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Chapter 11

Management of Entrepreneurship Projects from Project-Based Learning: Coworking StartUPS Project at Universidad Politécnica Salesiana (Salesian Polytechnic University), Ecuador

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Additional information is available at the end of the chapter

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Abstract

In the engineering education field, there is an identified need of innovative learning and teaching methods to improve students' entrepreneurship competencies in order to make connections between engineering and real society. This chapter addresses a management strategy for entrepreneurship projects in the university framework. It is the result of a cooperative experience from the Research Groups of Salesian Polytechnic University (UPS), the Technical University of Madrid (UPM), and the collaboration of other external entities. The management strategy is applied to undergraduate and postgraduate programs at UPS and has been called Coworking StartUPS Project. The research method is made up of different teaching methodologies—project-based learning, coworking, case studies—and different activities in and out of the university. The data were collected from students who were enrolled in the Coworking StartUPS Project, along with students and researchers from the three University Branch Campuses in the cities of Cuenca, Quito, and Guayaquil. The Coworking StartUPS Project links teaching & research activities with entrepreneurship are founded in cooperation and interaction, offering multiple possibilities for entrepreneurial skills development in the international context. This preprofessional experience promotes students to integrate the knowledge they have learnt and apply the new knowledge in an entrepreneurship project.

Keywords: entrepreneurship, innovation, project management, competency-based approach

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1. Introduction

Entrepreneurship is an old but continually emerging field that attracts the attention of academics, policy makers, and practitioners in various fields of economics, finance, management, and sociology [1]. In recent decades, it has been studied as a catalyst for development and a key factor for achieving economic growth, job creation, and increased productivity [2, 3]. Nowadays, the theory of entrepreneurship has expanded to new concepts where entrepreneurship is not only considered for its concerns for business success and benefits but also for subjective welfare and noneconomic well-being [4] which people can achieve through their capabilities [5]. Policy makers seek to promote entrepreneurship at a macrolevel through education on the basis that greater understanding is likely to create more adept entrepreneurs [6]. In this sense, there is an ongoing debate, related to academia, about whether we can actually teach students to be entrepreneurs [7]. The great increase in the number of entrepreneurship education programs in universities suggests that the general consensus is that entrepreneurship can be taught [8] Higher education institutions (HEIs) are expected to play a key role in promoting entrepreneurship, and entrepreneurship-training programs are spreading rapidly in universities and colleges throughout the world [9–11]. Although much has been written about this topic, universities around the world are still searching for new methods and practical tools, in a way that emphasizes "learning by doing," which should accelerate student mastery [12]. Furthermore, as societies become more entrepreneurial, work is becoming more modularized and structured in project work. In other words, work will depend largely on shorter term engagements and will be specific to a particular project that connects the supply and demand of labor, showing that our societies are becoming more entrepreneurial [13, 14]. In addition, current and rapid changes in society require new methods to develop a wide range of skills or competencies. Related to engineers, it should be a skill set outside of their traditional domain to address the needs of modern organizations. Our societies require more entrepreneurial professional engineers with good teamwork, communication, project management, and financial skills, along with proficiency in their core engineering skills [15]. Abiding by this objective, entrepreneurship project management is one of the topics which is taught in several disciplines. Thus, teaching and learning was identified as a major theme in the international debate on rethinking project management [16, 17]. Understanding the student experience will enable institutions of learning to address pedagogic and education factors within project management to be more effective in the future [18].

In this context, this chapter presents an entire entrepreneurship-training strategy, using a competency-based approach from project-based learning (PBL). The entrepreneurship-training strategy, called *Coworking StartUPS Project*, is the result of cooperation between Salesian Polytechnic University (UPS), a private University in Ecuador, through the Educational Innovation Group, GIE-Project, and Technical University of Madrid (UPM), Spain, through the Gesplan research group. The methodology is based in the Working with People (WWP) model [19–21] and integrates the competencies of project management, according to the International Project Management Association (IPMA) [22, 23], and the scientific foundations of project-based learning (PBL) [24, 25]. The data were collected from 827 students who were enrolled in the Coworking StartUPS Project and 79 teachers and researchers who were involved, all belonging to the 3 UPS University Branch Campuses: Cuenca, Quito, and Guayaquil. This management strategy covers two different aspects: first, "young entrepreneurs" and second,

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the integration of technical, behavioral and contextual project management competencies in UPS students in real situations of innovative and entrepreneurship projects. The success of this approach is the belief that students are not passive recipients of knowledge, but should become engaged in an experience (entrepreneurship project management) with real content. As a result of the entrepreneurship strategy, 103 ideas were identified, of which 48 are currently ongoing projects so far.

2. Experience of educational innovation in UPM: "project-based learning"

The creation of the European Higher Education Area (EHEA) has offered European universities the opportunity to improve and restructure strategic lines of education. In the context of Technical University of Madrid (UPM), this has resulted in a strategy to foster relations between research and educational activities through its Institutional Quality Program, approved in May 2005 by the Government Council of UPM. Within this program, a General Teaching Quality Plan —with the educational innovation or Educational Innovation Group (EIG)-Project experience as a central strategic element—is developed. This experience is carried out through the creation of Educational Innovation Groups [26] and the launching of a call of Educational Innovation Projects. Several Educational Innovation Groups have been approved and consolidated since then. The members of these groups present background, experience, training, and a project for the future of sufficient consistency in topics related to educational innovation, such as engineering and project management.

Thus, the EIG-Project starts at UPM with the main objective of conceiving a new dimension based on projects adapted to generate the development of competencies and early professional experiences. Project-based learning (PBL) [24, 25, 27] is used by the EIG-Project as the most powerful method to obtain effective competency-based teaching [28–30]. According to trends in psychology of knowledge, PBL is based on the thought that humans create new knowledge on the basis of what we know [31] and we have experienced previously, what is achieved through interaction and active participation with others.

3. "Coworking StartUPS Project" as a part of UPS's strategy

The entrepreneurship strategy presented in this chapter is part of UPS's strategy, which is oriented toward the need of becoming an innovative and research university. As expressed in the document "*Cuaderno de reflexión universitaria 14 Hacia una comunidad académica que investigación*"[32], as a part of the teaching component, innovation, and entrepreneurship are considered as "levers of change" with the strategy and potential to guide new institutional policies, and whose progressive implementation will allow an effective transformation of UPS in the short and medium term.

In 2015, a series of agreements to integrate the culture of "project work" were adopted in order to develop measures to promote innovation in UPS. This process of change has been accompanied by training for UPS agents (teachers and students) to develop a culture of

entrepreneurship and their project management competencies. The idea of fostering entrepreneurship from project management competencies was aimed at creating an Innovation and Entrepreneurship Ecosystem (Coworking StartUPS Project). This strategy is part of the implementation processes of Research Groups and Educational Innovation Groups (EIG) at UPS, jointly promoting Research and Educational Innovation, based on the participation of students and teachers who are competent for Project Management.

4. Coworking project methodology

The methodology used in this experience is based on the Working with People (WWP) model. This model aims to build up innovation and learning dynamics based on projects by connecting expert and experienced knowledge. At the same time, values are being incorporated to the people who are involved in this process and participate and develop with the entrepreneurship projects [19–21]. This WWP process has been applied in numerous innovation projects by working with university agents (students and teachers) and society involved in the design and implementation of projects [33–35]. This methodological framework integrates project-based learning (PBL) processes for the building of entrepreneurship initiatives considering three dimensions of competencies: social-ethical, technical-entrepreneurial, and political-contextual, based on the standards of the International Project Management Association [22, 23] and ISO 21500 [36].

From the socio-ethical component, the personal competencies (behaviors, attitudes, and values) of students and teachers that interact along the innovation processes necessary for the entrepreneurship initiatives are considered. In this sense, Coworking StartUPS Project actions developed competencies in relation to creativity, leadership, teamwork, communication, and negotiation among others.

The technical-entrepreneurial component integrates the competencies for the formulation and evaluation of entrepreneurship projects, such as technical and business instruments that allow the generation of goods and services for society. From this component, technical and entrepreneurial competencies and tools are provided in order to support entrepreneurs in the process of defining their projects, products, or services, identifying their clients and their business model.

The political-contextual component allows entrepreneurship projects to adapt to the needs of society in the contexts in which they work, in this case to achieve university-society relations. Thus, the contextual competencies necessary for the management of the projects, the knowledge of the organizations, and the implementation of projects are developed.

Finally, an integrating component is social learning, oriented to developing a network of entrepreneurship among the university's entrepreneurs, through spaces of learning, discussion, and reflection generated in different areas of the university with the participation of faculties and courses. This component is mainly undertaken by the Entrepreneurship Centers, or Coworking spaces, which serve as support to the entrepreneur and allow their interaction. This way they find the physical space of work and the necessary advice so that their ideas and learning are connected with the national and international markets. This connects the UPS entrepreneurship ecosystem with the local, national, and international level.

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5. Coworking project implementation: findings and results

The Coworking StartUPS Project was introduced in 2015 in a UPS Educational Innovation strategy as a reference point of a new perspective for developing entrepreneurship competencies, according to IPMA [22, 23], for project management teaching in engineering higher education [37] and links Teaching & Research.

The implementation model of the strategy and the relationships that are established from the contextual point of view is summarized in **Figure 1**. Within this implementation model, the creation of coworking spaces has resulted in a series of facilities and spaces that can be used in this and future initiatives promoted by the university.

The implementation of the phases carried out and the results are shown in the next section.

5.1. Phase I: Community Creation and competencies development for entrepreneurship project management: PBL process

Mission, vision, and values of UPS guide the Governance Strategy and the management system. People start projects without looking at a map first and without the competence to design, manage, and evaluate a project. As a result, they waste time and money, experience frustration, disappoint clients, and lose businesses.

Therefore, to foster the entrepreneurial culture and ensure the success of projects, in this first phase, the governance strategy integrates actions for the Community Creation and a teaching process for the development of project management competencies. This process is based

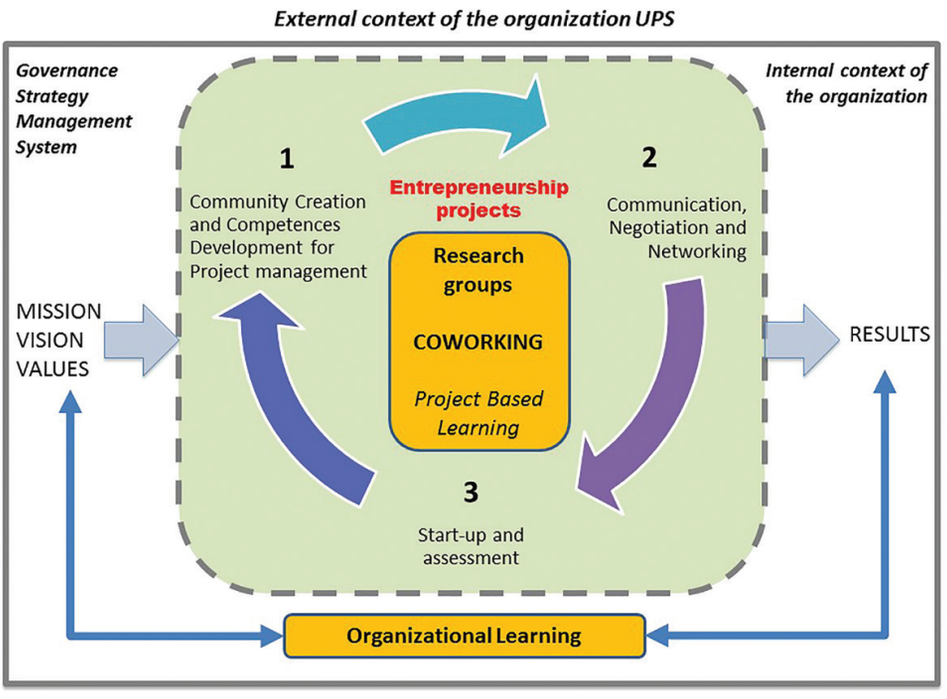


Figure 1. Outline of "Coworking StartUPS Project" strategy at UPS. *Source*: Gesplan Research Group and UPS.

in the PBL method, it consists of students in small groups who plan, design, and evaluate an entrepreneurship project that meets real needs for a real client—private or public—coordinated by professors who teach project management Competencies (**Figure 2a**, **b**). In this process of approximation to reality, group activities and interactive workshops are carried out in class for the course of project management using active methods [38] to get the direct involvement of students, similar to a real entrepreneurship project.

In these sessions, the teacher acts as a mentor for the tasks performed by the students and as a learning incentive for active absorption of knowledge. The active method of learning by doing [38–40] is presented in the area of project management and entrepreneurship with special relevance, great potential for originality, and development of creativity that can be fully assembled with scientific and technical knowledge. At the end of this training period, different groups of students (also with professors of research groups) must present and defend their feasibility study (Business project) of entrepreneurship projects with teachers and managers involved.

The knowledge of 46 competence elements necessary for entrepreneurship project management is integrated in this PBL process. Although there is more relevance for technical competence essential for project management, some contextual and behavioral competence elements are also considered. In PBL, which has been defined as "early professional experience" [24], which is part of the idea of "learning by doing," learning from reality. Participation in entrepreneurship projects with real content, which respond to real needs, give students the opportunity to leave the classroom, come into contact with external agents to solve real problems, and seize business opportunities [24]. This characteristic is a dynamic element for the educational process where students learn to see themselves as entrepreneurs, working cooperatively with research groups.

PBL consists of a small team (students and professors from research groups) working on an entrepreneurship project. According to IPMA, teamwork is a group of individuals who cooperate and interact among them in a coordinated manner, being responsible for the development of a project or activity achieving the expected outcomes [22, 23]. Coworking is teamwork



Figure 2. (a) and (b) Project management course: competencies development.

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learning processes that respond to a logical structure. According to methodological phases for formulation process, the following stages could be considered for entrepreneurship projects: initiation, planning, execution, monitoring control, and closure. Each stage contributes to the overall success of the project with the same importance. Within each stage, there is a distinct set of activities that lead the process from the first idea to its conclusion. The development of the project course is basically a learning process designed to teach methodologies, which have an organic process where phases and concepts are linked to each other. This logical process follows the subsequent phases [41] (**Figure 3**).

Within the preparation for the project formulation phase (1), three sections can be distinguished: (i) establishment of the project team and the necessary resources (administrative, logistics, and financial), (ii) terms of reference, and (iii) activities implementation plan according to schedule at this stage. This phase could be the most important in the sense that it establishes the conditions or terms of reference in which the project will be carried out. Therefore, it is necessary to carry it out successfully since, otherwise, the project could have a high probability of failure. At this stage, the scope of the project is decided, the business plan is defined and the stakeholder's expectations are established, so the time spent on each of these steps will help increase the probability of success.

Subsequently, in the analysis and diagnosis phase (2), students roleplay different aspects of the specific situation of the project team. During this phase, students are trained in research techniques and analysis for the collection and examination of data (analysis) and qualitative and quantitative techniques in order to identify the main causes of the situation (diagnosis). At the end of

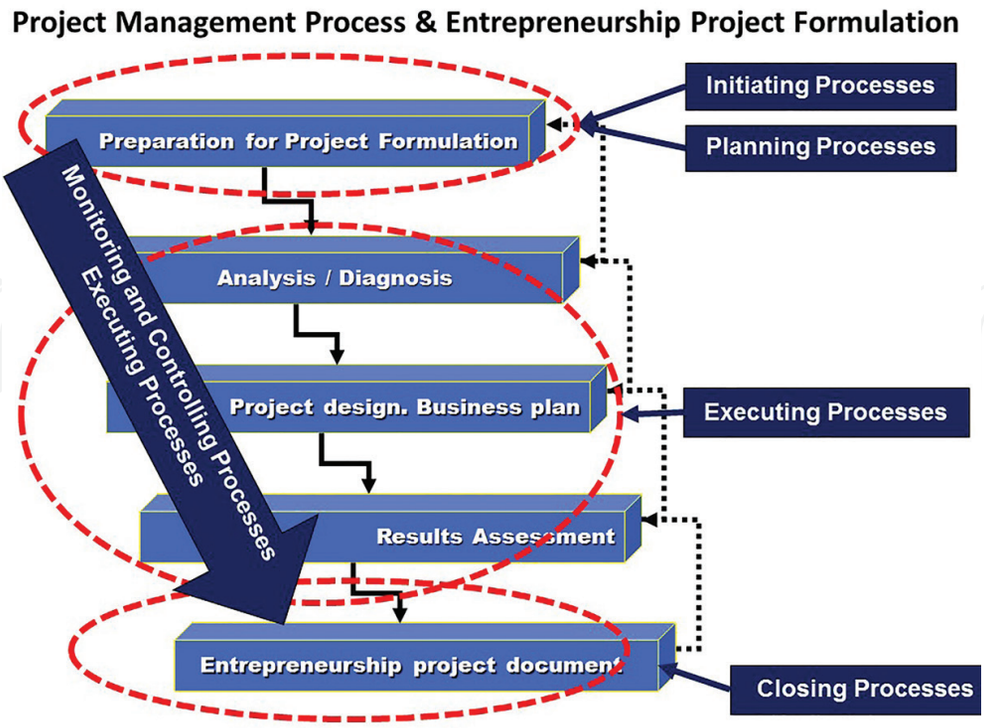


Figure 3. Project phases course with the PBL approach and project management process.

this phase, all teams must identify possible proposals to improve the current situation and solve uncertainties, as well as have understood what needs to be done in the entrepreneurship project.

Once the teams have collected the conclusions obtained in the analysis and diagnosis phases, the project design phase (3) is proceeded in order to develop, in a more precise and detailed way, the investment proposal integrated in the Business Plan. Throughout this phase, students are provided with training in design and planning tools to deal with technical specifications of the project components. The nature of the project will determine the specific level of detail, however, all teams must verify the feasibility of products, systems, and technologies, as well as defining the timetable, estimating costs and benefits, project organization, and resource management.

Once the project design phase is documented and completed, the multi-criteria assessment phase (4) is conducted to examine the effects and impacts of future project implementation. These results will provide a reference to guide the economic, social, technological, and environmental viability of the project. The elements of competence that are specifically addressed in this phase are costs and finances, business, resources, ethics and security, and environment.

The final phase—project documentation (5)—includes results and final reports made by students. At this stage, it is important to adequately communicate the relevant information to teachers and other external agents, so the ability to synthesize is essential. In this phase, external professional-tutors of UPM evaluate and issue opinions based on the entrepreneurship project documents and students' competencies.

Entrepreneurship projects are chosen due to the existence of business opportunities, society needs, and situations that need to be improved, as well as from the competence elements from the three business project dimensions (technical, contextual, and behavioral).

The main results of this phase were the participation of 827 students and 79 teachers who were informed about the project and the identification of 103 projects with 32 teachers who were involved. Many of these projects' scope changes, some disappear, and others are combined. The projects that were launched are based on a wide range of topics, including the development of industrial prototypes, computer applications, educational gadgets, etc. They all have innovation in common in order to add value to the entrepreneurship projects.

Subsequent to the official launch of the project, in the first month, there were visits to different classrooms, and university studies were also conducted. The visits involved a creativity workshop and the invitation to be part of the ecosystem.

There were workshops with teachers and meetings with different groups of the university such as the Entrepreneurs Club, the Robotics Club, Research groups, the Students federation, and others.

All the activities carried out during this phase were essential for creating a community. The main objectives of the community are to create a link between students and teachers, motivate them to be part of this ecosystem of innovation through a personal explanation of the project; share tools of accelerated entrepreneurship; identify projects that are already undertaking at the prototype level; and initiate the generation of networks with entrepreneurs at UPS.

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5.2. Phase II: building up of coworking spaces

This phase consists of the creation of Entrepreneurship Centers or coworking spaces that support entrepreneurs and allow their interaction, here they find the physical space and the advice needed so that their ideas are connected with the national and international markets.

There are four coworking spaces on a national level (**Figure 4**): Cuenca, Guayaquil, Quito "Girón" campus and Quito "Sur" campus, managed by the Head of research. These spaces can be used by current or former UPS students, with no age limit, who are committed to learning, sharing, and undertaking innovation projects. In the case of people from other institutions, they must take part in an entrepreneurial project from this institution. In these spaces, there are activities such as workshops, mentoring, training, business development, recreation activities, fairs, networking integration, brainstorming, research, innovation, and activities that add value to the ecosystem and the student.

Currently, there are *48 projects* that are being worked on constantly, 62 intermittently. There is an average of 80 people per month, who visit the different spaces on a national level to learn what it is and how they can become a part of it.

The creation of coworking spaces, as part of the strategy, has allowed the creation of permanent facilities that may continue to be used by students and researchers of the University.

5.3. Phase III: communication, negotiation, and networking

In a third phase of the Coworking StartUPS Project, within the same PBL approach, as part of specialized workshops (Bootcamp and Campus Party), students complete a new cooperative learning process aimed to deepen the enterprise culture and complexity of business management. For these coworking activities, students use their own projects, previously discussed



Figure 4. Coworking spaces: (a) Cuenca, (b) Guayaquil, (c) Quito-Girón.

and designed by their own teams. These new analyses are done in work teams with cooperative learning. With the results, each team prepares a report that is communicated orally and is the basis for the discussion of learning, joint discussions, and exchanges. The participation of new stakeholders (entrepreneurs and research groups) in these workshops increases innovation and learning, establishing interdependencies and links between teaching & research activities with entrepreneurship and professional background, offering multiple possibilities for entrepreneur skills development in the international context.

In this third phase, the PBL methodology evolved through collaboration agreements between UPS and public and private stakeholders for the implementation of entrepreneurship projects. These new cooperation agreements have been the basis for consolidating an approach to PBL that has been developed to adapt the methodological issues in teaching real problems. The success of this approach is the belief that students are not passive recipients of knowledge, but should become engaged in an experience (entrepreneur project management) with real content.

5.3.1. Campus Party

About 60 students from the Salesian Polytechnic University's branch campuses in Cuenca, Quito and Guayaquil attended the Campus Party of the "*Mitad del Mundo CEMEXPO*" Convention Center for 4 days (**Figure 5**). The students had the opportunity to enrich themselves with content suitable for the development of their entrepreneurship projects through 260 hours of content, 12 hours of master content, 30 of workshops, and 18 of participatory forums. In addition to attending the conferences, students presented their projects to visitors, students from other universities, journalists, headhunters, authorities, ministers, councilors, and the vice president of the Republic of Ecuador. Furthermore, it generated a community between students and teachers, who shared activities and dynamics that allowed them to integrate.



Figure 5. Campus Party of the Mitad del Mundo CEMEXPO.

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The objectives of this activity are to exploit creativity focused on production, technology, human talent, futuristic vision, and student entrepreneurship; provide students with an opportunity to present their projects; create links between students from different universities and create an interdisciplinary community.

The main results of the Campus Party are students presented their projects to visitors with different profiles (**Figure 6**); it was possible to integrate students from all three Campuses; links were generated between authorities, professors, and students; and students acquired knowledge during the forums and talks.

5.3.2. Bootcamps: accelerated entrepreneurship camp

A Bootcamp or accelerated entrepreneurship camp is defined as a program that seeks to transfer tools to innovate and develop entrepreneurial skills. A group of entrepreneurs, who meet for a few days, present an idea that will later be a prototype. This should be tested through the use of several empirical tools. Finally, a business model will be tested that allows that prototype to reach a market in a sustainable way.

That is the idea of Bootcamp, a concept that in the world of entrepreneurs makes sense and allows people who are in a clarifying phase to have concrete projects, quickly take them to practice acquiring knowledge through intense experience. In addition, participants have the opportunity to analyze their own profile of entrepreneur and to generate alliances with other entrepreneurs during the Bootcamp. Challenges are developed and alliances are generated with other entrepreneurs.

To sum up, they are spaces for accelerated learning. Connecting with others allows you to develop creative ideas for solving problems. The figure of the mentor emerges in this model as an individual who connects with the entrepreneurs and accompanies them on their path, not responding to their concerns but helping them to respond to themselves.



Figure 6. Project-idea presentation.

5.3.3. "Science, Technology, and Culture" Bootcamp

In April 2016, the "Science, Technology and Culture" Bootcamp' took place in the presence of 24 national and international mentors, plus 100 entrepreneurs from Cuenca, Quito, and Guayaquil, as well as authorities and a logistics team.

The main objective of the event was to consolidate the UPS-innovation Ecosystem, as well as to identify the progress of the projects that are part of this ecosystem. Additionally, it was sought to identify entrepreneurial tools and connect them with experts in different areas.

5.3.4. "From teacher to mentor" Bootcamp

This event was held in August 2016. Several activities were developed to train teacher-mentors to become involved and support the Ecosystem of Innovation and Entrepreneurship of UPS. The objectives of this activity were the "From teacher to mentor" *Bootcamp* sought to develop the basic skills that a teacher must possess to be a mentor (**Figure 7a**, **b**). Furthermore, this *Bootcamp* sought to generate a community for mentors to support the StartUPS Projects.

Sixty teachers from UPS's three branches participated in this *Bootcamp*. Several activities were held with teachers on the following topics: redesign the experience of giving a gift through the design thinking methodology; the UPS mentor (characteristics and scope of the proposal); the experience of designing a mentor; learning the ontological dimensions (body, emotion, and language); knowing types of mentoring and their designs; and designing mentoring sessions in UPS.

5.4. Phase IV: startup and assessment

5.4.1. Competence and learning assessment process

The Coworking StartUPS Project's learning activities begin with a competency self-assessment by students, using the same questionnaire requested in the IPMA certification process. This informative activity is a key element to guide the development of learning activities. In this



Figure 7. (a) and (b) "From teacher to mentor" Bootcamp.

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self-assessment process, perhaps the main problem detected has been the difficulty of students to reflect on their own experience and knowledge. On the other hand, a gradual effort has been required to sensitize teachers on the need to change the system and approach of student assessment—by assessing competencies more than knowledge—as a result of adaptation to the new requirements of higher education and also of the current professional world. In general terms, it can be said that there are still some difficulties in incorporating the competencies assessment system into training programs.

The self-assessment activity is repeated at the end of the Coworking StartUPS Project to evaluate the progress in the competence learning process based on the National Competence Baseline (NCB) competencies by comparing the results. This process is structured around two axes: a process of continuous evaluation of students' individual character and a participatory group assessment to contrast and discuss individual assessments collectively. The activity is part of the quality assurance system, using learning evaluation processes of the participants in the Coworking StartUPS Project. It consists of two sessions: first with Coworking students and then with the StartUPS management team. Analysis and reflection of the proposals and conclusions of this process can draw a series of "lessons learned" to keep improving the integration of entrepreneurship skills in future editions and for the design of new activities in the Coworking StartUPS Project.

Table 1 summarizes the results of knowledge and experience in each group of competencies acquired by students after learning through the "Coworking StartUPS project."

Analysis and reflection of the proposals and conclusions of this process can draw a series of "lessons learned" to keep improving the integration of competencies in future editions.

Moreover, through entrepreneurship projects, students examine the interactions of a large number of the NCB competence elements [22, 23]. So far the experience tested with entrepreneurship projects, following the PBL approach, is ideally suited for students to link the technical and contextual elements to the entrepreneurship context, with the needs of the productive sector and real social problems. From this formative point of view, personal competencies such as teamwork, communication, leadership, commitment and motivation, self-control, self-confidence, openness, creativity, results orientation, efficiency, consultation, assessment values, adaptability, and innovation in problem solving are also developed.

	Average knowledge improvement (%)	**Average experience improvement (%)**	**Average knowledge + experience (%)**
Technical competencies	24.42	22.81	47.24
Behavioral competencies	13.48	15.81	29.29
Contextual competencies	27.19	27.68	54.87

Source: Compiled by authors.

Table 1. Development of competencies.

Figures 8–10 show the comparison of different results obtained from the initial participation to the end of the project management course.

5.4.2. StartUPS project evaluation

Although the launched projects are in different stages of implementation, in fact, some of them in the early stages, UPS has plans to establish a continuous assessment system with the ultimate goal of supporting the establishment and success of all these projects.



Figure 8. Technical competencies comparison.

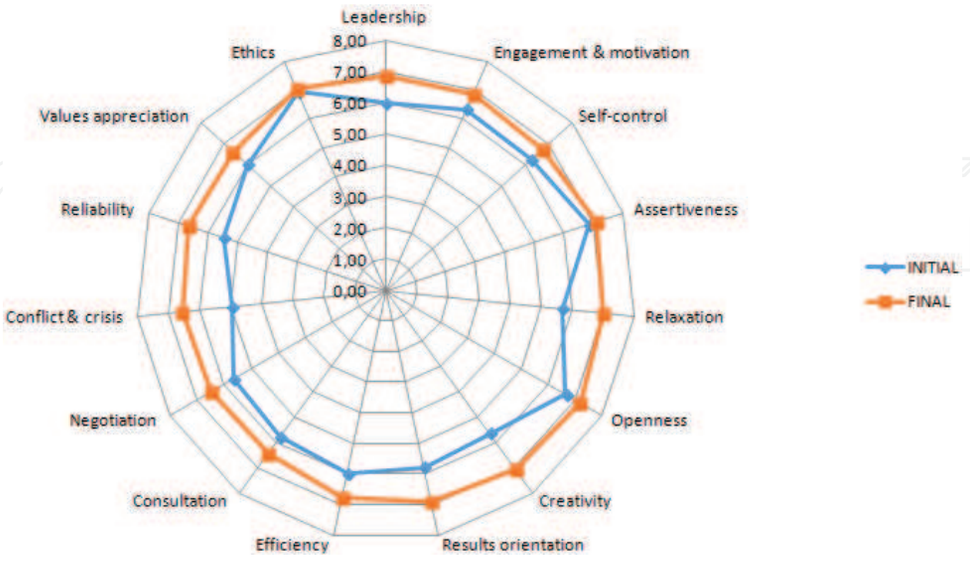


Figure 9. Behavioral competencies comparison.

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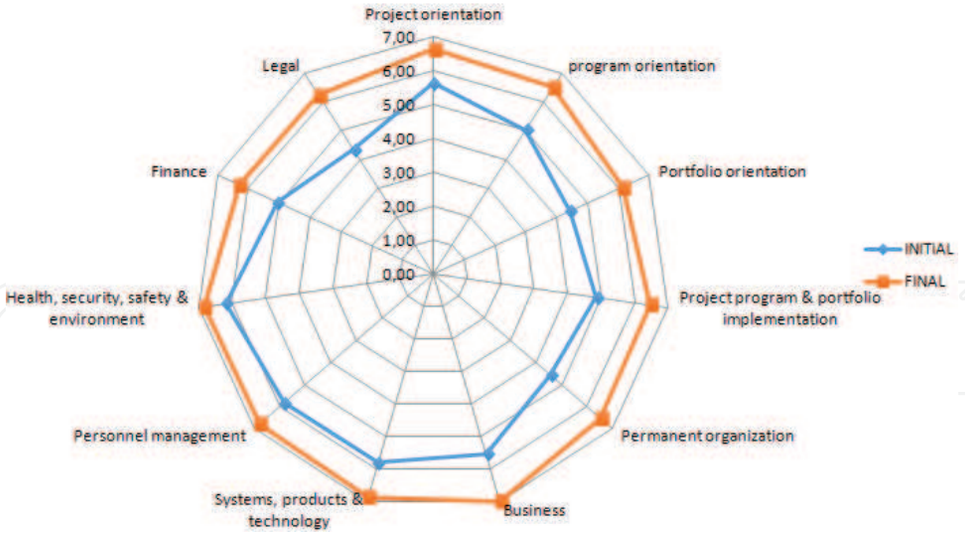


Figure 10. Contextual competencies comparison.

6. Conclusions

The methodology described above, with a competence-based approach, is the result of an experience of project-based learning that has been validated and specifically suited for the development of technical, contextual, and behavioral competencies. The learning methodology links teaching with the students' professional background, and is founded in cooperation, active participation, and interaction, offering multiple possibilities for competence development in the global and international context. The success of this approach is the belief that students are not passive recipients of knowledge, but should become engaged in an experience with real content. This preprofessional experience promotes students to integrate the knowledge they have learnt and apply the new knowledge in new ventures.

Students themselves have stated an improvement in their technical skills (with an improvement of 47%), behavioral skills (an improvement of 29%), and particularly in contextual skills (with an improvement of 55%).

The development of personal competencies, through the organization in working groups, and the challenge of facing complex real situations are part of the processes and activities integrated in the methodology and needed to encourage entrepreneurship in the university environment. Through these processes, creative ability and innovative research are fostered, generating new knowledge, as well as increasing students' enthusiasm and motivation to solve problems. Both, the strategy developed and its instruments—community building, PBL, agreements with institutions, interaction with external agents—offer new opportunities for educational innovation and the development of competencies.

The Coworking StartUPS Project has shown to be an opportunity for educational innovation, establishing new connections among the university (through Research Groups) and the

professional world (through the implementation of entrepreneurial projects), having international standards recognized in the field of project management as a benchmark. The fundamentals of IPMA are inserted into the higher education strategy to facilitate this international framework of competence-based training. This integration also links research projects and professional certification systems offering greater employability for future graduates and more efficiency of research groups from the culture of project management. Using this model, Salesian Polytechnic University has confirmed a clear position for incorporating entrepreneurship development project management skills, and concrete objectives that lead the way toward the University's strategy, the quality of education and the links to self-employment from business projects.

Moreover, some general conclusions from a series of "lessons learnt" have been drawn through the assessment process, which will serve to refine and improve the strategy in the future. On the other hand, a series of factors in the evaluation process of competencies that make evaluation more difficult, such as the different conceptions of each teacher, the greater burden of work required by ongoing evaluation, and the students' lack of familiarity with this kind of evaluation system, are identified. The development of behavioral competence with cooperative learning activities is especially valued and considered necessary to successfully address the complexity of the entrepreneurial projects. Finally, the creation of the community is the essential part of the Entrepreneurship Ecosystem and it is inevitable that it will become a process of consolidation.

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