

Full Length Research Paper

Entrepreneurship Education Program: the Potential of Portuguese Students

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Abstract

Several actions to promote entrepreneurship have been carried out with the aim of providing young people with entrepreneurial skills essential to address global change and to engage in innovative activities critical to countries' competitiveness. Entrepreneurship education is based on the recognition of the importance of familiarity, during childhood and adolescence, within the context of small businesses and the ability to stimulate motivation and the attributes and skills related to entrepreneurship through educational experiences, in order to present it as a career option and promote the latent enterprise potential of young people. Although the numerous ongoing Entrepreneurship Education Programs (EEP), it has not been made an independent evaluation of their alleged benefits, especially in pre-University Education. The purpose of this study is to assess the contribution of an EEP, addressed to the Secondary education, for young participants' desire for future self-employment and for the development of attitudes towards characteristics commonly associated with entrepreneurship, including achievement motivation, personal control, creativity, leadership and intuition. To collect data, a questionnaire was completed by students participating in the *EMPRE Program – Entrepreneurs at School* in five secondary schools in the interior of Portugal in the academic year 2009/2010, obtaining 182 answers. It was used a control group for comparison of results. In opposition to previous research conducted abroad, we didn't find evidence that participation in the EEP can foster positive attitudes toward self-employment since the preference of the Portuguese youths, in terms of a career choice, has to do with their professional exercise as employees. However, the study found that participants in the EEP displayed greater enterprise potential than nonparticipants, pointing to the need for an extended discussion on the suitability of the methodology behind the EEP. Furthermore, the study highlights the relevance of cultural context in the development of enterprise potential, recommending a more aware transference of EEP to diverse cultural environments.

Keywords: Entrepreneurship, education, latent enterprise potential, attitudes.

Introduction

The rising unemployment rate and the increasingly uncertain labour market are among the reasons that have given rise to the numerous actions promoting entrepreneurship (Lee & Wong, 2005; Simões, 2010; Simões *et al.*, 2014; Morais *et al.*, 2014; GEM, 2013) in the European Union. Additionally, the phenomenon of globalization and the consequent obligation to make Europe more competitive has turned the development of an "entrepreneurial culture" into a political imperative (Gibb, 2002).

Young people must be prepared for the unlikelihood of having a job for a lifetime and many will experience periods of unemployment. Thus, they will have to use their abilities to create their own jobs and accept self-employment as a viable life project (Gibb, 1987, 1993, 2002; Hitty & O'Gorman, 2004; Morais *et al.*, 2014; Daniel *et al.*, 2015).

The main purpose of this research is to evaluate the influence that participation in the Entrepreneurship Education Program (EEP) *EMPRE – Entrepreneurs at School* had on students' attitudes towards self-employment and their enterprise potential, using the Attitudes Toward Enterprise (ATE) test, developed by

Athayde (2009). The EEP *EMPRE*, designed from de EJE Program (*Empresa Joven Europea*), developed by *Valnalón*, a Spanish public company, was applied in Portugal in the academic year 2009/2010 in 5 secondary schools and comprises the creation and management of a company in school during an academic year. This methodology is frequently used in EEP because it is understood that the small business provides a context of uncertainty demanding entrepreneurial behavior which will be stimulated through a learning environment that promotes discovery and learning by doing (Gibb, 1993). The present article is organised into four additional chapters. Chapter 2 presents an analysis of the EEP, to better understand the importance of their evaluation, and a review of some research previously developed on EEP evaluation. Chapter 3 describes the data collecting procedures and the research methodology. The results and its comparison to preceding studies are revealed in Chapter 4, followed by the discussion of results and principal conclusions, in Chapter 5.

Literature review and hypotheses

Entrepreneurship education

It seems there is no consensus about what entrepreneurship entails (Fatoki & Chindoga, 2011; Hansemark, 1998; Daniel *et al.*, 2015) and what is involved in the pursuit of an entrepreneurial culture (Gibb, 1987, 2002; Morais *et al.*, 2014).

In an educational context, entrepreneurship can be properly defined as a set of enterprising behaviours supported by certain skills and attributes. Those behaviours can be displayed in several circumstances and organisations (Gibb, 1987, 1993, 2002; Hytti & O’Gorman, 2004; Lee & Wong, 2005; Daniel *et al.*, 2015).

It is believed that entrepreneurship education is closely connected to the development of an entrepreneurial culture which recognizes the values of competitiveness, innovation and creativity (Gibb, 1987; Lee & Wong, 2005; Simões, 2010; Simões *et al.*, 2014). Entrepreneurship education at the pre-college level is considered a multifaceted education and pursues comprehensive goals (Gibb, 1993; Hansemark, 1998), such as the encouragement of fundamental skills, essential to address the current labour market and cope with the global change (Gibb, 2002; Hitty & O’Gorman, 2004).

According to Walstad & Kourilsky (1998) and Daniel *et al.* (2015), it is particularly important to deliver entrepreneurship education at early ages, providing educative experiences, in order to encourage potential entrepreneurs, promote an enterprising culture and improve the perceived desirability and feasibility for entrepreneurship. Furthermore, it is useful to introduce youths to entrepreneurship as a career option, since it is during schooling years that they begin to think about professional future (Walstad & Kourilsky, 1998; Westhead *et al.*, 2000; Peterman & Kennedy, 2003).

The need for evaluating the EEP

In order to properly defend the use of EEP, it will be necessary to evaluate their effect on students’ behaviours (Gibb, 2002). Although there is evidence that teachers in the classroom are able to monitor the development of such behaviours (Gibb, 2002), the assessment of the outcomes of EEP generally rely on participants’ opinions, a procedure that has several limitations (Westhead *et al.*, 2000), or the simple monitoring by the promoting organisations (Athayde, 2009). Nevertheless, there is an urgent need to effectively measure the impact these programs have, to ensure that their objectives are achieved (Lee & Wong, 2005), since the haste with which they are being implemented have not yet permitted to evaluate their effectiveness (Gibb, 1987; Athayde, 2009).

Peterman & Kennedy (2003), in Australia, and Athayde (2009), in the United Kingdom, found that the participation in an EEP promoted young students’ desire for self-employment. Peterman & Kennedy (2003) recorded changes in perceived venture desirability and feasibility, arising from participation in the EEP. Westhead *et al.* (2000) assessed the contribution of an EEP to participants’ attitudes towards self-employment compared to non-participants, suggesting that additional longitudinal studies should be conducted in cultural and economic different environments.

Attitude theory vs. trait theory

Models based on personality traits were previously used to explain the entrepreneurship process, having been disregarded by Robinson *et al.* (1991), Krueger & Brazeal (1994), McCline *et al.* (2000), Peterman & Kennedy (2003) and Athayde (2009), who share the attitudinal approach to entrepreneurship.

Gibb (1993) supports that some characteristics of entrepreneurial behaviour are not fixed personality traits and thus can be acquired via experience and training. According to the contingency theory of entrepreneurial behaviour implicit in the former approach, entrepreneurial behaviour can be induced and/or enhanced by the environment. This was also reinforced by Littunen (2000), by Simões *et al.* (2014) and by Morais *et al.* (2014), who realized that entrepreneurial characteristics evolve throughout the entrepreneurial process. Intentions model focusing on attitudes and their antecedents was used by Krueger & Brazeal (1994) and Peterman & Kennedy (2003).

Robinson *et al.* (1991) identified four of the numerous attitudes commonly associated, in the literature, with entrepreneurship (need for achievement, locus of control, self-esteem and innovation) and developed the Entrepreneurial Attitude Orientation (EAO) scale.

McCline *et al.* (2000) updated the EAO scale including additional constructs to measure attitude to risk willingness and attitude to opportunity recognition, presenting a more extensive measure of the entrepreneurial orientation. Their efforts were followed by Athayde (2009) who developed the ATE test.

Latent enterprise potential and dimensions of the entrepreneur

Krueger & Brazeal (1994; GEM, 2013) presented the notion of entrepreneurial potential and distinguished between the entrepreneurial potential and the intention to become entrepreneurial since potential entrepreneurs do not need to have a clear intention toward starting a business; their potential (pre-existing preparedness to

The model developed by Athayde (2009) that supported the ATE test was used in the present investigation (Figure 1).



Source: adapted from Athayde (2009)

Figure 1: Model of latent enterprise potential in young people

Entrepreneurs' demographic characteristics

Entrepreneurial motivations are strongly related with having a role model, as revealed by several studies (Walstad & Kourilsky, 1998). Auken *et al.* (2006; GEM, 2013) stated that role models can affect the entrepreneurial intentions and career choice because of their influence on perceptions about one's ability to be successful in a new venture. According to Athayde (2009) and Simões (2010) the existence of family antecedents with businesses of their own is one of the aspects influencing the propensity to venture creation.

Regarding the effect of gender differences on students' entrepreneurial attitudes, Kourilsky & Walstad (1998), Athayde (2009), Dabic *et al.* (2010) and Daniel *et al.* (2015) concluded that boys seem to be more willing to start a business than girls. Ethnic background is another demographic characteristic listed in the literature on entrepreneurship. Walstad & Kourilsky (1998) revealed that black youths expressed a stronger interest in starting a business of their own than white youths. This was corroborated by Athayde (2009).

The type of school attended was presented by Athayde (2009) as influencing students' enterprise potential. She found that private schools' pupils scored higher at the ATE test than those at public schools, confirming prior investigation mentioned by her.

Entrepreneurship and culture

The assertion that some societies show greater predisposition toward entrepreneurship than others, led

accept an opportunity) "is latent and is causally and temporally prior to intentions" (Krueger & Brazeal, 1994).

Using the model of Krueger & Brazeal (1994) with the necessary adjustments due to the target population of her investigation (young people at school) Athayde (2009) introduced the notion of latent enterprise potential as a "constellation of attitudes" toward five dimensions commonly associated with entrepreneurship: creativity, personal control, achievement, intuition and leadership (Athayde, 2009).

Thomas & Mueller (2000) to question the relevance of culture on the potential for and frequency of entrepreneurship. They observed the prevalence of four characteristics (risk-taking, locus of control, innovativeness and energy level) in different cultural settings, in order to comprehend whether culture, representing the value system of a society, affects the development of the entrepreneurial potential in different societies. They also intended to verify if the existing entrepreneurship research, mostly generated in the United States, United Kingdom and Scandinavia, would apply in different cultural contexts. Results showed that only one of the traits observed (innovativeness) doesn't vary systematically between cultures, strengthening the above assertion (Thomas & Mueller, 2000).

Based on Max Weber's work on Protestant work ethic, in which he argues that cultural and religious factors explain differences in entrepreneurial activity between societies, McClelland (1961) held that the need for achievement is determined by some societal factors, such as parental influences, and determines the entrepreneurial propensity within a society.

Rego (2004) found that, despite the recently growing achievement motive, there is still a propensity for affiliation in Portuguese motivational profile, consistent with the pattern drawn by McClelland (1961) about Portugal. With regard to Hofstede's cultural dimensions, Rego (2004) pointed out that the Portuguese pattern is symmetric of the cultural pattern drawn to Great Britain (and the United States), considering the position of each country in the model of Hofstede (1980, 1991) (Table 1).

Table 1: Cultural indices on Hofstede's model (1991)

Country	Hierarchical distance	Individualism	Masculinity	Uncertainty control
Portugal	63	27	31	104
Great Britain	35	89	66	35

Portuguese national culture doesn't encourage risk-taking and individual responsibilities and therefore restricts the level of entrepreneurship. So the population is perceived as having low entrepreneurial propensity (GEM, 2004; GEM, 2013).

The importance of cultural issue adds another challenge to the entrepreneurship teaching process, since pupils apprehend lessons in different ways depending on the cultural context in which they are (Gibb, 2002).

Based on the Literature Review and on the research of Athayde (2009), the hypotheses to be tested were:

H1: Participants in the EEP are more willing than nonparticipants to run their own business in future.

H1a: Participants in the EEP will score higher in the ATE test than nonparticipants.

H2: Male and female students will differ in their desire for business ownership.

H2a: ATE test scores will differ between male and female students.

H3: Pupils with at least one self-employed parent and those with none will differ in their desire for business ownership.

H3a: ATE test scores will differ between pupils with at least one self-employed parent and pupils with none.

H4: Pupils from different ethnic backgrounds will differ in their desire for business ownership.

H4a: ATE test scores will differ between pupils from different ethnic backgrounds.

H5: Pupils at private schools and those at public schools will differ in their desire for business ownership.

H5a: ATE test scores will differ between pupils at private and public schools.

H6: Pupils with at least one parent with experience of emigration and those with none will differ in their desire for business ownership.

H6a: ATE test scores will differ between pupils with at least one parent with experience of emigration and those with none.

H7: Pupils with repeated exposure to EEP and those with only one participation will differ in their entrepreneurial intentions.

H7a: ATE test scores will differ between pupils with repeated exposure to EEP and those who have participated just once.

H8: ATE test scores will differ between Portuguese and English pupils.

The first hypothesis was concerned with how the participation in the EEP contributed to pupils' desire of running their own business in the future.

Hypotheses 2, 3, 4, and 5 were intended to evaluate the influence of demographic characteristics on pupils' intention to create their own job. Hypotheses 2a, 3a, 4a and 5a were developed to assess the impact of those demographic characteristics on youths' latent enterprise potential, measured by the ATE test.

Shapero (1975) suggests that important life events, such as migration, may provide increased entrepreneurial activity. Given that emigration leads to the assimilation of the host society's cultural characteristics by the migrant (Acculturation) so that he can integrate himself into that society, and given the presence of a not insignificant percentage of Portuguese young students whose parents are or were emigrants, and given the influence of behavioural models on entrepreneurial intentions, hypothesis 6 was intended to check the effect of parents' experience of emigration on pupils self-employment motivation.

Hypothesis 6a was advanced to assess the impact of the previous factor on students' latent enterprise potential, as measured by the ATE test. Hypothesis 7 was designed to investigate the influence of repeated exposure to EEP on youths' desire to become self-employed and hypothesis 7a was intended to assess the contribution of repeated exposure, based on the ATE test scores.

Hypothesis 8 was advanced to evaluate whether national culture influences the latent enterprise potential of young people, measured by the ATE test.

Data and research methodology

Research methodology

We first identified, by consulting the *EJE* website (<http://www.valnaloneduca.com/eje/>), the Portuguese schools where the *EMPRE* Program had been offered in the academic year 2009/2010, and the 229 participants, defining the test group. It was used a control group for comparison of results, drawn from the same schools as participants and matched in terms of type of school, school grade and gender.

To collect data, a self-administered questionnaire was mailed to the participant schools' Principal (Table 2) to be completed in the classroom by students. The high response rate obtained ensures that a representative sample of participants was incorporated in the research. This and the use of a control group permits to overcome several limitations of training evaluations (Westhead *et al.*, 2000; Athayde, 2009).

Table 2: Questionnaires sent to the schools

School - Place	Questionnaires Sent		Questionnaires Received	
	Participants at EEP	Non participants	Participants at EEP	Non participants
School – Mação	49	44	34	34
School - Tramagal	20	20	18	14
Solano Abreu's School – Abrantes	104	109	93 (88 valid)	90
Miguel Almeida's School – Abrantes	29	31	16	31
Vizela's High School – Vizela	27	25	26	5
TOTAL	229	229	187 (182 valid)	174

The questionnaire was designed and previously tested by Athayde (2009). It was translated and properly adjusted in its second part to the Portuguese social and educational systems.

The first part of the questionnaire consists of the ATE test itself. The second part of the questionnaire aims to gather information on a range of demographic characteristics of the respondents (age, gender, ethnic backgrounds, type of school attended, school grade, parents' type of work, qualifications and emigration

experience) and their qualification and career expectations. It was also included one last question asking whether the students had been previously exposed to an EEP.

Data

There were 184 male and 172 female respondents (Figure 2) ranging in age from 13 to 21 with a median age of 15.5 years old.

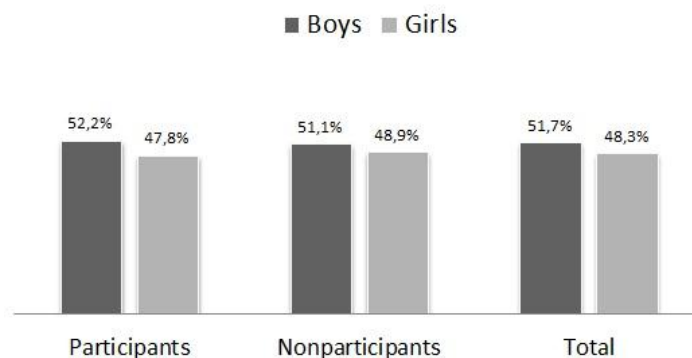


Figure 2: Answers by gender of respondents

182 respondents (51.1% of total respondents) had participated in the EEP, and the control group consists of 174 nonparticipants (48.9%) (Figure 3).

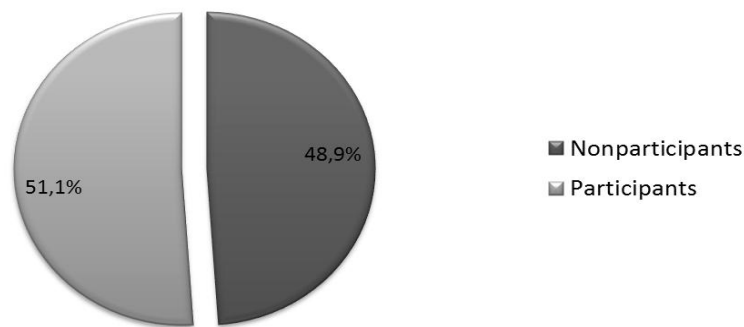


Figure 3: Answers by participation in the EEP

325 respondents attended one of the 4 public schools in the study and the remaining 31 went to the only private school (Figure 4).

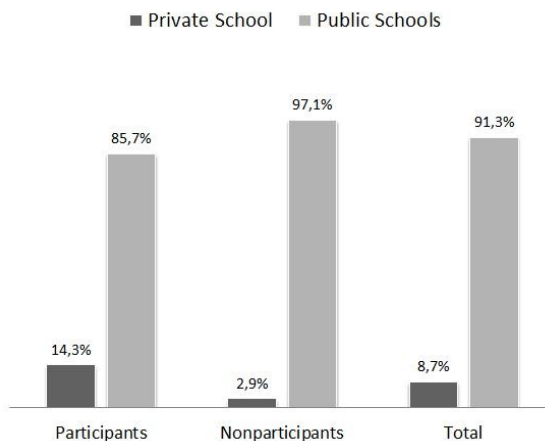


Figure 4: Answers by type of school attended

Concerning the ethnic background, the test group and the control group have a similar structure, with approximately 96% whites. The other ethnic groups considered are negligible. About the parents' present

type of work, only the minority of the students has at least one self-employed parent. Most students' parents, participant or not, aren't self-employed (Figure 5).

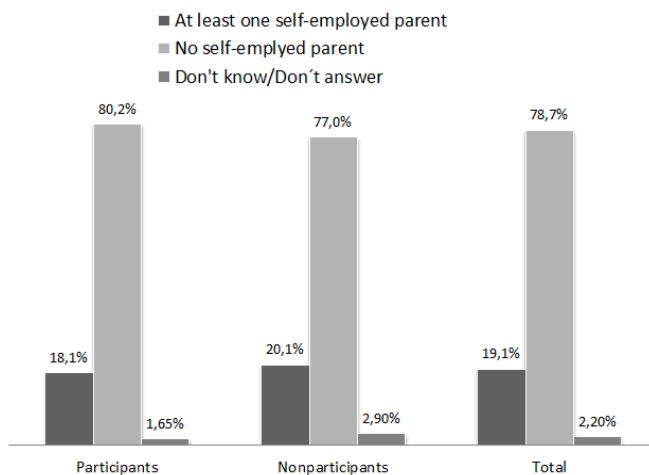


Figure 5: Answers by parents' present type of work

Concerning parents' emigration experience, the majority do not have that experience. Approximately one quarter

of the students mentioned that one (or both) of their parents has emigration experience (Figure 6).

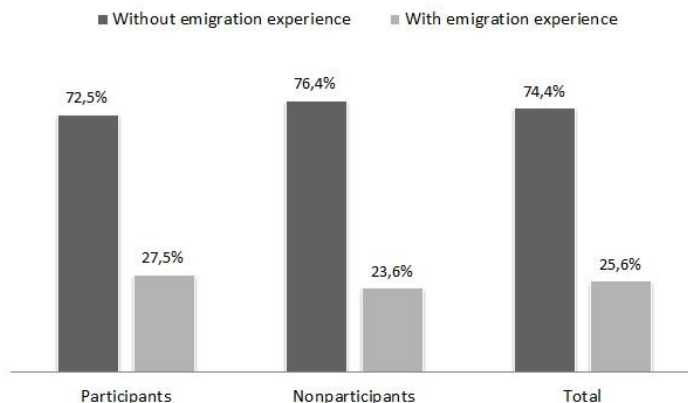


Figure 6: Answers by parents' experience of migration

We found that most of the students of the sample (71.9%) had no previous experience in EEP and 28.1% of the respondents were repeating the experience.

Amongst the 174 subjects of the control group, only 13 (7.5%) had already participated in an EEP. It appears then that most of the students with previous experience

in EEP took part again and therefore there can be a cumulative effect of repeated exposure to EEP for them

(Figure 7).

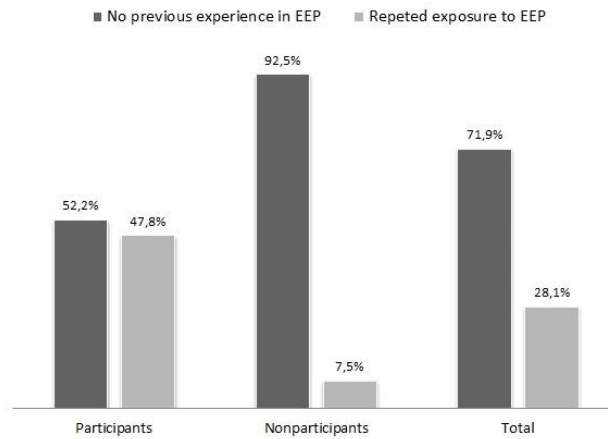


Figure 7: Answers by previous experience in EEP

Results

It was hypothesized that the desire for self-employment would be influenced by demographic attributes and participation in the EEP (hypotheses 1 through 7). In order to test the significance of the above independent variables on the dependent variables – career options at

21 years old (working to a large organisation, working to a small business, having own business, working in a profession and being unemployed) – it was conducted a multiple analysis of variance, using the General Linear Model Multivariate Procedure. None of the independent variables were statistically significant at the 5% level to the career options (Table 3).

Table 3: Box's Test of Equality of Covariance Matrices

Box's M	168.746
F	1.090
df 1	135
df2	11404.887
Sig.	.225

Since there is no significant bias across groups' distribution and the sample has more than 30 subjects, we chose to perform a parametric test – the *T*-test for equality of means. We have concluded that there is no statistically significant difference between participants and non-participants in each career option, particularly in self-employment option (Sig. = .512), and then the hypothesis 1 is rejected. Furthermore, hypotheses 2, 3, 4, 5, 6 and 7 are also rejected because we cannot assume a statistically significant difference between groups formed on the basis of provided demographic factors, regarding the desire for self-employment.

Hypotheses 1a, 2a, 3a, 4a, 5a, 6a and 7a concern the enterprise potential of young people, measured by the ATE test scores, taking into account participation in the EEP and demographic variables. Data on the dependent variable – enterprise potential – were checked for normality, which was rejected. An analysis of variance was calculated using the 7 factors listed (Table 4) as independent variables and the ATE test scores as the dependent variable. None of the independent variables were statistically significant for ATE test scores at the .05 level but, at the .10 level we cannot reject the hypothesis that the participation in the EEP is significant for ATE test scores.

Table 4: Analysis of Variance - Results for ATE test scores

ANOVA Table (Between-Groups)

Independent variables	Results at ATE test		
	Sig.	Group	Mean
Participaton in the EEP	.088	Nonparticipants	152,0000
		Participants	154,5604
Type of school	.280	Private	155,9355
		Public	153,0585
Gender	.185	Girls	154,3372
		Boys	152,3478
Ethnic background	.365	White from Portugal	153,5000
		Nonwhite/other nationality	150,8846
Self-employed parent	.548	No	153,4036
		Yes	154,5441
Migration experienced parent	.924	No	153,3509
		Yes	153,1868
Previous participation in EEP	.183	No	152,6836
		Yes	154,9100

Although we had large groups, normality was rejected, which led us to performed the Mann-Whitney U nonparametric test to compare median values between participants and nonparticipants. The conclusion was to reject the hypothesis of equality of medians (Sig. = .021), meaning that there is statistical evidence to sustain that the ATE test scores differ depending on whether the student had participated in the EEP (median = 156) or not (median = 153), confirming hypothesis 1a.

Mann-Whitney U was still performed to compare median values of ATE test scores between groups formed on the basis of demographic characteristics and previous participation in an EEP. We have decided not to reject the equality of median values. So, the hypotheses 2a, 3a, 4a, 5a, 6a and 7a are rejected. Will also be noted that hypothesis 8 showed no statistical significance.

Conclusions, Limitations and future directions

This research, unlike previous studies (Robinson *et al.*, 1991; Peterman & Kennedy, 2003; Athayde, 2009), didn't find evidence that the participation in the EEP *EMPRE* positively influenced the Portuguese students' intention to start their own business.

The ATE test scores, measuring the latent enterprise potential of youths in this research, didn't prove to vary with the provided demographic factors. Those scores seem to vary only slightly with the participation in the EEP: the students who had participated in the EEP scored statistically higher than nonparticipants, presenting then a greater enterprise potential. This finding supports the results obtained by Athayde (2009). However, in our investigation, participants in the EEP don't reveal the intention of creating their own business, despite their greater enterprise potential. It is important to understand that circumstance in future research, mainly the likelihood of its relation to the perception of adverse contextual factors, as the idea that setting up a business involves too complex and time consuming procedures, or that the tax burden is too heavy for Portuguese companies, or even that it is difficult to access financial support (GEM, 2004; GEM, 2013; Dabic

et. al., 2010; Fatoki & Chindoga, 2011). It would be worthwhile to study how the above circumstance is the consequence of the stigma of business failure typifying the Portuguese society, or the non-inclusion of entrepreneurship and business creation thematic into educational curricula, or even the inadequacy of teaching approaches.

Therefore, we can be facing the possibility of a leakage of the Portuguese youths' potential and the resources spent by schools and EEP's promoters that, judging by the intentions expressed by students, will not have the desired returns in terms of business creation. Encouraging is the assumption that raising the students' enterprise potential will normally allow them to meet the challenges of the current market labour (Walstad & Kourilsky, 1998; Gibb, 2002; Hitty & O'Gorman, 2004).

It is of note that the Portuguese students' preference in terms of future career option goes to a professional occupation rather than working in a large organisation or a small business, or even being self-employed. This finding might mean that young people appreciate the fact of having a profession, provided that it is exercised as an employee. Hence, there is an important work to be done by teachers and, specifically, by trainers in vocational courses, in promoting the desire for self-employment.

One limitation of our study may be the circumstance that participants in *EMPRE* Program could have a predisposition towards entrepreneurship prior to their participation, since this was on a voluntary basis. Another limitation has to do with the impossibility of conducting a longitudinal study that would allow monitoring the same individuals before and after their participation in the EEP. This would have ensured compliance with the main recommendations for training evaluations' design, referred by Athayde (2009).

To conclude that the EEP implemented in Portugal have a meaningful contribution to influence youths' intention to start their own business, such as in other countries where those programs were successfully undertaken, it will be necessary to evaluate other programs, similar in objectives but distinct in terms of methodology, using the ATE test. Any discrepancies in

results achieved in Portugal and abroad may be due to the national culture or the way the programs are implemented, particularly with regard to the specific training of teachers assigned to conduct those programs (Fatoki & Chindoga, 2011) and the monitoring provided by technicians from the EEP promoters.

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