

ENTREPRENEURSHIP EDUCATION: ECONOMIC ANALYSIS OF AN ENTREPRENEURIAL TRAINING PROGRAM BASED ON PUPIL ENTERPRISES IN PORTUGAL

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ABSTRACT

Promoting creativity and entrepreneurship has been identified as being essential for the development of countries; therefore, it is crucial to implement entrepreneurship educational training projects. Based on this assumption, the Entrepreneurship in the School Program was design and implemented with 281 students and 7 teachers. The results of its development show that participation in this program successfully developed the participants' creativity, so it was considered appropriate to examine the activity of each pupil enterprise more closely. Through this analysis we found that all the pupil enterprises achieved the project's objectives and some progressed even further. In fact, due to their dynamism and proactivity, some pupil enterprises carried out strategies that allowed them to maximize their profit margin. The total profit obtained by the pupil enterprises was about €3,400, of which €739.90 were achieved by a single company. On the other hand, the pupil enterprises spent about €10,000 on products from their 39 local suppliers.

Keywords: Entrepreneurship Education Program, Creativity Education, Pupil Enterprises.

JEL Classification: I25

1. INTRODUCTION

Over the last few years, a strong worldwide economic crisis has been experienced, characterized by an increase in unemployment and the impoverishment of the population. Our country is no exception. In fact, in 2012 the unemployment rates, especially for young people, accounted for 38% of the population between 15 and 24 years old (Sá, 2014). Considering these indicators, the European Commission (2002) argues that creativity and entrepreneurship need to be encouraged from an early age, because they are key skills for the development of a society and a country.

As a competence, creativity can be understood as the skill used to create something new (a product or a solution) that has value or utility (Amabile, 1996). Meanwhile, an entrepreneur can be described as someone with vision, adaptability, persuasion, confidentiality, competitiveness, risk-taking, honesty, perseverance, discipline, organization

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(National Commission on Entrepreneurship, 2003; cit. by Moreland, 2006), altruism, weighting, work, job satisfaction, commitment, and self-motivation (Faria, 2010).

Based on this perspective, creativity and entrepreneurship must be associated with education, taught in schools at all educational levels (Comissão Europeia, 2006), and be adapted to the target group (Comissão Europeia, 2002). Furthermore, creativity and entrepreneurship education must be supported by local organizations and entities, including the Government and companies (Redford, 2013).

This new conception of education seems to be easy to implement but presupposes rectification of academic curricula to associate creativity and entrepreneurship with knowledge (Shaheen, 2010) as well as to promote the development of skills and attitudes (Craft, 2005). However, in Portugal education has a very knowledge-based structure that provides little scope for dynamic programs based on learning by doing. Furthermore, over the last few years, it has been possible to notice an increase in students' and teachers' demotivation, school failure, and dropout (Jesus & Lens, 2005). Actually, the school dropout rate is estimated to be about 31% (Instituto Nacional de Estatística, 2011), which is more than double the European Union's rate (14.4%) (Comissão Europeia, 2011).

Moreover, the adoption of entrepreneurship education should resort to a competence approach focused on the acquisition of general and specific skills, rather than knowledge, and should require the active involvement of schools and teachers (Chaves & Parente, 2011). In fact, Imaginário, Cristo, Jesus, and Morais (2014) argue that it is necessary for the student to handle practical situations from the entrepreneurial reality to increase the acquisition of knowledge and skills.

When we investigate the entrepreneurship educational programs, it is possible to realize that entrepreneurship and creativity can be taught (see e.g. Ma, 2006; Scott, Leritz, & Mumford, 2004). However, the results are not always favorable, and some projects do not exert a positive impact on the entrepreneurial skills of the participants (for instance Ferrando, Sáinz, Soto, Fernández, & Valverde, 2014; Parkurbis, 2007). Indeed, according to the evaluation carried out by the Global Entrepreneurship Monitor in 2011 (Thompson, Gonçalves, Medina, & Amaral, 2013), the programs implemented in Portuguese primary and secondary schools do not appear to promote and stimulate the creativity of young people, expertise considered to be key to entrepreneurial behavior. On the other hand, in cultural and social terms, this report concludes that our society does not encourage risk-taking, creativity, and innovation.

However, it is important to stress that the absence of a formal evaluation process is seen as a major limitation of this type of project (Garavan & O'Cinneide, 1994). Besides, some of the impact studies presented in the literature do not include pre- and post-tests or even control groups (Matin, McNally, & Kay, 2013).

Aiming to promote the development of entrepreneurial skills in the educational community (students, teachers, and parents), making it more proactive, autonomous, responsible, self-confident, with a team spirit, able to take risks, and prepared to make decisions, the Entrepreneurship in the School Program was developed. This project was implemented under the strategic program of the "Network of Cities and Urban Centers for the Competitiveness and Innovation of the Blue Corridor," applied to the Axis 2 INALENTEJO, which covers ten municipalities of the Alentejo region (Sines, Santiago Cacém, Vendas Novas, Montemor-o-Novo, Évora, Arraiolos, Estremoz, Borba, Vila Viçosa, and Elvas), and it was coordinated and implemented by Sines Tecnopolo, the leading municipality being Sines. This program was technically and scientifically supported by the University of Algarve through its Division of Entrepreneurship and Technology Transfer (CRIA) and had the approval support of the DGEstE – General Directorate of School Establishments, Services Directorate of the Alentejo region (Imaginário, Cristo, Jesus, & Morais, 2014).

The Entrepreneurship in the School Program was designed based on the creation of an “import/export” company, managed, in the classroom, by the students during a school year. The constitution of the pupil enterprises was not made formally, but the whole process of creation and management was replicated and simulated, including the use of real money to engage in real business. Each pupil enterprise had to establish trade relations with other companies through the exchange of goods that would later be sold to the local community and could be supported by a real company from its municipality, the so-called “mentor company” (Imaginário, Cristo, Jesus, & Morais, 2014).

The use of real money had a dual functionality. On the one hand it aimed to ensure the program’s realism, and on the other it increased the participants’ motivation by assigning an award to the commercial partnership that obtained the most profits. Therefore, all the pupil enterprises had to collect between €100 and €150 by using their own money, by asking for a loan, or by following another strategy that they chose. Although this activity seemed to be easy to accomplish, it generated controversy among the students, because they did not want to invest their own money (Imaginário, Cristo, Jesus, & Morais, In Press).

This project was implemented during the academic year of 2012/2013 in 12 schools from 7 Corridor municipalities (Sines, Santiago do Cacém, Vendas Novas, Montemor-o-Novo, Évora, Vila Viçosa, and Elvas). In total 281 students and 27 teachers were involved, organized into 18 pupil enterprises and 9 commercial partnerships, established based on geographical distance and heterogeneity of sociodemographic criteria (Imaginário, Cristo, Jesus, & Morais, In Press).

To ensure the proper functioning of the project and the fulfillment of the tasks, the program’s technical team offered daily monitoring and advice to all the participants, students or teachers, virtually or in person. Virtual monitoring was guaranteed through email or the program’s Facebook page, while in-person monitoring was ensured by monthly sessions in each of the schools (Imaginário, Cristo, Jesus, & Morais, In Press).

The analysis of the participants’ opinions showed that the program was well adjusted to the entrepreneurial reality, allowing them to engage in the different activities carried out by each pupil enterprise from its establishment to its launch on the market. However, they believe that the bureaucratic burden of this process is excessive and time-consuming. Nevertheless, its adjustment to the educational context needs to be improved. If on one side its contents fit easily into the academic curricula, on the other side the timing of the proposed activities was not planned well considering the multiplicity of courses and types of education attended. The latter issue also contributes to the need to review the commercial partnership methodology adopted, since the activity of a pupil enterprise could be limited if its commercial partner is late. This result also shows that the establishment of interpersonal relationships and the interaction between students, teachers, and schools is considered to be one of the outstanding features of participation in the program (Imaginário, Cristo, Jesus, & Morais, In Press).

Furthermore, it was concluded that the Entrepreneurship in the School Program promoted the development of creativity and entrepreneurial skills of the young students (Imaginário, Cristo, Jesus, & Morais, Submitted). The results of a longitudinal study with a control group demonstrated that at first there were no significant differences between the two groups, but by the end of the program the participants showed significant differences in skill development. Specifically, the control group presented a significant decrease in entrepreneurial skills (i.e. creation, risk-taking, and action), while the participants showed a significant increase in creativity.

Considering these results, this study aims to describe and analyze the business activities of each pupil enterprise regarding the strategies used to obtain the necessary capital, the strategies adopted to sell the “imported” products, as well the strategies implemented to

increase the profit, the characterization of the products sold (including the buying and selling price, production costs, and number of “imported” units), and the characterization of the suppliers (type of enterprise, location, and type and number of products sold). To ensure the anonymity of the participants, letters were assigned to each pupil enterprise and numbers to each commercial partnership.

2. METHODOLOGY

2.1. Sample

A total of 281 students and 27 teachers participated in this entrepreneurial training program, organized into 18 pupil enterprises and 9 commercial partnerships. Table 1 presents some of the socio-demographic characteristics of the pupil enterprises, their shareholders, and their teachers.

Table 1 – Socio-demographic characteristics of the pupil enterprises, their shareholders, and their teachers (company identification, number of students, mean age, attended year and course, number of teachers involved, and their degree area)

Pupil Enterprise	Shareholders				Faculty	
	N	Mean Age	Attended year	Course	N	Area
Company A	25	16	10.º	IT Management	1	Economic Sciences
Company B	27	15	9.º	Regular Education	1	Geography
Company C	10	15	9.º	Regular Education	1	Physical Education
Company D	12	16	10.º	Entrepreneurship Club		
Company E	18	16	9.º and 11.º	Commercial Technical and Computer Technician	6	Economic Sciences e Informatics
Company F	6	16	9.º	Integrated Program for Education and Training	3	Mathematics, Natural Sciences and Social Action
Company G	16	17	11.º	Agricultural Production	2	Agricultural
Company H	22	18	12.º	Agricultural Production		
Company I	8	15	9.º	Regular Education	2	Geography and Visual Arts
Company J	4	15	9.º	Regular Education	2	Portuguese and French teaching and arts
Company K	6	16	10.º	Entrepreneurship Club	4	Economic Sciences
Company L	9	15	9.º	Regular Education	1	Social Sciences
Company M	25	16	10.º	Science and Technology		
Company N	15	16	10.º	Arts		
Company O	29	16	10.º	Languages and Humanities		
Company P	19	16	10.º	Science and Technology		
Company Q	17	17	11.º	Healthcare Assistant	2	Secretariat e Economic Sciences
Company R	13	16	9.º	Hostelry and Service Floors	2	Modern literature and Turism

Through the analysis of table 1, it is possible to realize that the students are close in age and, demographically, their main difference concerns their attended course. Until the ninth grade, Portuguese students usually attend regular education, which presents itself with a variety of general subjects. When they enter the tenth grade, they have to choose a more specific curricular area between general courses (science and technology, languages and humanities, economics sciences and arts), technical training, or vocational training.

Most of the pupil enterprises contain students who attend secondary school (58%, N=11), students who attend general courses (54.5%), and basic education students, of whom only 37.5% (N=3) attend professional courses.

On the other hand, the participating teachers present a variety of training areas, but they mainly graduated in socioeconomic sciences (41%, N=11), while 26% (N=7) graduated in languages and humanities, 26% (N=7) in science and technology, and 7% (N=2) in arts.

2.2. Measurements

To collect the pupils' enterprise activity, a data collection grid was developed with the necessary information, namely strategies for obtaining capital, strategies to sell the "imported" products, characterization of the products sold (including buying and selling price, production costs, and number of "imported" units), and characterization of the suppliers (type of enterprise, location, and type and number of products sold).

2.3. Procedures

The data collection grid developed was completed and updated during each monitoring session. To analyze the results, we used the qualitative content analysis technique first. Later we used the Statistical Package for Social Sciences 20 (SPSS) to determine the totals, percentages, means, and standard deviations and Microsoft Office Excel to calculate the monetary results, including production costs, sales, and profits.

3. RESULTS

Nowadays entrepreneurship and creativity are important as key competences for individuals' development and for countries' progress (i.e. Comissão Europeia, 2002). Therefore, it is crucial to develop and implement activities that can promote entrepreneurship and creativity (Imaginário, Cristo, Jesus, & Morais, 2014).

Based on these assumptions, the Entrepreneurship in the School Program was implemented during the academic year of 2012/2013 and attended by 281 students and 27 teachers from different schools in the Alentejo region. Aiming to develop creative and entrepreneurial skills in the educational community (Imaginário, Cristo, Jesus, & Morais, In Press), it also intended to reward the commercial partnership that achieved the highest profit.

Besides the adoption of real creation and management of company activities, the realism of this program was also assured by the use of real money and real trades. However, the use of money to start the pupil enterprise was one of the most controversial issues for the participants, because the students did not want to invest their own money (Imaginário, Cristo, Jesus, & Morais, In Press).

All the students started their pupil enterprise with the capital indicated, a minimum of €100 and a maximum of €150 (M=€122, SD=€23), but obtained it differently. Most of the pupil enterprises used proper funds (50%, N=9), and only 28% (N=5) resorted to a loan from the school or their teachers. However, four pupil enterprises used other strategies to gather their capital. Companies A, C, and J chose to sell other products, some produced

by them, like cakes, and others offered by school clubs, such as hand soaps and herbs. Company D, on the other hand, asked for a donation from a local bank.

Since the program would reward the commercial partnership that obtained the highest profit, all the pupil enterprises were motivated to adopt strategies to increase their profit. Therefore, the adoption of a good marketing strategy would lead to good results of the commercial partnership. In fact, Imaginário, Cristo, Jesus, and Morais (In Press) conclude that there was a significant development of creativity in students who participated in the Entrepreneurship in the School Program.

To sell their products, 72% of the pupil enterprises (N=13 – A, B, C, D, E, F, J, K, L, M, P, Q, and R) decided to organize or participate in events developed at their schools as well as to take part in other local/regional events, such as fairs, seminars, and vigils. Companies B and L also resorted to raffling some products at a symbolic price to reach more people and to increase their profits. Another strategy adopted was to offer products in the purchase of others; for instance, Company E offered vases when someone bought herb seeds and Company B offered a recipe booklet to clients who bought pearl chocolate.

Some pupil enterprises resorted to other tactics. For instance, Company A chose to register the order before acquiring the products from its commercial partner; Company F used school resources, produced all its products to “export” to its commercial partner, and asked local people to offer the necessary ingredients for producing the final products; Company J sold several flowers and fresh plants that were offered by the school gardening club; Company K, to promote its commercial partnership, created a website to advertise and sell the products from both companies; and, finally, Company B also promoted its products by transforming them into other products, such as salami, chocolate cake, and goats’ cheese sandwiches, and selling them at the events in which they participated. Moreover, 7 companies (30% – A, B, E, F, J, M, and N) exposed their company’s image through the use of t-shirts and sweatshirts with the company’s name and logo at attended events, and 14 pupil enterprises (78%) found free solutions to transport their products between each commercial partnership, using teachers and friends to take the products from one municipality to another or even soliciting funds from the school.

It should also be emphasized that all the pupil enterprises were present at the program’s final fair, at which they were able to build and decorate their stand as well as to sell their products. On the other hand, all the pupil enterprises publicized and promoted themselves on their Facebook pages, presenting their unique corporate image and showing their catalog/products.

Besides these strategies, all the pupil enterprises had to choose the products that they would like to offer and contact the suppliers, negotiating the prices if possible. Each company had to select about 8 different products, but it was the commercial partner who chose the product that it wanted to “import.” In total the pupil enterprises had 47 suppliers; however, 5 companies supplied more than 1 pupil enterprise (suppliers 1, 2, 3, 4, and 5 – table 2). Therefore, the real number of suppliers is 39.

Table 2 – Characterization of the major suppliers (type of business, location, units and value of sales, and number of pupil enterprises supplied)

Supplier	Type of business	Municipality	Sales (Units/Value)	N of pupil enterprises Supplied
Supplier 1	Regional and traditional pastries	Vila Viçosa	318 (318€)	4

Supplier 2	Products made with recycled materials	Santiago do Cacém	36 (128,40€)	3
Supplier 3	Regional jams	Elvas	167 (380,53€)	2
Supplier 4	Regional and traditional pastries	Sines	61 (185,10€)	2
Supplier 5	Seeds of herbs	Vendas Novas	154 (185,10€)	2
Supplier 6	Regional product	Vila Viçosa	670 (664€)	1
Supplier 7	Regional and traditional pastries	Vila Viçosa	480 (720€)	1
Supplier 8	Regional product	Vila Viçosa	410 (410€)	1

Through the analysis of table 2, which presents the characterization of the major suppliers, it is possible to realize that these five suppliers are located in different municipalities and are responsible for 20% of the traded units. However, three other suppliers were identified that, although they only supplied one pupil enterprise, are accountable for 42% of the traded units (suppliers 6, 7, and 8), a total of €1,794. All these suppliers provided products sold by company B.

Table 3 presents the economic aspects of the pupil enterprises' activity, namely the units that each pupil enterprise "imported" from its commercial partner, its production costs, its sales, and its profits. It has to be said that we consider as production costs the amount paid for "imported" products from the commercial partner as well the money spent on merchandising.

Table 3 – Characterization of the pupil enterprises' activity (number of suppliers, number and percentage of units "imported" from each commercial partner, production costs, sales, and profits)

Company	Partnership	Suppliers (N)	Units "imported" from each commercial partner (N/%)	Production costs (€)	Sales (€)	Profits (€)
A	2	2	333 (8,9%)	1.488,00	1.860,50	372,50
B	7	4	1631 (43,6%)	2.388,60	3.128,50	739,90
C	8	3	161 (4,3%)	512,92	604,55	91,63
D	1	3	107 (2,9%)	197,80	310,50	112,70
E	6	2	114 (3,0%)	156,25	266,00	109,75

F	9	x	180 (4,8%)	519,40	583,00	63,60
G	6	1	232 (6,2%)	123,20	104,80	-18,40
H	4	1	25 (0,7%)	43,50	80,80	37,30
I	5	2	145 (3,9%)	366,34	444,30	77,96
J	3	4	109 (2,9%)	301,13	372,15	71,02
K	8	3	150 (4,0%)	508,85	377,32	168,47
L	1	3	26 (0,7%)	248,73	188,07	188,07
M	7	5	173 (4,6%)	2.125,10	2.499,40	374,30
N	3	2	68 (1,8%)	289,70	381,02	91,32
O	4	1	26 (0,7%)	49,55	76,00	26,45
P	5	3	43 (1,1%)	370,49	426,70	56,21
Q	9	5	146 (3,9%)	310,12	690,00	379,88
R	2	3	76 (2,0%)	1.178,10	1.640,90	462,80
Total		47 (real 39)	3.745 (100%)	11.177,78	14.034,51	3.405,46

From these economic results, it is possible to conclude that the pupil enterprises made a total of sales worth €14,034.51 and earned a profit of €3,405.46, but not all of them achieved the same performance. The sales value ranged between €76 (company O) and €3,128.50 (company B), while the profits fluctuated from €26.45 (company O) to €739.90 (company B). However, one of the pupil enterprises earned no profit; actually, company G had a financial loss of -€18.40.

Analyzing the relation between profit and units “imported,” it is possible to realize that the pupil enterprise that earned the largest profit is the one that imported the most products, but it is not the one that achieved the largest profit per product. This place is taken by company L, which, with only 26 products, had a profit of €188.07, representing an average profit per product of €7.23, followed by company R, which earned an average profit per product of €6.09.

Since the Entrepreneurship in the School Program also intended to reward the commercial partnership that earned the largest profit, as well as calculating the individual profit from each pupil enterprise, it was also necessary to determine the profit of each partnership. The

results show that the partnership profit ranged between €1,114.4 (commercial partnership 7) and €63.75 (commercial partnership 4).

4. DISCUSSION

Entrepreneurship, associated with creativity, is considered to be essential for the development of a society and a country (Comissão Europeia, 2002); therefore, it is necessary to teach it from an early age (Comissão Europeia, 2006). According to this perspective, schools must abandon formal education based on knowledge and adopt an approach focused on entrepreneurship education that also aims to promote the development of skills and attitudes (Craft, 2005; Shaheen, 2010).

Over the last 10 years, some entrepreneurship education programs have been implemented in Portugal (Comissão Europeia, 2002), but their results do not seem to have been particularly favorable since they do not appear to have promoted or stimulated the creativity of the participants (Thompson, Gonçalves, Medina, & Amaral, 2013). However, several training programs that had a positive impact on the development of creative and entrepreneurial skills can also be found (Ma, 2006; Scott, Leritz, & Mumford, 2004).

Since the absence of an evaluation process is identified as a major limitation of the implemented entrepreneurship education projects (Garavan & O'Conneide, 1994) the Entrepreneurship in the School Program was designed to incorporate moments for the collection of data and information (Imaginário, Cristo, Jesus, & Morais, 2014). Based on the good indicators obtained in the evaluation of the program (Imaginário, Cristo, Jesus, & Morais, Submitted; In Press), especially the increase in creativity of the participants, it was considered appropriate to analyze the activities developed by each pupil enterprise further.

To start their pupil enterprise, each company was asked to raise capital between €100 and €150. This money should be invested in the acquisition of the first products and in their transportation and transformation, if necessary. Although all the pupil enterprises completed this task successfully, most of them did not want to use their own money (Imaginário, Cristo, Jesus, & Morais, In Press). In fact, only 50% of the pupil enterprises raised the company's capital using membership quotas. The other pupil enterprises resorted to more creative strategies, including loans, donations, and the sale of products. This issue was even expressed by the participants, who suggested that the program's organization should give the capital to each of the pupil enterprises (Imaginário, Cristo, Jesus, & Morais, In Press).

Other creative strategies were also used to market the "imported" products and to maximize the pupil enterprises' profit. Moreover, with the exception of the organization of or participation in events, used by 13 pupil enterprises, the companies implemented different marketing strategies. Some of the adopted strategies were quite common, such as raffles and product offers, but others were more innovative. The design of a fully functional e-commerce platform used to sell the partnership products must be emphasized (company K); however, as well as the Facebook page, this website was used more as a product portfolio than for the products' sale. On the other hand, free solutions for products' transportation between the commercial partnerships were adopted by 14 of the pupil enterprises, allowing them to save a large amount of money because the movement of goods through the Portuguese mail or carriers can be very expensive, especially when transporting heavy goods, such as jams in glass bottles.

Although all the pupil enterprises sold their products and completed their tasks, not all of them achieved the same performance and some adopted a more entrepreneurial attitude than others. Companies G, H, I, K, N, and O just carried out the required tasks to complete the program and did not develop other strategies to increase their sales and their profit

margin. In fact, analyzing the profit obtained by each pupil enterprise, it was found that company G was the only one that achieved not a profit but a loss (-€18.40).

Company G may have failed to sell most of the 232 products that it “imported,” but it was the third pupil enterprise in the number of units acquired from its commercial partner. Therefore, it was one of the companies that most demonstrated an entrepreneurial attitude towards risk taking. Moreover, this pupil enterprise was one of those that had lower production costs (approximately €0.45 per product), products with the lowest price (nearly €0.75 per product), and a good profit margin (about €0.40 per product). Considering these results, it is possible to assume that if it had sold another 60 units of the 182 unsold, it would have been able to cope with the financial loss and make some profit.

In contrast, company B was the pupil enterprise that engaged the most strategies to increase its profit, and it was the company that “imported” the most units of products from its commercial partner and had more production costs (€2,388.60), more sales (€3,128.50), and more profit (€739.90). Therefore, it is safe to consider this company as the most active, entrepreneurial, and creative pupil enterprise. In fact, during the project its responsible teacher often characterized the pupils as proactive, autonomous, and responsible; for instance, each member was actually in charge of his or her role played in the pupil enterprise and was able to act even without the presence of the teacher or the other business partners. This dynamism was eventually also reflected in its commercial partner’s activity, which achieved a more accelerated pace, and it finished its activity with a sales volume of €2,499.40 and a profit of €374.30.

Based on this performance and results, partnership 7, composed of companies B and M, was the partnership that obtained the greatest profit, a total of €1,114.4. This amount corresponds to about 33% of the profit made by all 9 commercial partnerships.

Please note that the success of the Entrepreneurship in the School Program was also facilitated by the 39 suppliers that agreed to work with the pupil enterprises. These suppliers were real companies from local businesses that sold mainly regional or traditional products. Although it is not possible to analyze the impact that this participation exerted on each supplier, it is important to note that in total the companies spent about €10,000 purchasing products from the suppliers, acquiring a total of 3,565 product units.

5. CONCLUSION

At a time characterized by an increase in unemployment and in the population’s impoverishment (Sá, 2014), entrepreneurship education seems to be a solution to the economic and social development of a society (Comissão Europeia, 2002). However, to promote entrepreneurship and creativity successfully, it is crucial for schools to adopt a more practical approach and focus on learning by doing, relegating the acquisition of knowledge to the second place (Craft, 2005).

Such entrepreneurship education activities are often implemented as programs or long-term projects, usually in an academic year, but it is not always possible to analyze their impact because many of them do not include an evaluation process (Garavan & O’Cinneide, 1994). In fact, according to an assessment of the programs implemented in Portuguese primary and secondary schools, they do not appear to promote and stimulate the creativity of young people (Thompson, Gonçalves, Medina, & Amaral, 2013).

The Entrepreneurship in the School Program intended to develop entrepreneurial and creative skills in the educational community through the creation and management of an “import/export” pupil enterprise during a school year (Imaginário, Cristo, Jesus, & Morais, 2014). A total of 281 students and 27 teachers participated in this entrepreneurial training

program, organized into 18 pupil enterprises and 9 commercial partnerships (Imaginário, Cristo, Jesus, & Morais, In Press).

Based on the good indicators obtained (Imaginário, Cristo, Jesus, & Morais, Submitted; In Press), it was considered an asset to deepen the pupil enterprises' activities that contributed to increasing their creativity skills, namely the strategies to raise capital, the strategies to sell the "imported" products, and the characterization of the economic results obtained by each pupil enterprise.

Analyzing the activities developed by each pupil enterprise, it can be concluded that they all completed the program successfully; however, attention should be drawn to the fact that not all of them achieved the same performance. While some pupil enterprises only implemented the tasks envisaged by the project, others took further steps to stimulate their activity and try to earn the maximum profit possible. For instance, most of the pupil enterprises organized or participated in events promoting their products and some organized raffles and product offers. More creatively, many of the pupil enterprises arranged free solutions for transporting the products between the commercial partnership through friends, family, or teachers, and one of the companies even developed a fully functional e-commerce platform to sell the partnership products.

Although it is not possible to relate the definition and implementation of the sales strategies to the profits, it is possible to realize that the most active pupil enterprise was the one that gained the most profit. On the other hand, one of the pupil enterprises with the least entrepreneurial attitude was the only one that suffered a financial loss.

The choice of products and, consequently, suppliers also contributed to the success of the program, because most of the pupil enterprises offered traditional products that had a great demand from final consumers. It is, however, regrettable that it was not possible to analyze the impact that acting as a pupil enterprise's supplier exerted on each provider; therefore, it is considered that in future editions of programs with the same methodology, it should be possible to work with suppliers and collect some indicators. Anyway, it should be emphasized that in total the pupil enterprises spent about €10,000 with the 39 suppliers.

The adoption of a commercial partnership methodology was identified as one of the aspects that should be improved in future editions, since, as the pupil enterprises had different rhythms of work, the companies of the same commercial partnership ended up being dependent (Imaginário, Cristo, Jesus, & Morais, In Press). However, when considering the activities developed by each pupil enterprise, especially regarding commercial partnership 7, it is apparent that this feature ended up promoting their motivation. In fact, the dynamism and proactivity of company B eventually caused company M to accelerate its pace, which made this commercial partnership the one that obtained the largest profit.

Although this study consists of more descriptive work on the activities performed by the pupil enterprises, it is considered that its analysis allows the reader to take a different look at the Entrepreneurship in the School Program and the pupil enterprises. In fact, the literature on the subject, apart from providing a few impact studies, contains no research that could provide a more detailed characterization of the work developed during such projects.

It should also be noted that all the work performed by students and teachers was undertaken simultaneously with their usually school activities, and throughout the school year there were no dropouts of pupil enterprises or teachers.

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BIBLIOGRAFIA

- Amabile, T. (1996). *Creativity in Context*. Boulder: Westview Press.
- Chaves, R., & Parente, C. (2011). O empreendedorismo na escola e o paradigma das competências: O caso da Junior Achievement - Portugal. *Sociologia, Problemas e Práticas*, 67, pp. 65-84.
- Comissão Europeia. (2002). *Final Report of the Expert Group "Best Procedure Project on Education and Training for Entrepreneurship"*. Bruxelas: Direção-Geral das Empresas da Comissão Europeia.
- Comissão Europeia. (2006). Aplicar o Programa Comunitário de Lisboa: Promover o Espírito Empreendedor através do Ensino e da Aprendizagem. *Comunicação da Comissão ao Conselho, ao Parlamento Europeu, ao Comité Económico e ao Comité das Regiões*. Bruxelas.
- Comissão Europeia. (2011). *Redução do Abandono Escola Precoce na União Europeia*. Bruxelas: Parlamento Europeu.
- Craft, A. (2005). *Creativity in Schools - Tensions and Dilemmas*. London: Routledge.
- Faria, M. (2010). Questionário de Competências Empreendedoras (QCE): Aplicação a estudantes do ensino superior. In L. Almeida, B. Silva, & S. Caires, *Actas do I Seminário Internacional "Contributos da Psicologia em Contextos Educativos"* (pp. 287-301). Braga: Universidade do Minho.
- Ferrando, M., Sáinz, M., Soto, G., Fernández, M., & Valverde, J. (2014). Resultados de un programa de innovación educativa para mejorar la creatividad del alumnado. *Revista AMAzônica*, XIV(2), 258-279.
- Garavan, T., & O'Conneide, B. (1994). Entrepreneurship education and training programmes: A review and evaluation – Part 1. *Journal of European Industrial Training*, 18(8), 3-12.
- Imaginário, S., Cristo, E., Jesus, S., & Morais, F. (2014). Educação para o empreendedorismo em Portugal, o nascimento do Programa Empreender na Escola. *Revista AMAzônica*, XIV(2), 343-362.
- Imaginário, S., Cristo, E., Jesus, S., & Morais, F. (In Press). A criação e gestão de miniempresas na sala de aula – Opiniões dos alunos e professores participantes do Programa Empreender na Escola. *Avances en Psicología Latinoamericana*.
- Imaginário, S., Cristo, E., Jesus, S., & Morais, F. (Submitted). Programa Empreender na Escola - Impacto da participação nas competências empreendedoras e criativas dos alunos: Estudo longitudinal.
- Instituto Nacional de Estatística. (2011). *Portugal em Números*. Lisboa: INE.
- Jesus, S., & Lens, W. (2005). An integrated model for the study of teacher motivation. *Applied Psychology: An International Review*, 54(1), 119-134.

- Ma, H. (2006). A synthetic analysis of the effectiveness of single components and packages in creativity training programs. *Creativity Research Journal*, 18(4), 435-446.
- Matin, B., McNally, J., & Kay, M. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28, 211-224.
- Moreland, N. (2006). *Entrepreneurship and Higher Education: An Employability Perspective. Learning & Employability - Series One*. York: The Higher Education Academy.
- Parkurbis. (2007). *B-Tech: Empresários na Escola - Percursos de Acompanhamento à Criação de Novas Empresas de Base Tecnológica*. Covilhã: Parque de Ciência e Tecnologia da Covilhã, SA.
- Redford, D. (2013). Acriação de uma estratégia nacional para a educação do empreendedorismo em Portugal. In D. Redford, *Handbook de Educação em Empreendedorismo no Contexto Português* (pp. 31-62). Porto: Universidade Católica Editora.
- Sá, V. (2014). *O Desemprego Jovem em Portugal*. (Tese de Mestrado). Coimbra, Universidade de Coimbra, Portugal.
- Scott, G., Leritz, L., & Mumford, M. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal*, 16(4), 361-388.
- Shaheen, R. (2010). Creativity and education. *Creative Education*, 1(3), 166-169. doi:10.4236/ce.2010.13026
- Thompson, D., Gonçalves, N., Medina, A., & Amaral, L. (2013). The relevance of education for entrepreneurship in Portugal – Results from the Global Entrepreneurship Monitor. In D. Redford, *Handbook de Educação em Empreendedorismo no Contexto Português* (pp. 63-84). Porto: Universidade Católica Editora.