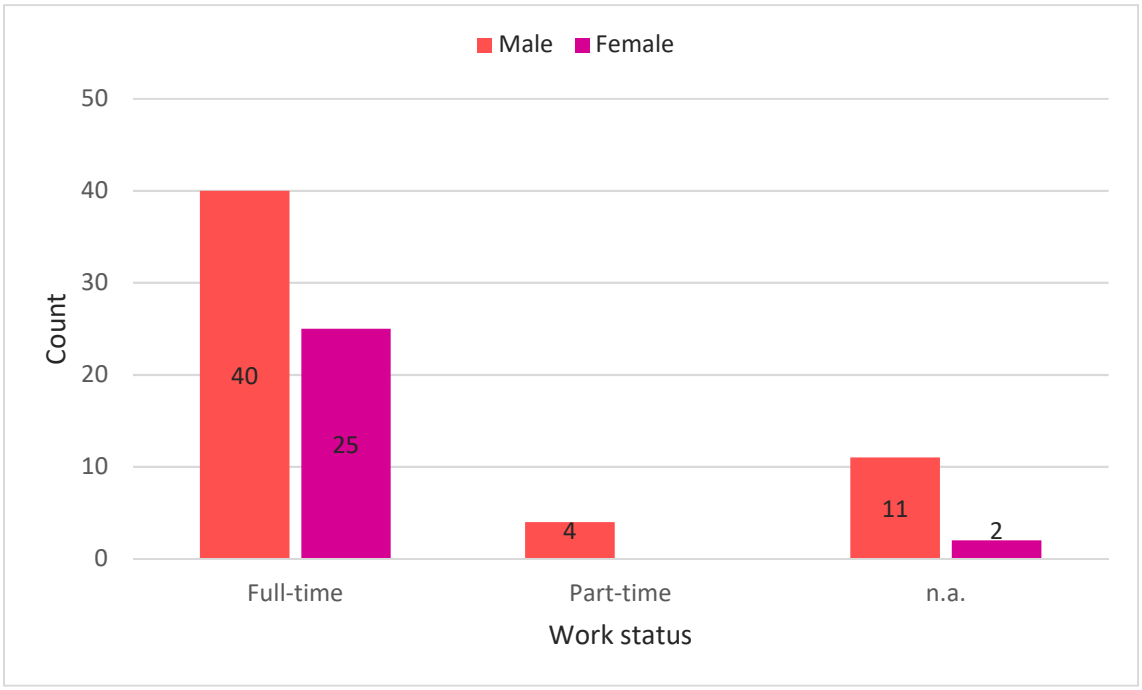
Graphic 7. *Distribution of the sample of entrepreneurs by gender according to the variable Work Status*



n.a. – not applicable

In the following graphic (Graphic 8), in a more detailed analysis of the Work Status variable and, according to gender, we show the distribution of participants.

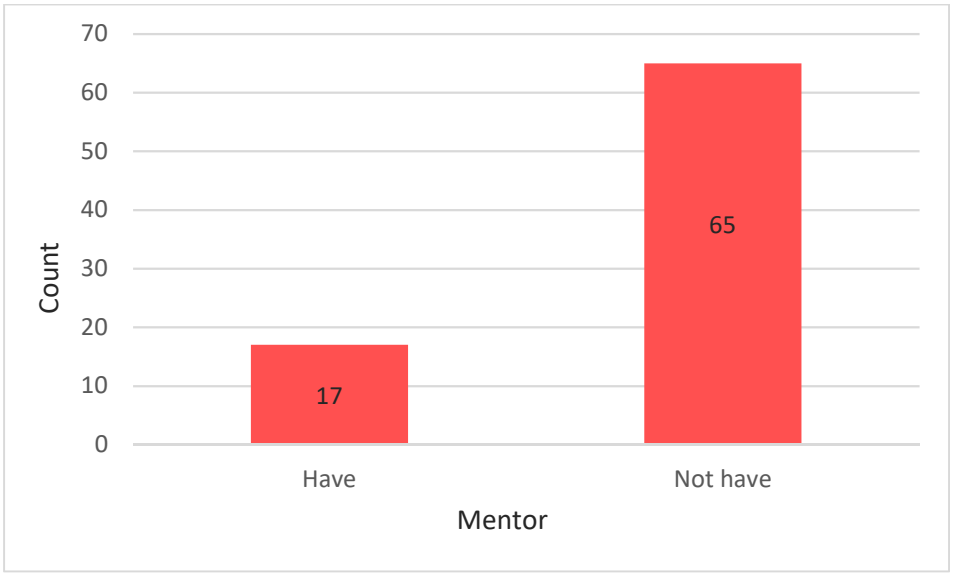
Graphic 8. *Distribution of the sample of entrepreneurs by gender according to the variable Work Status*



n.a. – not applicable

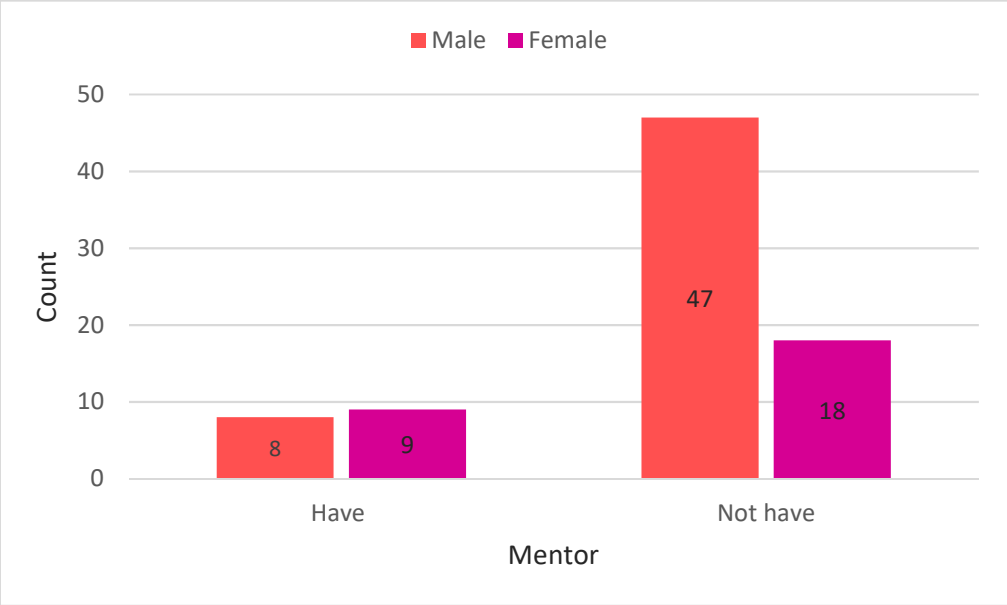
In the following charts (Graphic 9; Graphic 10 and Graphic 11), we show the frequency of participants according to the variable if they have a Mentor or not, and according to the variable Experience/time involve in the world of entrepreneurship.

Graphic 9. *Distribution of the sample of entrepreneurs according to whether they have a Mentor or not*

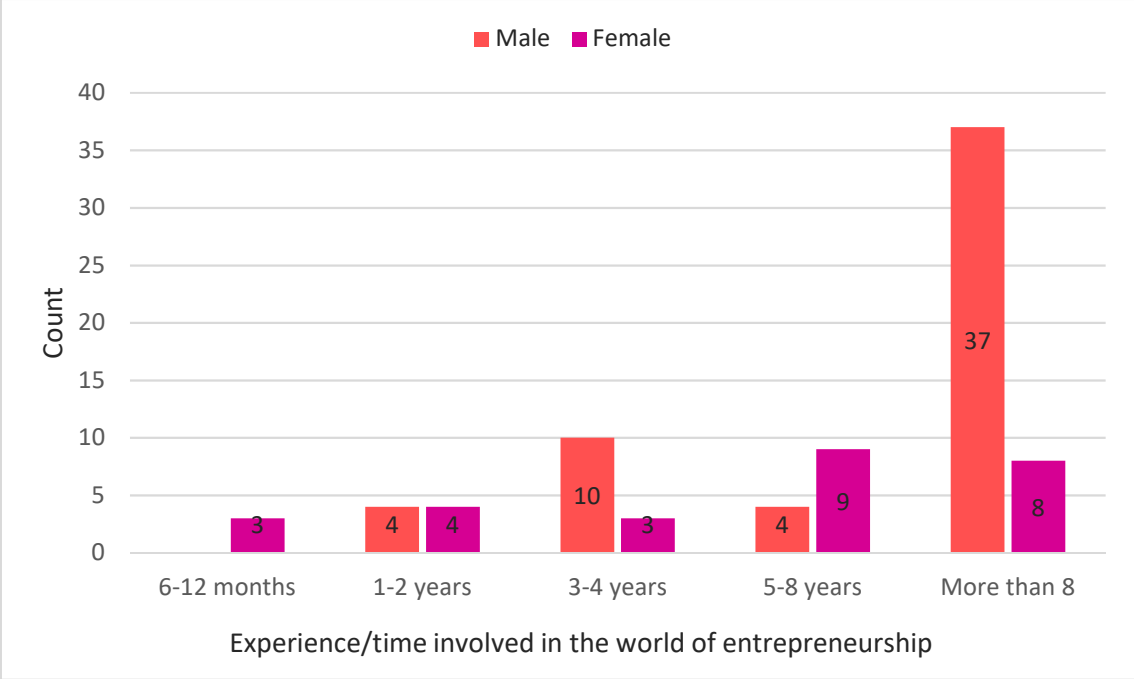


Of the 82 entrepreneurs, 65 did not have a mentor (which represents about 79% of the sample).

Graphic 10. *Distribution of the sample of entrepreneurs according to whether they have a Mentor or not by gender*

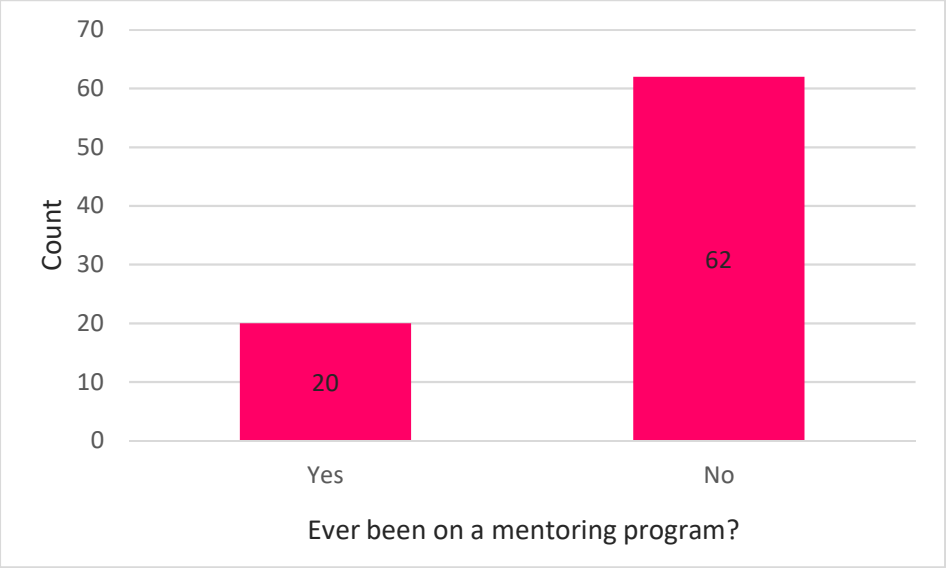


Graphic 11. *Distribution of the sample of entrepreneurs according to whether they have a Mentor or not by time of experience*



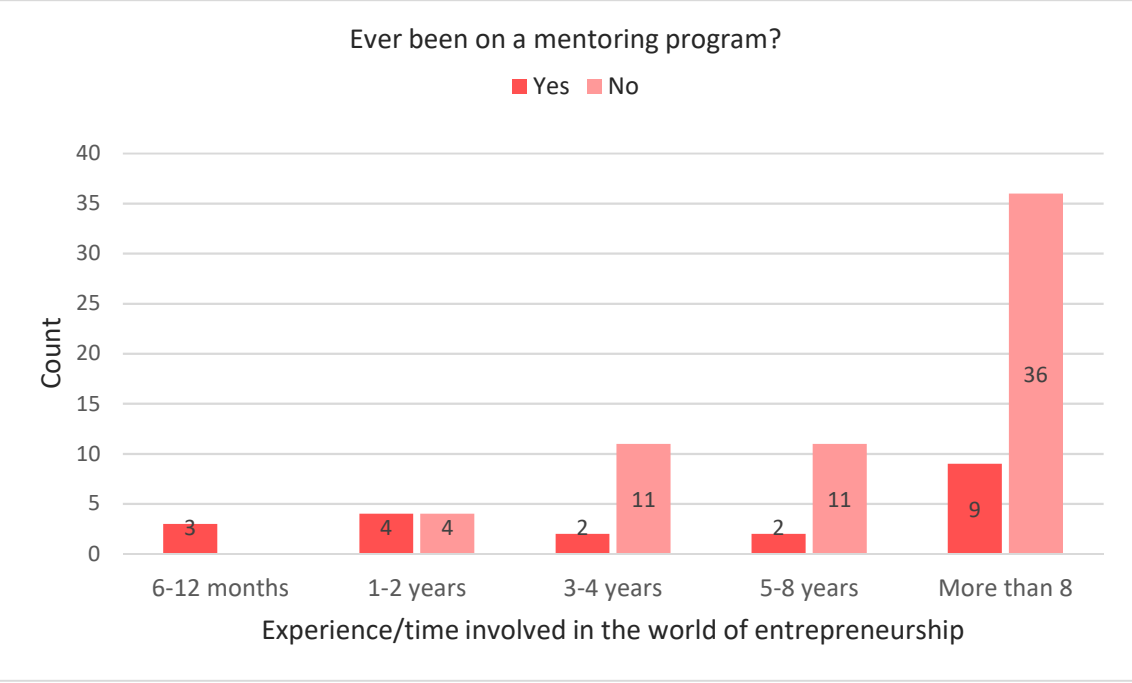
On the other hand, when asked if the participants had ever been involved in any mentoring program, the results were as follows (Graphic 12):

Graphic 12. *Distribution of the sample of entrepreneurs according to if they have already been involved in any mentoring program*



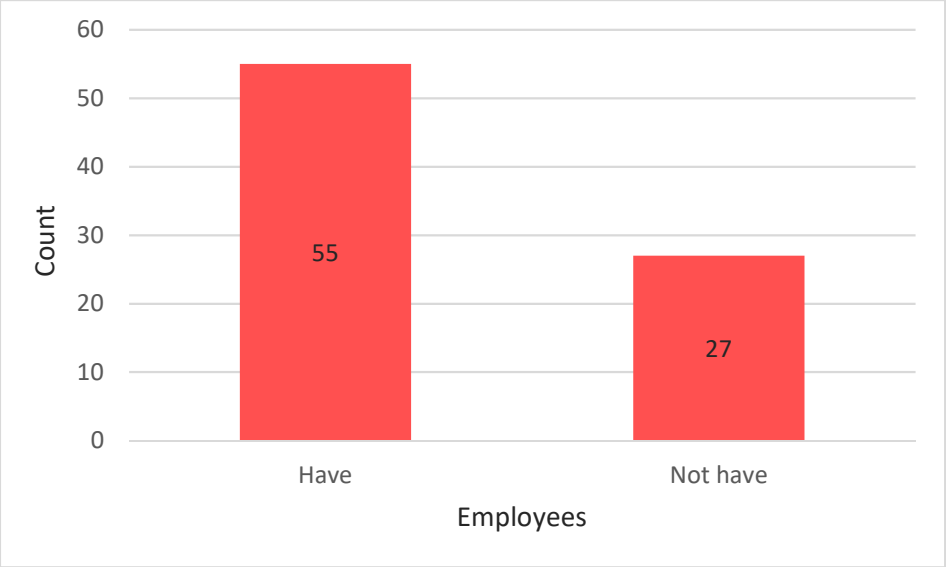
Most have never been involved in any mentoring process (about 77.5%). A similar result is found even in entrepreneurs who have more years of experience (Graphic 13).

Graphic 13. *Distribution of the sample of entrepreneurs according to if they have already been involved in any mentoring program in relation with years of experience*



Finally, we show in the following graphic (Graphic 14) whether the participants had employees in their entrepreneurial business.

Graphic 14. *Distribution of the sample of entrepreneurs according to the number of employees*



About 71% of the participants had employees in their entrepreneurial activity.

6.4.3. Job Analysis Questionnaire Metrics Properties

The need for the use of statistics as a resource and a method for obtaining the desired results through the created tool (questionnaire), which will later describe in more detail, was assumed by all partners as the best efficient way according to the relationship between the quality, results and associated costs of IO1.

According to Smith (2015), many people consider the statistical analysis as a purely technical exercise related to the application of techniques of collection and analysis of specialized data, however, this perception is incorrect and deceitful.

The practice of statistics as a scientific method involves contingent procedures and making shrewd decisions, and not only the mechanical application of formulas accepted as it is sometimes assumed (McGinn, 2010).

It is for this reason that for Bhattacherjee (2012), that a scientific method refers to a standardized set of techniques that enables the construction of scientific knowledge such as

how to make valid observations considered, how to interpret the results and to generalize these results.

Since this IO1 has a specific purpose, we needed to create a tool to this end. We chose to use statistics as the scientific method for, not only answer what is require in the IO1, but also to allow other researchers to be able to use the tool and, be able according to Bhattacherjee (2012), to obtain the:

- Replicability of results, i.e., enable other researchers independently to replicate or repeat the scientific study and get similar results;
- Accuracy of the data, which is often difficult to measure;
- And Parsimony. When there are several possible explanations for the same phenomenon, researchers must always accept the simpler or more logical economic explanation. This concept is called parsimony or "Occam's razor." The parsimony prevents an infinite number of concepts and relationships that can explain a little bit of everything but nothing in particular.

On the other hand, and according to Furr (2011), the writing up of a questionnaire requires attention to the anticipated psychometric properties of the items that make up the whole questionnaire. It is for this reason that psychometrics as a specific branch of statistics, is based on measuring a theory in science, to explain the sense that they have the answers of the subject of a series of tasks (Pasquali, 2008).

Therefore, it is urgent, of course, and before answering any questions required in particular in this IO1, to analyze some Metrics Questionnaire Properties to ensure the quality of data, its properties or basic indicators that guarantee the quality of the tool/questionnaire administered.

So, for that, we planned, considering the following metric indicators:

- Translation validity;
- Reliability of the data (analyzed through internal consistency - alpha coefficient).

Translation Validity

After the presentation of the questionnaire JOB ANALYSIS QUESTIONNAIRE - Annex C, created exclusively for IO1, all partners were invited to conduct a deep review item by item, section to section, until we get a final version accepted by all and minimally understandable to the translation of the same, in the respective mother tongues of each partner.

As an additional and obligatory method, each partner was responsible for translating the questionnaire in his/her mother tongue. Thus, it was to determined that the acceptable time required to complete the questionnaire, should not exceed more than 45 minutes.

Data Reliability/Internal consistency

At this point, we will carry out a research of the internal consistency, by examining the Cronbach's alfa coefficient of different groups of sample participants from all partners organizations of this project.

According to Hair, Anderson, Tatham and Black (2005), a value for the higher Cronbach's alpha 0.70 can be considered satisfactory.

In the following table (Table 20), we present the respective alpha coefficients according to the variables that reflect the weight perceived in Section D (30 Skills Required), section E (14 types of Knowledge Required); and Section F (20 types of Best Practices Required).

Table 20. ALPHA coefficients (α)

SECTION	VARIABLE	ALPHA COEFFICIENT (α)
D	*WpSR* - weight perceived for each Skill required	*0,931*
E	*WpKR* - weight perceived for each Knowledge required	*0,897*
F	*WpBP* - weight perceived for each Best Practices required	*0,919*

According to Pestana and Gageiro (2014), the alpha value should be positive, ranging between 0 and 1, having the following readings:

- Above 0.9 - Very good consistency
- Between 0.8 and 0.9 - Good

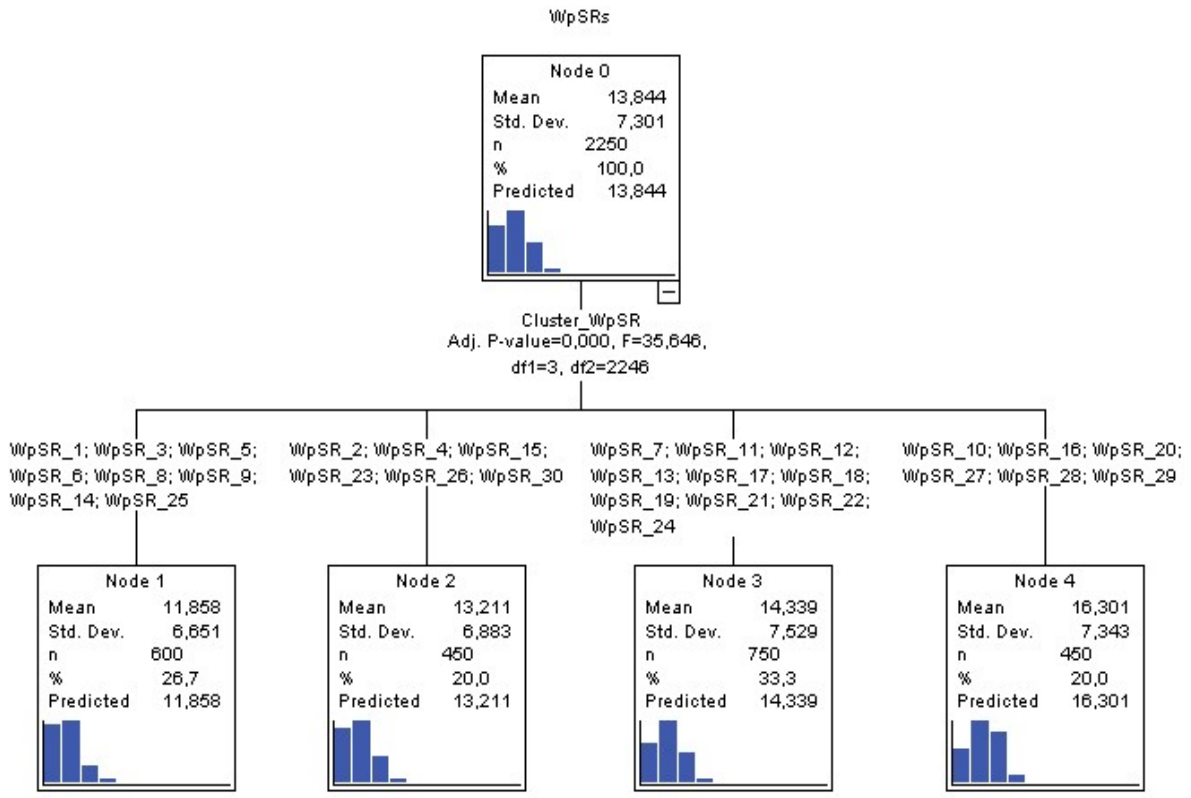
- Between 0.7 and 0.8 - Reasonable
- Between 0.6 and 0.7 - Low
- Less than 0.6 - Inadmissible

The results indicate that the items that saturate the respective sections mentioned, have an internal consistency that ranges from good consistency (α = 0,897) to very good consistency (α = 0,931), particularly in the section D which is the most valued section (most valued section for this report-study).

6.4.4. Results obtained from the Section D Decision Tree Procedures

According to the Decision Tree Procedure that creates a tree-based classification model, all the 2250 responses/cases that are in section D (perceived weight for each Skill required), were submitted to this process, from a point of view of statistical analysis and their results are detailed on the next figure (Figure 7).

Figure 7. *Section D results obtained from the Decision Tree procedure*



In the Decision Tree Procedure, we chose the algorithm CHAID (CHi-squared Automatic Interaction Detection) which is a type of decision tree technique based upon adjusted significance of Bonferroni testing.

One of the CHAID's advantages is that its output is highly visual and easy to interpret. Because it uses multiway splits by default, and it needs rather large sample sizes to work effectively, since with small sample sizes the respondent groups can quickly become too small for reliable analysis.

On the other hand, because the variable - perceived weight for each Skill required - (WpSRs variable) is a quantitative variable, the CHAID algorithm work the data based upon adjusted to the significance level of the Bonferroni test through an ANOVA (Analysis of variance)[13].

Through our technique and with the use of ANOVA it is possible to see that through the Decision Tree Procedure and using CHAID algorithm, clusters (nodes) resulting and displayed in the previous figure are significant, defined from a statistical point of view, F (3; 2246) = 35,645655; Adj. P = 0,000008.

As a result, with the Decision Tree Procedure chose through the CHAID algorithm, it was also possible to check the relative weight of each node (cluster) had or contributed to the final Overall weight of learning outcomes as well, to adjust values according to the Bonferroni coefficient and significance level, that we underline in the following table (Table 21).

[13] Which is a great statistical model to be used to analyze the differences among group means and their associated procedures (such as the “variation” among and between groups).

Table 21. *Section D Tree Table*

SECTION D TREE TABLE												
Node	Mean	Std. Deviation	N	Percent	Predicted Mean	Parent Node	Primary Independent Variable					
							Variable	Sig.[a]	F	df1	df2	Split Values
0	13,8442	7,301384	2250	100,0%	13,844199							
1	11,8577	6,651105	600	26,7%	11,85767	0	Cluster 1	,000	35,646	3	2246	WpSR_1; WpSR_3; WpSR_5; WpSR_6; WpSR_8; WpSR_9; WpSR_14; WpSR_25
2	13,2109	6,88345	450	20,0%	13,2109	0	Cluster 2	,000	35,646	3	2246	WpSR_2; WpSR_4; WpSR_15; WpSR_23; WpSR_26; WpSR_30
3	14,3390	7,520932	750	33,3%	14,3390	0	Cluster 3	,000	35,646	3	2246	WpSR_7; WpSR_11; WpSR_12; WpSR_13; WpSR_17; WpSR_18; WpSR_19; WpSR_21; WpSR_22; WpSR_24
4	16,3014	7,34329	450	20,0%	16,3014	0	Cluster 4	,000	35,646	3	2246	WpSR_10; WpSR_16; WpSR_20; WpSR_27; WpSR_28; WpSR_29

Growing Method: CHAID
Dependent Variable: WpKAs
a. Bonferroni adjusted

After the Decision Tree Procedure and applying the method to allocate ECVET points (explained from p. 83 to 87) to each cluster, in the next table (Table 22), we share the ECVET points assigned to each cluster assuming that the maximum limit of the ECVET points will be 120 ECVET points[14] (one-year training course).

Table 22. *Allocation of ECVET points to required skill clusters – Questionnaire Section D*

Node (Cluster)	Percent	ECVET points (120 * % of each cluster)
1	26,7%	32,04 (32) *
2	20,0%	24
3	33,3%	39,96 (40) *
4	20,0%	24

** Values in quotes rounded up to units*

Following the same idea as the procedure for allocating ECVET points now to each item that saturates the cluster, that is, each Skill required, we set out in the following table (Table 23), the relative weight that each Skill has in the total of the cluster and its correspondence in ECVET points, within the cluster that is anchored.

Table 23. *Allocation of ECVET points to each required skill with its corresponding relative weight and ECVET points assigned*

Cluster Sum Values		Cluster ECVET points	WpSR's Sum Values		WpSR's Sum Values relative weight (%)	ECVET number correspondent of WpSR
1	6190,64	32 ECVET	WpSR_1	889,21	0,1436 (14,36%)	4,60 ECVET
			WpSR_3	873,00	0,1410 (14,10%)	4,51 ECVET
			WpSR_5	886,88	0,1433 (14,33%)	4,59 ECVET
			WpSR_6	887,62	0,1434 (14,34%)	4,59 ECVET
			WpSR_8	830,23	0,1341 (13,41%)	4,29 ECVET
			WpSR_9	893,73	0,1443 (14,43%)	4,62 ECVET
			WpSR_14	929,97	0,1502 (15,02%)	4,80 ECVET
2	5944,92	24 ECVET	WpSR_2	969,51	0,1631 (16,31%)	3,91 ECVET
			WpSR_4	1006,63	0,1693 (16,93%)	4,06 ECVET

[14] While in the ECVET system, 120 credits are attributed for one year during the learning process, in the ETCS system, for the same period of time, 60 credits are designated, therefore, half of the ECVET credits system. Throughout this study report, credits will be suggested via the ECVET system, however it will be easier for the reader to understand the values in the ETCS system, which will always be half of the values that will be exposed in this study report.

			WpSR_15	991,91	0,1669 (16,69%)	4,00 ECVET
			WpSR_23	1001,43	0,1685 (16,85%)	4,04 ECVET
			WpSR_26	977,45	0,1644 (16,44%)	3,95 ECVET
			WpSR_30	997,99	0,1679(16,79%)	4,03 ECVET
3	10805,7	40 ECVET	WpSR_7	1030,11	0,095 (9,5 %)	3,80 ECVET
			WpSR_11	1114,07	0,1031 (10,31 %)	4,12 ECVET
			WpSR_12	1024,47	0,0948 (9,48 %)	3,79 ECVET
			WpSR_13	1036,25	0,0959 (9,59 %)	3,84 ECVET
			WpSR_17	1126,02	0,1042 (10,42 %)	4,17 ECVET
			WpSR_18	1124,36	0,1041 (10,41 %)	4,16 ECVET
			WpSR_19	1124,36	0,1041 (10,41 %)	4,16 ECVET
			WpSR_21	1066,69	0,0987 (9,87 %)	3,95 ECVET
			WpSR_22	1085,00	0,1004 (10,04 %)	4,02 ECVET
			WpSR_24	1074,34	0,0994 (9,94 %)	3,99 ECVET
4	7335,65	24 ECVET	WpSR_10	1234,76	0,1683 (16,83 %)	4,04 ECVET
			WpSR_16	1220,86	0,1664 (16,64 %)	3,99 ECVET
			WpSR_20	1187,42	0,1619 (16,19 %)	3,88 ECVET
			WpSR_27	1171,48	0,1597 (15,97 %)	3,83 ECVET
			WpSR_28	1226,12	0,1671 (16,71 %)	4,01 ECVET
			WpSR_29	1295,01	0,1765 (17,65 %)	4,24 ECVET

Considering the results obtained through the Job Analysis Questionnaire - Annex C - in section D (perceived weight for each Skill required) through the answers given by the entrepreneurs from different European countries, and after submitting the answers to the statistical procedures previously described as well as for the allocation of ECVET points for each cluster of Skills and their items (Skills) that saturate them, we present in the following tables (Table 24; Table 25; Table 26) the due meaning of the global results.

Therefore, for each cluster saturated with its items, the Learning Unit is given a name with the equivalence of the number of ECVET in each cluster, as well as the number of ECVET in each Skill of each cluster.

Once again, we are assuming that the maximum limit of the ECVET points will be 120 ECVET points (for one-year training course program).

Table 24. Allocation of ECVET points to the Cluster 1 with its Skills

# Cluster 1			
Name of the Unit of learning: Skills to understand and operate in an ambiguity/uncertainty entrepreneurial business environment			
WpSR	SKILL DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model	ECVET number correspondent of WpSR
WpSR_1	To be able to understand the emotional levels of my employees	RESOURCES	4,60 ECVET
WpSR_3	To be able to mobilize resources	RESOURCES	4,51 ECVET
WpSR_5	To be able to adapt into a multidisciplinary and cultural environment	ACTIONS	4,59 ECVET
WpSR_6	To be available to identify the right conditions to run a business in an ambiguous environment	ACTIONS	4,59 ECVET
WpSR_8	To be able to overcome limits and cultural prejudices, to be self-confident and trust in our skills, facing the risk and overcoming future obstacles with bravery	RESOURCES	4,29 ECVET
WpSR_9	To be able to present a clear picture of what the entrepreneur wants in an innovative way	IDEAS	4,62 ECVET
WpSR_14	To be able to communicate better with the employees	RESOURCES	4,80 ECVET
RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF LEARNING OUTCOMES ***= 32 ECVET***			

Table 25. Allocation of ECVET points to the Cluster 2 with its Skills

# Cluster 2			
Name of the Unit of learning: Skills to manage an entrepreneurial business model			
WpSR	SKILL DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model	ECVET number correspondent of WpSR
WpSR_2	To able to use in a proper way the statistical analysis tools for a better understanding of my company	RESOURCES	3,91 ECVET
WpSR_4	To be able to deal with ambiguity, uncertainty and take risks	ACTIONS	4,06 ECVET
WpSR_15	To be able to negotiate better with the suppliers	ACTIONS	4,00 ECVET
WpSR_23	To be able to manage errors and assume responsibility	RESOURCES	4,04 ECVET
WpSR_26	To be able to assess the feasibility of an idea and take care of its management	ACTIONS	3,95 ECVET
WpSR_30	To able to select between two or more alternatives to reach the best outcome in the shortest time	ACTIONS	4,03 ECVET
*RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF LEARNING OUTCOMES = **24 ECVET***			

Table 26. Allocation of ECVET points to the Cluster 3 with its Skills

# Cluster 3			
Name of the Unit of learning: *Skills to be on market and sell entrepreneurial business products*			
WpSR	SKILL DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model	ECVET number correspondent of WpSR
WpSR_7	To be able to develop and maintain useful relationships to implement a business through networking techniques and strategies	ACTIONS	3,80 ECVET
WpSR_11	To be able to be resilient against losses and failures	RESOURCES	4,12 ECVET
WpSR_12	To be able to persist in the development of the business even with the daily adversities	RESOURCES	3,79 ECVET
WpSR_13	To be able to explore the 'inner' set of resources - knowledge, insight, information, inspiration and all the fragments that populate our minds - that have been accumulated over the years to combine them in extraordinarily new ways	IDEAS	3,84 ECVET
WpSR_17	To be able to have the determination to achieve the business goals	RESOURCES	4,17 ECVET
WpSR_18	To be able to analyze the environment	IDEAS	4,16 ECVET
WpSR_19	To be able to design and implement a marketing plan	ACTIONS	4,16 ECVET
WpSR_21	To be able to solve problems with enterprising spirit	ACTIONS	3,95 ECVET
WpSR_22	To be to able find solutions, transform, collectively create and work as a team	IDEAS	4,02 ECVET
WpSR_24	To be able to focus in a product/entrepreneurship project as well a commercial or sales plan for it	ACTIONS	3,99 ECVET
RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF LEARNING OUTCOMES = ***40 ECVET***			

Table 27. Allocation of ECVET points to the Cluster 4 with its Skills

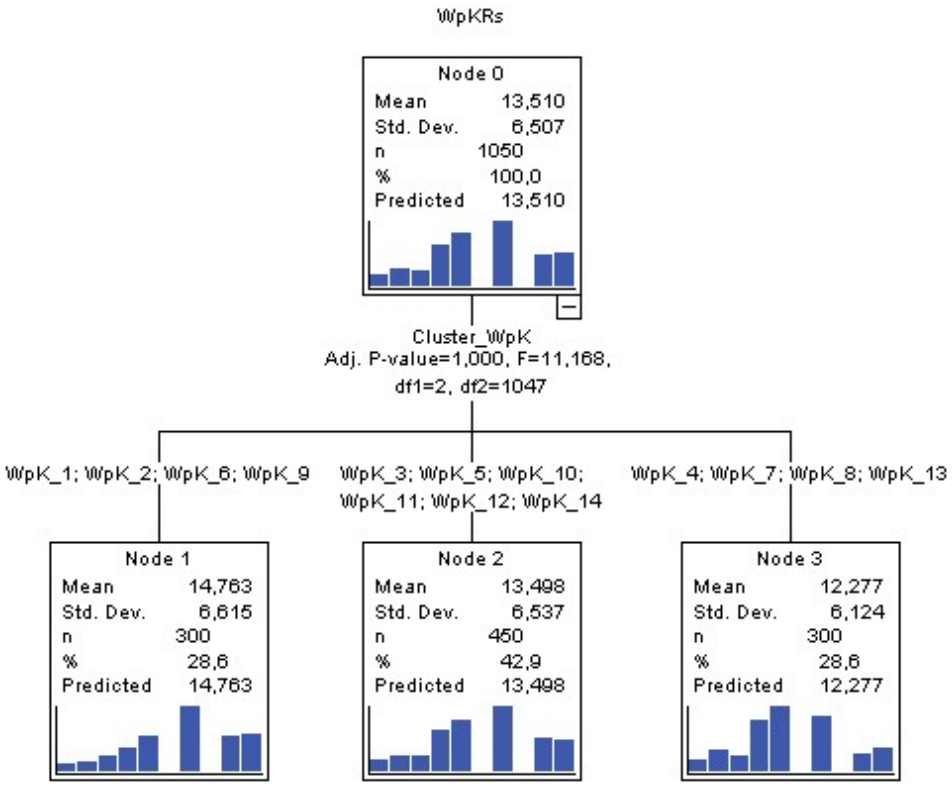
# Cluster 4			
Name of the Unit of learning: *Skills for adapting the entrepreneurial business to markets and business trends*			
WpSR	SKILL DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model	ECVET number correspondent of WpSR
WpSR_10	To be able to interpret the economic feasibility of business opportunities in advance	RESOURCES	4,04 ECVET
WpSR_16	To be able to lead a company into success	RESOURCES	3,99 ECVET
WpSR_ 20	To be able to be technologically innovative	RESOURCES	3,88 ECVET
WpSR_27	To be able to listen to clients	RESOURCES	3,83 ECVET
WpSR_28	To be able to be efficient, multi-task and hard worker	RESOURCES	4,01 ECVET
WpSR_29	To be able to adapt to customer requirements and market trends	ACTIONS	4,24 ECVET
RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF LEARNING OUTCOMES = ***24 ECVET***			

The objective of this report-study revolves around these findings and conclusions to recommend a new prototype programme that can fill in the gap between the labor market needs, in terms of skills and qualifications of an effective entrepreneur and existing entrepreneurship training practices/courses (see Part I of this report) and, considering that Teaching "for" entrepreneurship (see Part II of this report) means a work oriented approach, we added in the study the analysis of the knowledge and Best Practices pointed out in the answers of the entrepreneurs. We submitted their analysis to the same methods, both in the creation of Clusters (Decision Tree Procedures) and in the allocation of ECVET points to the items that saturate the knowledge clusters and Best Practices clusters.

6.4.5. Results obtained from the Section E Decision Tree Procedures

On this new Decision Tree Procedure to create a tree-based classification model, all the 1050 responses from the 14 items about knowledge that are in section E (perceived weight for each knowledge required) were submitted, from the point of view of statistical analysis, to this model (Decision Trees) and their results are shown on the next figure (Figure 8).

Figure 8. *Section E results obtained from the Decision Tree procedure*



Through our method and using ANOVA, it is possible to see that the Decision Tree Procedure using CHAID algorithm and clusters (nodes) resulting and displayed in the previous figure, is significant and were defined from a statistical point of view: $F_{(2;\ 1047)}$ = 11,167753; Adj. P = 1,000.

As a result, with the Decision Tree Procedure chose for the procedure through the CHAID algorithm (with the option – Force First variable), it is also possible to check the relative weight of each node (cluster) has or contributes to the final Overall weight of learning outcomes, as well to adjust values according to the Bonferroni coefficient and significance level, that we underline in the following table (Table 28).

Table 28. Section E Tree Table

SECTION E TREE TABLE												
Node	Mean	Std. Deviation	N	Percent	Predicted Mean	Parent Node	Primary Independent Variable					
							Variable	Sig.[a]	F	df1	df2	Split Values
0	13,5105	6,506753	1050	100,0%	13,5105							
1	14,7633	6,615123	300	28,6%	14,7633	0	Cluster 1	1,000	11,1678	2	1047	WpK_1; WpK_2; WpK_6; WpK_9
2	13,4978	6,537283	450	42,9%	13,497778	0	Cluster 2	1,000	11,1678	2	1047	WpK_3; WpK_5; WpK_10; WpK_11; WpK_12; WpK_14
3	12,2767	6,123598	300	28,6%	12,2767	0	Cluster 4	1,000	11,1678	2	1047	WpK_4; WpK_7; WpK_8; WpK_13

Growing Method: CHAID
Dependent Variable: WpKAs
a. Bonferroni adjusted

In the next table (Table 29) we present the ECVET points assigned to each cluster assuming that the maximum limit of the ECVET points will be 120 ECVET points (one-year training course).

Table 29. *Allocation of ECVET points to required knowledge clusters – Questionnaire Section E*

Node (Cluster)	Percent	ECVET points (120 * % of each cluster)
1	28,6%	34*
2	42,9%	52*
3	28,6%	34*

** Values in quotes rounded up to units*

Following the same reasoning as the method for allocating ECVET points, now to each item that saturates the cluster, that is, for each knowledge required (*WpKR* - weight perceived for each Knowledge required), we set out in the following table (Table 30), the relative weight that each knowledge has in the total of the cluster and its correspondence of ECVET points within the cluster that is anchored.

Table 30. *Allocation of ECVET points to each required knowledge with its corresponding relative weight and ECVET points assigned*

Cluster Sun Values		Cluster ECVET points	WpKR's Sun Values		WpKR's Sun Values relative weight (%)	ECVET number correspondent of WpKR
1	4429	34 ECVET	WpK_1	1087,00	0,2454 (24,54%)	8,34 ECVET
			WpK_2	1093,00	0, 2468 (24,68%)	8,39 ECVET
			WpK_6	1118,00	0, 2524 (25,24%)	8,58 ECVET
			WpK_9	1131,00	0, 2554 (25,54%)	8,68 ECVET
2	6074	52 ECVET	WpK_3	1037,00	0, 1707 (17,07%)	8,88 ECVET
			WpK_5	1041,00	0, 1713 (17,13%)	8,91 ECVET
			WpK_10	993,00	0, 1635(16,35%)	8,50 ECVET
			WpK_11	983,00	0, 1618 (16,18%)	8,42 ECVET
			WpK_12	971,00	0, 1599 (15,99%)	8,31 ECVET
			WpK_14	1049,00	0, 1727 (17,27%)	8,98 ECVET
3	3683	34 ECVET	WpK_4	942,00	0, 2558 (25,58%)	8,70 ECVET
			WpK_7	930,00	0, 2525 (25,25%)	8,59 ECVET
			WpK_8	894,00	0, 2427 (24,27%)	8,25 ECVET
			WpK_13	917,00	0, 2490 (24,90%)	8,47 ECVET

Taking into consideration the results obtained through the Job Analysis Questionnaire - Annex C - in section E (perceived weight for each knowledge required) through the answers given by entrepreneurs, and after submitting the answers to the statistical procedures previously described as well as for the allocation of the ECVET points for each cluster of knowledge and its items (knowledge) that saturate them, we share the following tables (Table 31; Table 32; Table 33) the due significance to of global results.

Once again, we are underling that we are assuming that the maximum limit of the ECVET points will be 120 ECVET points (for one-year training course program).

Table 31. Allocation of ECVET points to the Cluster 1 with its knowledge

# Cluster 1			
Name of the Unit of knowledge: *Marketing Personalization Knowledge*			
WpKR	KNOWLEDGE DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model & Theory-based education	ECVET number correspondent of WpKR
WpKR_1	Knowledge about business sector inside out and strategic thinking	RESOURCES	8,34 ECVET
WpKR_2	Knowledge about marketing and communication	IDEAS; Marketing and sales aspects (*Theory-based education*)	8,39 ECVET
WpKR_ 6	Knowledge about technology and innovation	Technical aspects (*theory-based education*)	8,58 ECVET
WpKR_9	Knowledge about the customers and potential customers of the business	Financial aspects (*theory-based education*)	8,68 ECVET
RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF THE KNOWLEDGE OUTCOMES = ***34 ECVET***			

Table 32. Allocation of ECVET points to the Cluster 2 with its knowledge

# Cluster 2			
Name of the Unit of knowledge: Legal and administrative technical-financial knowledge			
WpKR	KNOWLEDGE DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model & Theory-based education	ECVET number correspondent of WpKR
WpK_3	Knowledge about business financial and accounting domain	Financial aspects	8,88 ECVET
WpK_5	Knowledge about human resources and manage people	Financial aspects	8,91 ECVET
WpK_10	Knowledge about management and administration domain	ACTIONS; Organizational aspects	8,50 ECVET
WpK_11	Knowledge about business bureaucracy and legal aspects	Legal aspects	8,42 ECVET
WpK_12	Knowledge about commercial aspects and product sales	RESOURCES; Sales aspects	8,31 ECVET
WpK_14	Knowledge of techniques and strategies to manage time and priorities	ACTIONS; Organizational aspects	8,98 ECVET
*RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF THE KNOWLEDGE OUTCOMES = **52 ECVET***			

Table 33. Allocation of ECVET points to the Cluster 3 with its knowledge

# Cluster 3			
Name of the Unit of knowledge: *Markets and business trends knowledge*			
WpKR	KNOWLEDGE DESCRIPTION	Relation with the Three Entrepreneurial Models: EntreComp, The Great Eight, 13 Entrepreneurial Competencies Model & Theory-based education	ECVET number correspondent of WpKR
WpK_4	Knowledge about economy and competitiveness	Financial aspects	8,70 ECVET
WpK_7	Knowledge about the labor market and market Trends	Technical aspects	8,59 ECVET
WpK_8	Knowledge about tools for shared decision making and problem/challenge resolution	RESOURCES; Organizational aspects	8,25 ECVET
WpK_13	Knowledge about experiences of entrepreneurial activities and their positive and negative results	ACTIONS; Personal aspects	8,47 ECVET
*RELATIVE WEIGHT OF THE CLUSTER ON THE OVERALL WEIGHT OF THE KNOWLEDGE OUTCOMES = **34 ECVET***			

Taking into account Spencer and Spencer's (1993) iceberg model, namely its visible level characteristics (Skills and knowledge), which was explored in the context of this research, and since our object of study, via research model approach, corresponded to the analysis of these outputs of the entrepreneur with these two characteristics, i.e., it was possible to observed and measured in terms of professional performance and, above all, by the possibility of being trained/taught "for" entrepreneurship in a work oriented approach.

The objective beyond the results of this research is that, it can additionally provide entrepreneurs in the beginning of their career, with the knowledge and skills necessary to the work life and vocational education/training under the subject Business Focus[15].

However, we wanted to explore other types of behavior (Best Entrepreneurial Practices) that were considered and mentioned at an earlier stage by experienced entrepreneurs and, that may be observed by other less experienced entrepreneurs. Therefore, we will explore the answers given in section F (Best Practices Required) of the Job Analysis Questionnaire - Annex C, submitting its analysis to the Decision Tree Procedures for a more detailed exploration and consequent design of Clusters with the items that saturate such Best Practices clusters.

6.4.6. Results obtained from the Section F Decision Tree Procedures

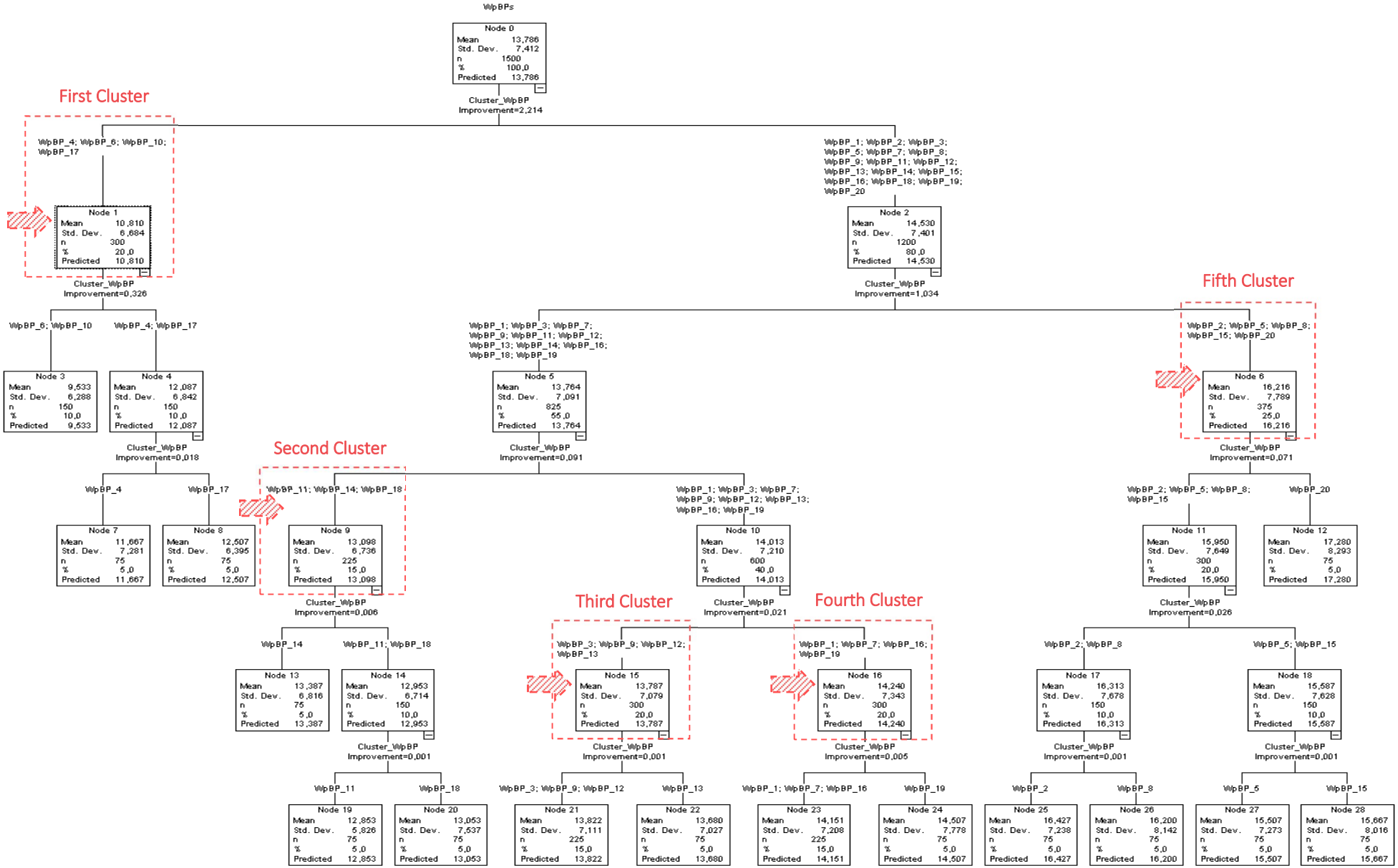
On this new Decision Tree Procedure data exploration, the Growing Methods will be the Classification and Regression Trees (CRT). The CRT, in short, is a Growing Method that divides data into segments as homogeneous as possible in relation to the dependent variable.

Accordingly, it will originate an end node in which all cases have the same value for the dependent variable, that is, a "pure" homogeneous node.

All the 1483 responses from the 20 items about the “Best Practices” that are in section E (perceived weight for each Best Practices required) were submitted to this procedure, from a point of view of statistical analysis, to this model (Decision Trees), and their results are shown on the next figure (Figure 9).

[15] See **Figure 2.** Overview of terms currently used in entrepreneurial education, p. 33 of this report

Figure 9. *Section F results obtained from the Decision Tree procedure*



After data submission, it is verified, through the Decision Tree procedure, that the algorithm resulted in 29 clusters (nodes) with a number of 15 terminal nodes.

After analyzing the items that saturate the clusters exposed in figure 9, we marked a box with a red line drawn together with an arrow, to indicate the 5 clusters of "Best Practices", whose meaning suggests us that they are more understandable and optimized to highlight attitudes/behaviors indicated by experienced entrepreneurs and, evaluated quantitatively by the 82 entrepreneurs (Table 34).

Thus, articulating with a meaning attributed to the data exposed, and following a reading from left to right of Figure 9, above are highlighted, the "Best Practices" items that saturate each cluster are presented as follows (Table 34; Table 35; Table 36; Table 37; Table 38):

Table 34. First Cluster of the best practices required

BEST PRACTICES REQUIRED		MEANING GIVEN TO THE DATA SUBMITTED
WpBP	Item	*Practices to increase the entrepreneurial spirit and make him/her known as an entrepreneur*
WpBP_4	Being involved in workshops, fairs, or conferences on entrepreneurship	
WpBP_6	Have a mentor or have been involve in a mentoring process	
WpBP_10	Interact and work with entrepreneurs in different ways like forums	
WpBP_17	Invest and improve Benchmarking i.e. comparing a business to other businesses in a specific industry	

Table 35. Second Cluster of the best practices required

BEST PRACTICES REQUIRED		MEANING GIVEN TO THE DATA SUBMITTED
WpBP	Item	*Practices to increase entrepreneurial efficiency*
WpBP_11	Interact and explore the market sector/environment	
WpBP_14	Understanding oneself in the different facets as a human being - cognitive, social and personality	
WpBP_18	Process Outsourcing like a use of an accounting office	

Table 36. Third Cluster of the best practices required

BEST PRACTICES REQUIRED		MEANING GIVEN TO THE DATA SUBMITTED
WpBP	Item	*Practices for an entrepreneur to be creative and innovative*
WpBP_3	Experiment new ideas	
WpBP_9	Invest and improve in Research and Innovation	
WpBP_12	Collaborate and be active looking for things	
WpBP_13	Understand oneself in the various dimensions as a human being as cognitive, social and personal skills	

Table 37. Fourth Cluster of the best practices required

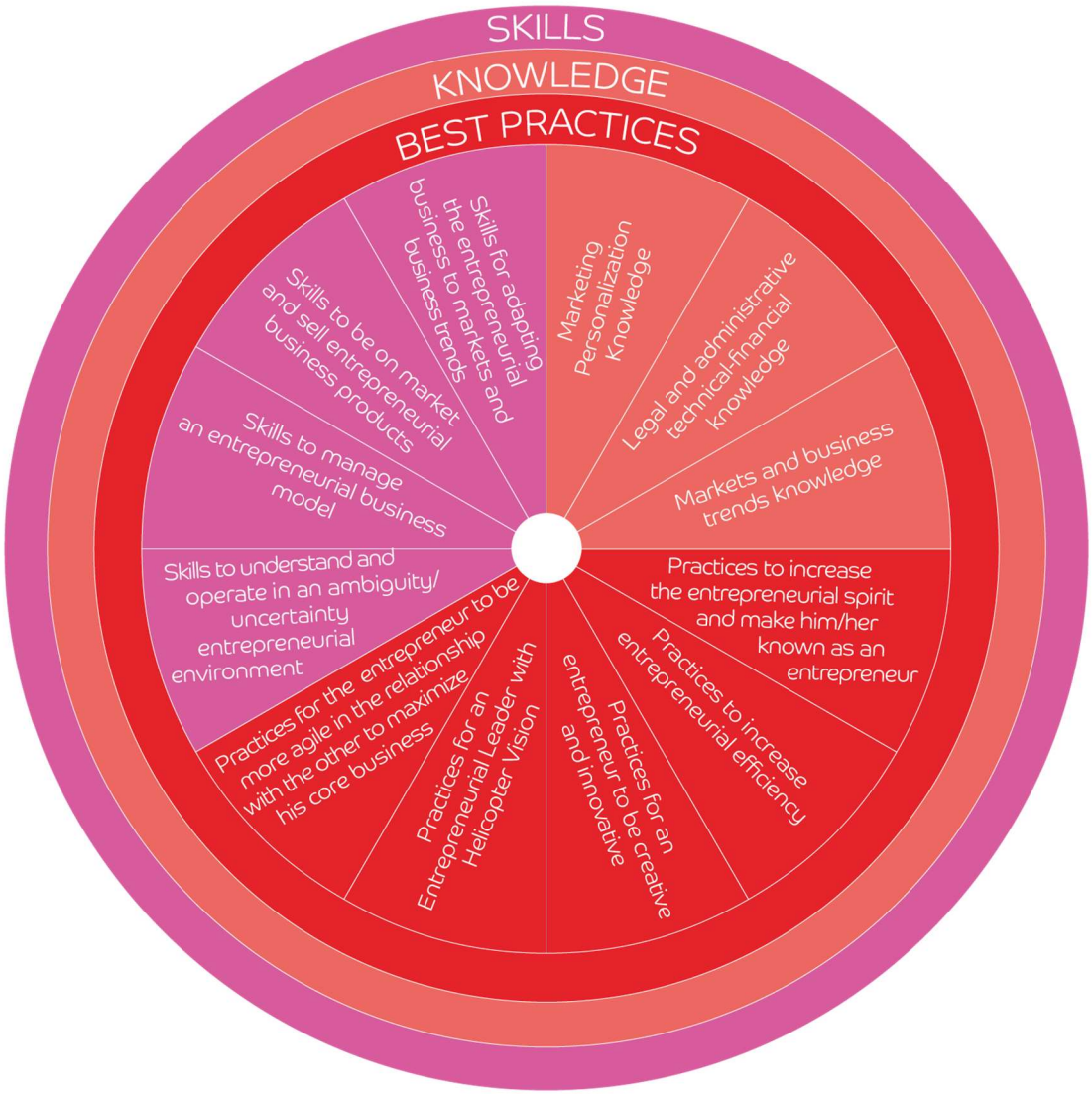
BEST PRACTICES REQUIRED		MEANING GIVEN TO THE DATA SUBMITTED
WpBP	Item	*Practices for an Entrepreneurial Leader with Helicopter Vision*
WpBP_1	To follow the trends	
WpBP_7	Use of IT systems for management and automation of tasks	
WpBP_16	Use of collaboration tools for the transmission of information	
WpBP_19	Have meetings with employees and share tasks	

Table 38. Fifth Cluster of the best practices required

BEST PRACTICES REQUIRED		MEANING GIVEN TO THE DATA SUBMITTED
WpBP	Item	*Practices for the entrepreneur to be more agile in the relationship with the other to maximize his core business*
WpBP_2	To be flexible	
WpBP_5	Belong to a network of partners that allows oneself to present and expand a business	
WpBP_8	Team working/Team Building	
WpBP_15	Supervise, respect and frame the relationship with employees	
WpBP_20	Cooperate with a loyal and trusted team of employees	

For a schematically integrative global view of the different clusters that saturate section D, section E and section F, and similarly to the allusive figure of the EntreComp model (which describes entrepreneurship as a lifelong competence, see Figure 6 of this report, p. 85), we present in the following figure (Figure 10), our prototype summary for a new program that allowed us to highlight the building blocks found precisely for this new program.

Figure 10. *Clusters of Skills, Knowledge and Best Practices*



With these new "building blocks" that represent the Unity of learning outcomes for this new programme - skills and knowledge - and according to Spencer's Iceberg model (see p. 14 of this report), it is possible to observe and measure them in terms of professional performance and

easier to develop (train them). We also wanted to include a behavioral repertoire of the entrepreneurial spirit of "Best Practices" which, like the components of Spencer and Spencer, are also observable and possible to be a fundamental element in the process of lifelong training.

Final Conclusions

Knowing that the Entrepreneurial competence has become a priority on the political agendas of modern economies and societies, considering it is a crucial competence within the labor market and for people in their daily lives, this labor market study analyzed the current entrepreneurial practices and skills. For a better understand and to frame a set of characteristics or attributes of entrepreneurship we included, mainly European, socio-demographic characteristics. Moreover, we took in consideration aspects that were not considered in the vast "world" of entrepreneurship as well aspects that needed further study.

We believe that this study constitutes a pertinent and meaningful input/output in relation to what was intended to respond, to the challenges, in a satisfactory way to the intellectual output n. 1 (IO1) of the Erasmus + programme.

The parts involved, such as the partner countries, stakeholders, experienced entrepreneurs, key ministries, government authorities, trade associations, universities, managers from different sectors of the economy and businesses, were vital for this intellectual output, that focuses on the review and evaluation of best practices and training courses in Europe, as well as a mapping of labor market needs and entrepreneurship prospects in Europe and in partner countries.

Through the different parts/sections, it was possible to identify the existing gaps in the training context of 27 curricula of some training institutions in the field of entrepreneurship (in its internal and external education aspects) of some European countries. In addition, these reviews allowed us to identify a considerable amount of relevant information/data, which in our opinion will have great significance for the entrepreneurship area and for those who want to implement and manage a new entrepreneurial business. All the data in the different stages

were treated in a statistical way, mainly in the fourth part, to draw conclusions and introduce our prototype.

We mentioned that along the different stages some of the constraints/restrictions found according to the experienced entrepreneurs' (e.g., Market Conditions; Regulatory Framework; R&D and Technology; or, for example, Entrepreneurial Capabilities & Culture) were also analyzed and included, therefore, also reflected in the projected model presented.

This report introduced the idea of a prototype program that through its "building blocks" considers some factors that influence the growth in small companies. Most important, due to the absence or lack of updating to the constant changes in the labor market, the prototype intends to fill in the gaps between the labor market and the training courses available. Respectively, we included an additional punctuation value for all European Education and training institutions/organizations with this new input for the entrepreneurship area.

Finally, the sections presented in this report-study will later serve as the basis for the IO2 (Orientation Tools), IO3 (Entrepreneurship Training Program) and IO4 (E-Guide) that will be developed.

Bibliographic References

Adams, W. C. (2015). Conducting semi-structured interviews. In K. E. Newcomer, H. P. Hatry & J. S. Wholey (Eds), *Handbook of practical program evaluation* (4ed) (pp. 492-505). San Francisco: JOSSEY-BASS.

Allen, Elaine et al. (2008). *Global entrepreneurship report: 2007 report on women and entrepreneurship*. Global Entrepreneurship Research Association. Available from Internet: https://www.babson.edu/media/babson/site-assets/content-assets/about/academics/centres-and-institutes/blank-institute/global-research/global-entrepreneurship-monitor/reports/gem-2007-women-entrepreneurship-report.pdf

Anderson, G. (1990). *Fundamentals of educational research*. London: The Falmer Press.

Ash, R. A. (1988). Job analysis in the world of work. In S. Gael (Ed.), *The Job Analysis Handbook for Business, Industry and Government, I,* 3-13.

Ash, R. A., & Levine, E. L. (1980). A framework for evaluating job analysis methods. *Personnel, 57,* 59.

Bacigalupo, M., Kampylis, P., Punie, Y. & Van den Brande, G. (2016). EntreComp: The Entrepreneurship Competence Framework. Available from Internet: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf

Bainée J. (2013), "Entrepreneurship education", in Elias G. Carayannis (Ed.), *Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship*, Springer, pp.649-354.

Bartram, D. (2005). The Great Eight competencies: a criterion-centric approach to validation. *Journal of Applied Psychology, 90(6)*, 1185-1203.

Berman, P. (1978). The Study of Macro- and Micro- Implementation. *Public Policy*, pp. 157-184.

Bhattacherjee, A. (2012). *Social Science Research: Principles, Methods, and Practices*. Tampa, Florida, USA: Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Brannick, M. T., Levine, E. L., & Morgeson, F. P. (2007). *Job and Work Analysis: Methods, Research and Applications for Human Resource Management.* Thousand Oaks, CA: Sage Publication.

Bowen, C. C. (2003). A case study of job analysis. *Journal of Psychological Practice, 8,* 46-55.

Bosma, N. & Levie, J. (2009). *Global Entrepreneurship Monitor 2009 Executive Report*. Available from Internet: https://www.researchgate.net/publication/48322611_Global_Entrepreneurship_Monitor_2009_Executive_Report

Boyatzis, R. E. (1982). *The competent manager: a model for effective performance*. New York: John Wiley & Sons.

Bruyat, C. & Julien, P.A. (2001). Defining the Field of Research in Entrepreneurship. *Journal of Business Venturing, 16(2),* pp. 165-180.

Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management science, 29*, 1349-1364.

Camara, P. B. (2017). *Dicionário de competências. Lisboa*: Editora RH, Lda.

Casey, M.A. & Kueger, R.A. (2000). *Focus groups: A practical guide for applied research*. (3rd ed.). Thousand Oaks, CA: Sage.

CEEDR (2000). *Young entrepreneurs, women entrepreneurs, co-entrepreneurs and ethnic minority entrepreneurs in the European Union and central and eastern Europe*. Luxembourg: russels: European Commission, DG Enterprise. Available from Internet: http://ec.europa.eu/enterprise/policies/sme/files/craft/craftstudies/

Cedefop (2011). *Guidance supporting Europe's aspiring entrepreneurs: Policy and practice to harness future potential*. Luxembourg: Publications Office.

Chia, R. (1996). Teaching paradigm shifts in management education: university business schools and the entrepreneurial imagination. *Journal of Management Studies, 33*, pp.409–428.

Chouhan, V.S. & Srivastava, S. (2014). Competencies and competency modeling – A literature survey. *Journal of Business and Management, 16(1),* pp. 14-22.

Cornelius, E. T., Carron, T. J., & Collins, M. A. (1979). Job analysis models and job classification. *Personnel Psychology, 32,* 693-708.

Davidsson, P., Delmar, F. & Wiklund, J. (2006), "Entrepreneurship as Growth: Growth as Entrepreneurship", in Davidsson, P, Delmar, F, & Wiklund, J (Ed.), *Entrepreneurship and the Growth of Firms*, Edward Elgar Publishing, United Kingdom, England, Cheltenham, pp.21-38.

Denscombe, M. (2007). *The good research guide for small-scale social research projects*. (3rd ed.). New York: McGraw-Hill.

Dierdorff, E. C., & Morgeson, F. P. (2007). Consensus in work role requirements: The influence of discrete occupational context on role expectations. *Journal of Applied Psychology, 92,* 1228-1241.

Donckels, R. (1991). Education and entrepreneurship experiences from secondary and university education in Belgium. *Journal of Small Business and Entrepreneurship, 9*(1), pp.35–42.

Erkkilä, K. (2000). Entrepreneurial education: mapping the debates in the United States, the United Kingdom and Finland. Abingdon: Taylor & Francis.

European Commission (2003). *Green paper on entrepreneurship in Europe.* COM(2003) 27 final, 21.1.2003. Available from Internet: https://web.archive.org/web/20040611050753/http://www.europa.eu.int:80/comm/enterprise/entrepreneurship/green_paper/index.htm

European Commission (2008). *Entrepreneurship in Higher Education, Especially within Non-Business Studies.* Final Report of the expert Group, March.

European Commission (2009). *Study on EU VET instruments (EQAVET and ECVET).* Brussels: Commission of the European Communities.

European Commission DG EAC. (2009). *The European Credit System for Vocational Education and Training VET - Get to know ECVET better Questions and Answers.* Brussels: Commission of the European Communities.

European Commission DG EAC. (2011). *The European Credit System for Vocational Education and Training VET - Get to know ECVET better Questions and Answers - Review.* Brussels: Commission of the European Communities.

European Union (2011). *Commission (2011). Using ECVET for geographical mobility: part II of the ECVET users' guide*. Luxembourg: Publications Office of the European Union.

European Union (2012a). *Entrepreneurship determinants: culture and capabilities*. Luxembourg: Publications Office of the European Union.

European Union (2012b). *Necessary conditions for ECVET implementation*, Luxembourg: Publications Office of the European Union

European Union (2009). *Recommendation of The European Parliament and Of The Council on the establishment of a European Credit System for Vocational Education and Training (ECVET)*, Luxembourg: Publications Office of the European Union

Eurostat (2010). *Labor Force Survey Database.* Available from Internet: https://ec.europa.eu/eurostat/web/lfs/data/database

Fiet, J.O. (2000). The pedagogical side of entrepreneurship theory. *Journal of Business Venturing*, *16*, pp.101-117.

Fiet, J. (2001). The pedagogical side of entrepreneurship theory. *Journal of Business Venturing, 16*(2), pp.101–117.

Fraenkel, J. R. & Wallen, N. E. (2003). *How to design and evaluate research in education*. (5th ed.). Boston: McGraw-Hill Inc.

Furr, R. M. (2011). *Scale Construction and Psychometrics for Social and Personality Psychology*. Thousand Oaks, CA: Sage Publication.

Gartner, W. & Vesper, K. (1998). Experiments in entrepreneurship education: Success and failures. *Journal of Business Venturing, 9*, pp.179–187.

Garvan, T. & O' Cinneide, B. (1994). Entrepreneurship education and training programmes: A review and evaluation- Part 1. *Journal of European Industrial Training, 18*(8), pp.3–12.

Gianesini, G., Cubico, S., Favretto, G. & Leitão, J. (2018), "Entrepreneurial Competencies. Comparing and Contrasting Models and Taxonomies", in S. Cubico, G. Favretto, João Leitão, U. Canter. (eds.), *Entrepreneurship and the Industry Life Cycle, Studies on Entrepreneurship, Structural Change and Industrial Dynamics*, Springer International Publishing AG, Cham, Switzerland, pp.13-32.

Giddens, A. (1984). *The Constitution of Society*. London: The Polity Press.

GHK & Technopolis (2008). *The profile of the successful entrepreneur: results of the survey 'Factors of Business Success'. (Statistics in focus: industry, trade and services, 96/2006).)*. Luxembourg: Eurostat. Available from Internet: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-029/EN/KSNP-06-029-EN.PDF

Gibb, A. (1996). Entrepreneurship and small business management: can we afford to neglect them in the twenty-first century business school? *British Journal of Management, 7*, pp.309–321.

Gibb, A. (2002). In pursuit of a new enterprise and entrepreneurship paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews, 4*(4), pp.223–269.

Goldstein, I. L., & Ford, J. K. (2002). *Training in Organizations: Needs Assessment, Development, and Evaluation.* Belmont, CA: Wadsworth Group.

Hahn, D. C., & Dipboye, R. L. (1988). Effects of training and information on the accuracy and reliability of job evaluation. *Journal of Applied Psychology, 73,* 146-153.

Hair Jr., J.F., Anderson, R.E., Tatham, R.L. & Black, W.C. (2005). *Análise multivariada de dados*. Porto Alegre: Bookman.

Harris, Lois R. & Brown, Gavin T.L. (2010). Mixing interview and questionnaire methods: Practical problems in aligning data. *Practical Assessment, Research & Evaluation, 15(1)*.

Harvey, R. J., & Lozada-Larsen, S. R. (1988). Influence of amount of job description information on job analysis rating accuracy. *Journal of Applied Psychology, 73,* 457-461.

Harvey, R. J., Friedman, L. Hakel, M. D., & Cornelius, E. T. III (1988). Dimensionality of the job element inventory, a simplified worker-oriented job analysis questionnaire. *Journal of Applied Psychology, 73,* 639-646.

Heder, E., Ljubic, M. & Nola, L. (2011). *Entrepreneurial Learning - a Key Competence Approach*. Zagreb, Croatia: South East European Centre for Entrepreneurial Learning.

Henry, C., Hill, F. And Leitch, C. (2003). *Entrepreneurship Education and Training.* London: Ashgate Publishing Ltd.

Hills, C. (1988). Variations in university entrepreneurship education. An empirical study of an evolving field. *Journal of Business Venturing,* 3(2), pp.199–122.

Hills, G. and Morris, M. (1998). Entrepreneurship education: A concept model and review. In Scott, M., Rosa, P. and Klandt, H. (Eds.): *Educating Entrepreneurs in Wealth Creation*, Ashgate, Aldershot, pp.38–58.

Hoy, F., McDougall, P. & Dsouza, D. (1992), "Strategies and Environments of High Growth Firms", in L. Sexton and J.D. Kasarda (Ed.), *In the State Of the Art of Entrepreneurship*, PWS-Kent Publishing, pp 341-357.

Hughes, G. L. & Prien, E. P. (1989). Evaluation of task and job skill linkage judgments used to develop test specifications. *Personnel Psychology, 42*, 283-292.

Hutz, C. S., Bandeira, D. R. & Trentini, C. M. (2015). *Psicometria*. Porto Alegre: Artmed Editor, Ltda.

Jones, R. G., Sanchez, J. I., Parameswaran, G., Phelps, J., Shoptaugh, C., Williams, M., et al. (2001). Selection or training? A two-fold test of the validity of job-analytic ratings of trainability. *Journal of Business and Psychology, 15,* 363-389.

Lackéus, M. (2015). Entrepreneurship in education: what, why, when, how. In https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf

Leffler, E. & Falk-Lundqvist, Å. (2013). What about Students' Right to the "Right" Education? An Entrepreneurial Attitude to Teaching and Learning. *International Perspectives on Education and Society, 23*, 191-208.

Levine, E. L., Ash, R. A. & Bennett, N. (1980). Explorative Comparative Study of Four Job Analysis Methods. *Journal of Applied Psychology, 65,* 524-535.

Levine, E. L., Ash, R. A., Hall, H. & Sistrunk, F. (1993). Evaluation of Job Analysis Methods by Experienced Job Analysts. *Academy of Management Journal, 26(2),* 339-348.

Levine, E. L., Sistrunk, F., McNutt, K. J., & Gael, S. (1988). Exemplary job analysis systems in selected organizations: A description of process and outcomes. *Journal of Business and Psychology, 3,* 3-21.

Lewrick, M., Omar, M., Raeside, R. & Sailer, K. (2010). Education for entrepreneurship and innovation: "management capabilities for sustainable growth and success". *World Journal of Entrepreneurship, Management and Sustainable Development, 6*(1/2), pp.1–18.

Lopez, F. M., Kesselman, G. A., & Lopez, F. E. (1981). An empirical test of a trait-oriented job analysis technique. *Personnel Psychology, 34,* 479-502.

Lucian, C., & Cristina, D. (2007). Competency & Human Resource management. *International journal of psychology, 2*.

Luke, M. & Goodrich, K. M. (2019) Focus Group Research: Na Intentional Strategy for Applied Group Research? *The Journal for Specialists in Group Work, 44(2)*, 77-81.

Kelley, D., Bosma, N. & Amorós, J. E. (2010). *Global entrepreneurship monitor: 2010 global report*. Available from Internet: https://entreprenorskapsforum.se/wp-content/uploads/2011/02/GEM-2010-Global-Report.pdf

Khan, M. E. & Manderson, L. (1992). Focus groups in tropical diseases. *Research Health Policy and Planning, Vol.7(1).*

Krueger, N.F., Reilly, M.D. and Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing, 15(5)*, 411-432.

Kyro, P. (2000). *Is there a Pedagogical Basis for Entrepreneurship Education?* Department of Economics, Jyväskylä University, Finland, pp.1–18.

Kyrö, P. (2005). Entrepreneurial learning in a cross-cultural context challenges previous learning paradigm. In: Kyrö, P. & Carrier, C. (eds.) *The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context*. Hämeenlinna: University of Tampere

Mathieu, R. (2006). *Agents of change and policies of scale: a policy study of entrepreneurship and enterprise in education*. Doctoral thesis, Umeå Universitet.

McCormick, E. J., Jenneret, P. R., & Mecham, R. C. (1972). A study of job characteristics and job dimensions as based on the Position Analysis Questionnaire (PAQ). *Journal of Applied Psychology, 79,* 262-268.

McCoshan, Andrew et al. (2010). *Towards greater cooperation and coherence in entrepreneurship education: report and evaluation of the pilot action high level reflection panels on entrepreneurship education initiated by DG Enterprise and Industry and DG Education and Culture*. Available from Internet: http://ec.europa.eu/DocsRoom/documents/9269 /attachments/1/translations/en/renditions/native

McGinn, M. K. (2010). Learning to use statistics in research: a case study of learning in a university based statistical consulting centre. *Statistics Education Research Journal, 9(2)*, 35-99.

McMullan, W. and Long, W. (1987). Entrepreneurship education in the nineties. *Journal of Business Venturing, 2*, pp.261–275

Mohan, R. (2013). Using competency models for performance management Ideal Management. *International Monthly Refereed Journal of Research In Management & Technology, Vol.2*, 91-99.

Morgeson, F. P., & Campion, P. (1997). Social and cognitive sources of potential inaccuracy in job analysis. *Journal of Applied Psychology, 82,* 627-655.

Morris, M. H., Webb, J. W., Fu, J. and Singhal, S. (2013). A Competency-Based perspective on entrepreneurship education: Conceptual and empirical insights. *Journal of Small Business Management, 51(3)*, 352-369.

Mucchelli, A. (1981). *Les motivations*. Paris: Presses Universitaires de France

Mwasalwiba, E. S. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education Training*, 52 20-47.

Orser, B. (1997). *Understanding the Influence of Intention, Managerial Capacity and Gender on Small Firm Growth*. (PhD. Thesis). Bradford University School of Management, UK.

Patton, M.Q. (2002). *Qualitative evaluation and research met*hods (3rd ed.). Thousand Oaks, CA: Sage.

Pasquali, L. (2008). *Psychometrics. Rev Esc Enferm USP, 43*, 992-999.

Pestana, M. H. & Gageiro, J. N. (2009). *Análise Categórica, Árvores de Decisão e Análise de Conteúdo – Em Ciências Sociais e da Saúde com o SPSS*. Porto: LIDEL.

Pestana, M. H. & Gageiro, J. N. (2014). *Análise de dados para ciências sociais – A complementaridade do SPSS* (6ª ed.). Lisboa: Edições Sílabo.

Pina e Cunha, M., Rego, A., Campos e Cunha, R., Cabral-Cardoso, C. & Neves, P. (2014). *Manual de Comportamento Organizacional e Gestão*. Lisboa: RH Editora

Plashka, G. and Welsch, H. (1990). Emerging structures in entrepreneurship education: curricula designs and strategies. *Entrepreneurship Theory and Practice, 28*, pp.129–144.

Prien, E. P., & Ronan, W. W. (1971). Job analysis: A review of research findings. *Personnel Psychology, 24,* 371-396.

Ramos, E. & Bento, S. (2006). As competências: quando e como surgiram. In M. Ceitil (Ed), *Gestão e desenvolvimento de competências* (pp. 87-106). Lisboa: Edições Sílabo, Lda.

Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Routledge.

Robbins, S. (2002). *Comportamento Organizacional.* São Paulo: Pearson Prentice Hall.

Rodríguez, I. D. (2009). *Copie II baseline study on enterprise education*. Available from Internet: https://www.cop-ie.eu/sites/default/files/TG_Education_baseline_study_ent_educ%20Sept_2009.pdf

Rosenfeld, R. H., & Wilson, D. C. (1999). *Managing Organizations: text, readings & cases*. London: McGraw-Hill.

Scase, R. (2000). *entrepreneurship and Proprietorship in Transition: Policy Implications for the Small- and Medium-size Enterprise Sector*. Helsinki: United Nations University World Institute for Development Economics Research.

Schwab, D. P., & Heneman, H. G. (1986). Assessment of a consensus-based multiple information source job evaluation system. *Journal of Applied Psychology, 71,* 354-356.

Schwind, H., Das, H., Wagar, T., Fassina, N. & Bulmash, J. (2013). *Canadian Human Resource Management: A Strategic Approach* (10Th). Ontario: McGraw Hill.

Schrör, H. (2006). *The profile of the successful entrepreneur: results of the survey 'Factors of Business Success'. (Statistics in focus: industry, trade and services, 96/2006)*. Luxembourg: Eurostat. Available from Internet: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-NP-06-029/EN/KSNP-06-029-EN.PDF

Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J. & Rytkola, T. (2010). Promoting entrepreneurship education: the role of the teacher? *Education Training, 52*, 117-127.

Shane, S. & Venkatraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Journal, 25(1)*, 217-226.

Smith, M. J. (2015). STATSREF: *Statistical Analysis Handbook - a web-based statistics resource*. Winchelsea, UK: The Winchelsea Press.

Solomon, G.T., Duffy S. & Tarabishy A. (2002), "The State of Entrepreneuriat Education in the United States: a National Wide Survey and Analysis", *International Journal of Entrepreneurship Education, 1(1)*, pp. 65–86.

Spencer, L. M. & Spencer, S. M. (1993). *Competence at work: models for superior performance*. New York: John Wiley & Sons

Storey, D. (1994). *Understanding the Small Business Sector*. London: Routledge.

The Gallup Organization (2009). *The Gallup Organization (2009). Entrepreneurship in the EU and beyond: a survey in the EU, EFTA countries, Croatia, Turkey, the US, Japan, South Korea and China. Analytical report. (Flash Eurobarometer, 283).* Brussels: European Commission, DG Enterprise and Industry. Available from Internet: http://ec.europa.eu/public_opinion/flash/fl_283_en.pdf

The Gallup Organization (2007). *Entrepreneurship survey of the EU (25 Member States), United States, Iceland and Norway: analytical report.* Brussels: European Commission, DG Enterprise and Industry. Available from Internet: http://ec.europa.eu/public_opinion/flash/fl_192_en.pdf

Vesper, K. and McMullen, W. (1988). Entrepreneurship: today courses, tomorrow degrees? *Entrepreneurship Theory and Practice, 13*(1), pp.7–13.

Volkmann, Christine et al. (2009). *Educating the next wave of entrepreneurs: unlocking entrepreneurial capabilities to meet the global challenges of the 21st century*. Geneva: World Economic Forum.

Zeithaml, C. and Rice, G. (1987). Entrepreneurship/small business education in American universities. *Journal of Small Business Management, 25*(1), pp.44–50.

Annexes

Annex A

Expert Focus group tool

CURRICULUM EXPOSURE N.º XX

Name of training institution	
Name of training course	
Study plan	
Skills after training	
Site:	

EVALUATION OF DIFFERENT CURRICULA ASSIGNED BY EXPERTS

How much do you as an expert believe that these curricula are adapted to the needs in the market context in the field of entrepreneurship?

		LITTLE	SOMETHING	REASONABLE	GOOD	EXCELLENT
# CURRICULA	# EXPERT	1	2	3	4	5
CURRICULUM EXPOSURE N.º 1	1					
	2					
	3					
	4					
	5					
	6					
CURRICULUM EXPOSURE N.º 2	1					
	2					
	3					
	4					
	5					
	6					
CURRICULUM EXPOSURE N.º 3	1					
	2					
	3					
	4					
	5					
	6					

		LITTLE	SOMETHING	REASONABLE	GOOD	EXCELLENT
# CURRICULA	# EXPERT	1	2	3	4	5
CURRICULUM EXPOSURE N.º 4	1					
	2					
	3					
	4					
	5					
	6					
CURRICULUM EXPOSURE N.º 5	1					
	2					
	3					
	4					
	5					
	6					

3 skills of all curricula exposed that the experts agree to be the most efficient and effective to "run" an entrepreneurship business in today's world.

#	SKILLS
1	
2	
3	

2 skills of all curricula that experts agree need to be improved to "run" an entrepreneurship business in today's world.

#	SKILLS
1	
2	

Annex B

Semi-structured interview for experienced entrepreneurs

INTERVIEW SCRIPT

This interview to be held with your permission, is part of the European project ENTRE-FORWARD: ENHANCING ENTREPREUNERSHIP SKILLS, of the ERASMUS + program, and its contribution is to know a little more about yourself as an experienced entrepreneur, your business and, in your opinion which are the best 5 skills and practices for running an entrepreneurial business in today's world. This interview should not exceed more than 15 minutes of your time.

I start the interview by asking you some individual characteristics.

1. Age: _____
2. Gender (just put an X): Male (___); Female (___)
3. Education: _____
4. How many years have you been involved in the world of entrepreneurship?

   _____
5. if you have to point to number of the times you were successful against failure by a ratio, what those numbers will tell us (tip: for example, 3/30, i.e., 3 successes against 20 failures!?) _____/_____

Specifically, about your business.

6. What type of business do you currently run?

   _____
7. How many employees are involved in your business? _____
8. Despite having a running business, it is usual to get involved in continuing education?

   Yes (__); No (___)

8.1. Why?_____

_____

_____

_____

9. What are the top three constraints/restrictions you have found or encountered in running your entrepreneurial business?

_____

_____

10. In your opinion and in order of importance, what are the 5 most relevant skills for running a business?

1st:_____

2nd:_____

3rd:_____

4th:_____

5th:_____

11. Of the 5 skills indicated, regardless of position, which one you think is extremely important for starting or starting a business and, in your opinion, was not trained or not found in training units / institutions: _____

_____

12. In your opinion, what are the 2 most relevant knowledge content for running a business?

1:_____

2:_____

13. Finally, in your opinion as an experienced entrepreneur, what are the three best practices that make it easy for an entrepreneur to run his business?

_____

_____

_____

Thank you for your availability and contribution to this project of the ERASMUS + program that focuses on entrepreneurship.

End of the Interview.

Annex C

Job Analyses Questionnaire

ENTRE-FORWARD

Co-funded by the
Erasmus+ Programme
of the European Union

JOB ANALYSIS QUESTIONNAIRE FOR ENTREPRENEURS

A. Instructions

The purpose of this questionnaire is to gather information about a position and its capabilities/ skills, activities and educational/experience requirements of an entrepreneur. Answers should accurately represent how the respondent is currently working in his/her entrepreneurial activity.

Please pay attention when completing the following questionnaire correctly.

Evaluate your current daily work entrepreneur main skills

1. Be objective and accurate in your answers. Consider them as a natural part of your normal day-to-day responsibilities and activities.
2. When indicating the percentage of time, you spend on each activity, consider what is performed on a classified system propose by daily (D), weekly (W), monthly (M), or annually (A) basis. The percentages do not need to be exact but should reflect the more time-consuming parts on your daily work position.
3. Describe the daily work as it is being performed today, not as it might be in the future or as you think it should be.
4. All questions must be answered completely. The entrepreneur should forward the questionnaire, when completed, to the person that ask you to fill. A brief explanation should accompany any question that is determined to be non-applicable.

B. Entrepreneur Identification

1. Age:

2. Gender (just put an X): Male (___); Female (___)

3. Level of Education (put an "x" in the right option that apply to you):

	High School education or equivalent
	Some higher education or vocational training
	Bachelor degree or equivalent
	Degree or equivalent
	Master's degree or equivalent
	Doctorate degree or equivalent

3.1. EQF[1] Level (European Qualifications Framework):

4. Type of the current business:

5. Experience / time involved in the world of entrepreneurship (put an "x" in the right option that apply to you):

	1-6 months
	6-12 months
	1-2 years
	3-4 years
	5-8 years
	More than 8 years

6. Work Status: Full-time / Part-time (if applicable):

7. Mentor (Have / Not have):

7.1. As an entrepreneur have you ever been on a mentoring program (yes / no):

9. Employees (Have / Not have):

9.1. If yes, how many:

10. Usual you as an entrepreneur get involved in continuing education/training: yes / no:

10.1. Why:

[1] In accordance with the partner country's education system and according to the Bologna principles

C. Entrepreneur Activity Summary

Briefly explain your main entrepreneur business

D. Key Skills Required

Analyze the key skills required for the entrepreneur listed below through your entrepreneurial activities. Classify those entrepreneurial skills to run your business — whether if they are performed daily (D) or almost daily, weekly (W) or almost weekly, monthly (M) or almost monthly, or annually (A) or almost annually basis.

Indicate, also, your perception of the approximate percentage of time spent performing in each skill on that classified basis (D; W; M; A).

Indicate also below, the importance and the training need level perception associated, on a scale of 1 to 5, when 1 is the lowest level of importance or training need and 5 is the highest level respectively. Both scales - importance and the training need level – the meaning given will be: 1 - Low; 2 - Medium-low; 3 - Medium; 4 - Medium-high; 5 – High.

- For Example:

#	Sample of Skills required	Performed on a basis: D; W; M; A	% of Time	Importance Level associated (1 to 5)	Training need Level associated (1 to 5)
1	Be able to handle financial aspects of my business	W	15%	4	3
2	Be able to communicate effectively with my key-stakeholders	D	70%	5	5
3	Be able to develop a marketing campaign	D	85%	3	4
4	Being able to sell my products to new customers	D	50%	5	2
5	Be able to use social networks to promote my business	D	60%	5	2
n	Being able to read and integrate other culture aspects for the success of my business	NA*	-----	-----	-----

**NA = Not applicable*

About your Key-Skills listed below - fulfills in which basis you classify your performance; the percentage of the average time required, and the importance as well the training need level associated, when 1 is the lowest level of importance or training need and 5 is the highest level respectively where: 1 - Low; 2 - Medium-low; 3 - Medium; 4 - Medium-high; 5 – High.

#	Skills Required	Performed on a basis: D; W; M; A	% of Time	Importance Level associated (1 to 5)	Training need Level associated (1 to 5)
1.	To be able to understand the emotional levels of my employees		%		
2.	To able to use in a proper way the statistical analysis tools for a better understanding of my company		%		
3.	To be able to mobilize resources		%		
4.	To be able to deal with ambiguity, uncertainty and take risks		%		
5.	To be able to adapt into a multidisciplinary and cultural environment		%		
6.	To be available to identify the right conditions to run a business in an ambiguous environment		%		
7.	To be able to develop and maintain useful relationships to implement a business through networking techniques and strategies		%		
8.	To be able to overcome limits and cultural prejudices, to be self-confident and trust in our skills, facing the risk and overcoming future obstacles with bravery		%		
9.	To be able to present a clear picture of what the entrepreneur wants in an innovative way		%		
10.	To be able to interpret the economic feasibility of business opportunities in advance		%		
11.	To be able to be resilient against losses and failures		%		
12.	To be able to persist in the development of the business even with the daily adversities		%		
13.	To be able to produce original and unusual ideas, or to make something new or imaginative		%		
14.	To be able to communicate more effectively with the employs		%		
15.	To be able to negotiate more effectively with the suppliers		%		
16.	To be able to lead a company into success		%		
17.	To be able to have the determination to achieve the business goals		%		
18.	To be able to analyze the business environment		%		

19.	To be able to design and implement a marketing plan		%		
20.	To be able to be technologically innovative		%		
21.	To be able to solve problems with enterprising spirit		%		
22.	To be to able find solutions, transform, collectively create and work as a team		%		
23.	To be able to manage errors and assume responsibility		%		
24.	To be able to focus your product/entrepreneurship project as well a commercial or sales plan for it		%		
25.	To be able to change your idea and adapt it until you carry it out		%		
26.	To be able to assess the feasibility of your idea and take care of its management		%		
27.	To be able to listen to clients		%		
28.	To be able to be efficient, multi-task and hard worker		%		
29.	To be able to adapt to customer requirements and market trends		%		
30.	To able to select between two or more alternatives to reach the best outcome in the shortest time		%		

E. Knowledge

Analyze the knowledge that you regularly used to perform your key skills at your entrepreneurial activities. Through the different types of knowledge listed below - fulfills the importance, as well the need to be improved or trained, when 1 is the lowest level of importance or training need and 5 is the highest level respectively where: 1 - Low; 2 - Medium-low; 3 - Medium; 4 - Medium-high; 5 – High.

#	Knowledge Required	Importance Level associated (1 to 5)	Training need Level associated (1 to 5)
1.	Knowledge about business sector inside out and strategic thinking		
2.	Knowledge about marketing and communication		
3.	Knowledge about business financial and accounting domain		
4.	Knowledge about economy and competitiveness		
5.	Knowledge about human resources and manage people		
6.	Knowledge about technology and innovation		
7.	Knowledge about the labor market and market Trends		

8.	Knowledge about tools for shared decision making and problem / challenge resolution		
9.	Knowledge about the customers and potential customers of my business		
10.	Knowledge about management and administration domain		
11.	Knowledge about business bureaucracy and legal aspects		
12.	Knowledge about on commercial aspects and product sales		
13.	Knowledge about experiences of entrepreneurial activities and their positive and negative results		
14.	Knowledge of techniques and strategies to manage time and priorities		

F. Entrepreneurial Best Practices

Analyze the following list of best practices in entrepreneurial activity and rank them according to its importance level and the Performance-Reward ratio level for an entrepreneur when, for both scales, 1 is the lowest level and 5 is the level highest, respectively. 1 - Low; 2 – Medium - low; 3 - Medium; 4 - Medium-high; 5 – High. Please notice and consider that the Performance - Reward ratio level, means, the entrepreneur's perception of the relationship between performing a practice and experiencing a certain result.

#	Best Practices Required	Importance Level associated (1 to 5)	Performance-Reward ratio level associated (1 to 5)
1.	To follow the trends		
2.	To be flexible		
3.	Experiment new ideas		
4.	Being involved in workshops, fairs, or conferences on entrepreneurship		
5.	Belonging to a network of partners that allows me to present and expand my business		
6.	Have a mentor or have been involve in a mentoring process		
7.	Use of IT systems for management and automation of tasks		
8.	Team working / Team Building		
9.	Invest and improve in Research and Innovation		
10.	Interact and work with entrepreneurs in different ways like forums		

11.	Interact and explore the market sector/environment		
12.	Collaborate and be active looking for things		
13.	Understand oneself in the various dimensions as a human being as cognitive, social and personal skills		
14.	Understanding oneself in the different facets as a human being - cognitive, social and personality		
15.	Supervise, respect and frame the relationship with employees		
16.	Use of collaboration tools for the transmission of information		
17.	Invest and improve Benchmarking i.e. comparing my business to other businesses in my specific industry		
18.	Process Outsourcing like use of an accounting office		
19.	Have meetings with employees and division of tasks		
20.	Cooperate with a loyal and trusted team of employees		

Thank you for your availability and contribution to this project of the ERASMUS + program that focuses on entrepreneurship.

Date: _____/_____/_____

ENTRE-FORWARD

Enhancing entrepreneurship skills

ABOUT THE PROJECT

Fostering entrepreneurship has become a policy priority in Europe and the European Union Member States are taking measures to develop and provide entrepreneurship education programmes.

In this sense, entrepreneurial skills are nowadays necessary in any field of activity. Thus, it is essential to build and develop entrepreneurial skills that enable a person to succeed as an entrepreneur.

The Entre-Forward project focuses on upskilling people and showcases the importance of developing entrepreneurial skills. Also, the project aims at promoting innovative approaches to strengthen the cooperation between industry and education towards entrepreneurship and proposes innovative practice-based methods, where students are involved in project work and/or motivational activities.

PARTNERS

The Entre-Forward project is composed of 6 partners from various EU Member States (France, Greece, Italy, Poland, Portugal, Spain), representing organizations specialized in training and entrepreneurial development.

StudioRisorse

GWEP

ISON PSYCHOMETRICA

UNIÃO DAS FREGUESIAS de Gondomar (S. Cosme), Valbom e Jovim

dep INSTITUT

COOPÉRATIVE D'INITIATIVE JEUNES

Handbook on Entrepreneurial Trainings and Skills

Project Homepage

www.entre-forward.eu

Sign up for our regular newsletters, and follow us on facebook

EntreForward

Co-funded by the Erasmus+ Programme of the European Union