

A Creative And Entrepreneurship Project Promotion Of Primary Schools And High Education

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ABSTRACT

With the purpose of promoting creativity and entrepreneurship behavior in primary school children and connecting it to entrepreneurship work develop in a High Education Institute with undergraduate students, Produz@ideia arise has a project that makes the link between the two type of levels of education, proposing a multidisciplinary project in multi-level type of education. This project was implemented during a year of work applying a problem-based learning perspective in both level of education and exploring the creativity and analysis implementing the methodology of the “Six Thinking Hats of Bono” with the primary education schools. By putting into action this project we pretended to prove that the empowerment that young children would embrace after the project, being creative, learning to reflect and analyze all perspectives of making things and trying and experiment how to make them, would create on them the access risk in a different way. The way of development that we used, could be audacious, but we expect students of both institutions acquire the necessary taste of not being afraid of taking chances by put into action their own ideas. On the other hand of the education level, in HEI, we tried to promote creativity on students making them to find a way to produce “crazy” ideas and trough that learn to take changes, analyze problems and find solutions and make things happen. Like this this project addresses the fundamental of entrepreneurship education at two levels of education at the same time, making it fun and successful. At the end of the project the entrepreneurship attitudes and behavior were assessed and it was possible to confirm the empowerment and the competence development in analyzing in a problem-based learning view.

INTRODUCTION

As several studies show entrepreneurship behavior is crucial for economic development (e.g. Acs et al., 2004; Baumol, 2002; or even Schumpeter, 1934). The entrepreneur behavior values creativity, takes risks, is based on an informal organizational structure concerned in formulating strategies and in identifying opportunities. Therefore, is important to create an educational system capable of collaborating with the society in which it is inserted, which can affect change-technological, social, economic – for its development, causing a greater interaction between school and society (Friedlaender, G., 2004). In this sense, we tried to create a project that did just that and also linked different stages of level of education. In doing so, we proposed to promote entrepreneurship and creativity in early age students that could also stimulate at the same time older students taking the youngsters example on creativity and innovative solutions thinking.

This project, called Produz@ideia, will start with the recognition of a necessity/ problem or getting an exist one that it's difficult to solve, goes through an objective definition and means to achieve a solution, a plan of action has to be developed, the resources have to be analyzed and accessed and it's possible to implement a process and a creation. In this way we propose to follow the thoughts of different scientists that characterize the entrepreneurship behavior and access the importance of innovation and entrepreneur attitude in distinctive, if not all, aspects of life (e.g. Mulet, 2011; Friedlaender, G., 2004; Sadler-Smith et al. 2003; Hayton, George and Zahra, 2002; Drucker, 1985).

The didactic innovation project we propose, intends to promote creativity and enhance the power of realization of dreams or ideas, while entrepreneurial skills. To be developed by professors of the Polytechnic, naturally drew a design of didactic innovation that makes the bridge between two levels of teaching basic education and high education, encouraging and using the creative potential of the students of basic education and the power of knowledge and technical realization of Polytechnic School students. In this way, Produz@ideia allows working student's entrepreneurial skills and abilities of the two levels of education.

Objectives of this project are therefore to:

- Encourage creativity in children (elementary school) and young (higher education);
- Empower the entrepreneurial attitude;
- Reduce the fear of risk, through collaboration among peers;
- Making dreams come true, making you believe in their potential for creation, always present;
- Involve the institutions of higher education and primary education.

In this paper we propose to present the methodology we applied in the implementation process of this project and the way it was operationalized, so the objectives defined could be achieved.

METHODOLOGY

These project main objectives are to motivate children to be creative and entrepreneurs since we want them to have new ideas with novelty, usefulness and appropriateness to it. In this way of thinking we decide to follow the Problem Based Learning (PBL) model because joins creativity with the process of knowledge acquisition that sustains entrepreneurship and help to develop innovative solutions. PBL stimulus people to restructure information that they already know within a realistic context to gain new knowledge and to elaborate on the new information they have learned (Kilroy, 2014). This model relies in three pillars: Ill-Structured Problem; Student-as-Stakeholder; and the Teacher as (Metacognitive) Coach. In this way it deals with the the “Ill structured problem”, that consists of a problem which is described in an ambiguous way, that needs more information research to be more clear and that can be solved in more than one way, that have different possible solutions. When we considered “students as stakeholders” we are saying that they have a significant knowledge and have to make it useful and give it a meaning and select and evaluate their options, monitoring the process towards the solution and at the same time have to defend and give evidence-driven arguments. The role of the teachers as coaches is important to guide students in an ethic perspective of the solutions definition process and help them to develop their self-awareness process of thinking and seeking information (Kilroy, 2014).

Conscientious that we are dealing with children of young age and that might be difficult for them to assume these roles we also follow the “Six Thinking Hats”, by Edward Bono, method so they could easily assume the parts as long as they had the hats on. This method, accordingly to Xerxen (2012), has two main objectives:

1. To simplify thinking, by allowing a thinker to deal with one thing at a time;
2. To allow a switch in thinking.

In this way, instead of having to take care of emotions, logic, information, hope and creativity all at the same time, the thinker is able to deal with them separately. Moreover by turning it into role-playing, the concept of the hats makes it possible to request certain types of thinking (Xerxen, 2012). The Six Thinking Hats is tailored so as to stimulate the inner creativity of participants and to help them to discover how to turn seemingly insoluble problems into real opportunities.

With this methodology in mind we defined our implementation plan to pursue the project goals.

IMPLEMENTATION

The implementation of Produz@ideia in primary schools has been develop following three different steps:

Step 1 (Primary Schools Students)

- The authors had went to the two participating schools in the city of Guarda to have short working sessions with primary student classes. While there, they had work for minimum one hour with the PBL and the Six Thinking Hats, promoting the discussion of ideas concerning different areas and their possible solutions. The Six Thinking Hats were seen as a very important part of the work by the children. In their way of thinking it was a completely different process of working. Also from our experience during this year, we feel that their participation need to be encourage to contribute with their valuable opinions. They need to feel the importance of sharing their thoughts and more important than this, the ideas could have a good value, no matter the crazy that they could be. He had ask the children to share their ideas by drawings in the end after the discussion period (Figure 1 and Figure 2)

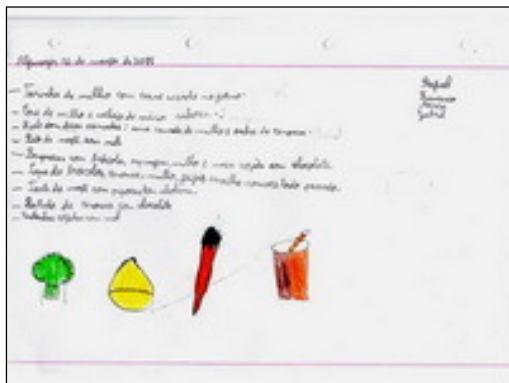


Figure 1: Drawings from the children



Figure 2: Drawings from the children

Step 2 (Young Students)

- After collecting and analyzing the ideas presented by the children, the authors separated them in several areas: food products, engineering and services. Later discussing the logistic aspects we had choose the food products area for a first experience. Then these were presented to young undergraduate students at Polytechnic of this area. They had understood them and study how they could implement them by using their knowledge and creativity. During this process of developing the idea the authors were updated time to time. Before the final meeting the food products were present and explained (Figure 3).



Figure 3: Food products test

Setp 3 (Children and Young Students)

- In the end of the year there was a final meeting in the Polytechnic facilities, here the ideas dream by the children in the beginning had appear converted into solid projects capable to be seen as final products used in our daily life.



Figure 4: Final event



Figure 5: Final event

These three steps were carry out always with the help of the authors that had supervised all the process, interfering the minimum to keep the ideas from the children and also from the students uncontaminated. This had given the necessary flavor of purity and originality that turn the project in a successful mission.

VALIDATION

The process of validation is still being developed but it is supported by an in-depth interview of the students' teachers so it's possible to observe if the children altered their behavior in the different subjects and activities realized in school in a more creativity and entrepreneur perspective. This interview is not structured so it's possible to orient the conversation to the main subject wanted. The interviewer has to have control of the conversation all the time ad keep focusing the talk to objectives questions that permit to evaluate the required behaviors. There will be some written questions to make sure that all the teachers involved have to answer them but beside these requests, the interview has to be completely free.

DISCUSSION

This year we had gone through the three steps detail previously in the two schools that were selected. In total we had near 50 children involved with 4 teachers and 15 students from our School of Tourism and Hospitality Management.

These type of new and bold projects, like Produz@ideia, always need time to be comprehended by the education system. In our case, the primary schools teachers were very enthusiastic by the participation of their students, referring the interest demonstrated during the year. Also they had state that some students start to be more engage

on making questions and declaring their own opinion, not having afraid of saying something wrong. This is very important in the point of view of the curriculum and the necessary skills and competences need to be achieved.

We are confident to say that in generally the goals were achieved, but in particular the capacity of boosting an important dosage of creativity in children (elementary school) and youngsters (HEI) was the keynote of the work done, alongside the empower of the entrepreneurial attitude. With the last two we reduce the fear of risk, through collaboration among peers, not only in the debate of ideas, but also very important, the discussion of the normal curriculum in primary schools and HEI.

Produz@ideia could be one more tool that HEI have to promote the need of changing mentalities in primary students and teachers, but also helping the older HEI students to change their mind set, preparing them to integrate the society by adapting to situations and being creative, being real entrepreneurs in action.

References

- Acs, Z. J., Audretsch, D. B., Braunerhjelm, P., and Carlsson, B. (2004). The missing link: The knowledge filter, entrepreneurship and endogenous growth. Discussion Paper, No. 4783. December. London, UK: Center for Economic Policy Research.
- Baumol, W. J. (2002). The free-market innovation machine, Princeton: Princeton University Press.
- Drucker, Peter (1985). Innovation and Entrepreneurship: Practice and Principles, Harper & Row, New York.
- Friedlaender, G. M. S. (2004). Metodologia de ensino-aprendizagem visando o comportamento empreendedor. Doctoral Thesis of Universidade Federal de Santa Catarina, Centro Tecnológico. Brazil.
- Hayton, J., George, G. and Zahra, S. (2002). National culture and entrepreneurship: a review of behavioural research. *Entrepreneurship Theory and Practice*, 26 (4), pp. 33-35.
- Kilroy, D. A. (2004). Problem based learning. *Emerg Med J* 2004;21:411–413. doi: 10.1136/emj.2003.012435
- Mulet, J. (2011), Un diagnóstico del estado de la innovación en España. *Papeles de Economía Española*, FUNCAS, núm. 27, pp. 2-12.
- Sadler-Smith, E.; Hampson, Y.; Chaston, I. and Badger, B. (2003). Managerial Behavior; Entrepreneurial Style, and Small Firm Performance. *Journal of Small Business Management*, 2003, vol. 41, n. 1, p. 47-67.
- Schumpeter, J. A. (1934). The theory of economic development, Cambridge, Harvard University Press.
- Xerxen, Shirley Pulis (2012). The Six Thinking Hats. Presentation in *Entrepreneurship in Education and Training Conference*, organized by the Danish presidency of the European Union, 17-19 of June of 2012, Copenhagen and Horsens, Denmark.