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**IMPACT ASSESSMENT OF ENTREPRENEURSHIP EDUCATION IN AFRICAN SECONDARY SCHOOLS:
AN EVIDENCE-BASED CASE OF SUCCESS IN ANGOLA**

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Impact evaluation and evidence-based results are among the most important contributions that researchers on entrepreneurship education can make. Reliable data on secondary schools programs in developing countries, especially in the African context, are rare. This paper is an impact evaluation of the pilot implementation from 2009 to 2013 of the United National Industrial Development Organization (UNIDO) and the National Institute of Research and Development in Education (INIDE)'s "Program for Entrepreneurship Education in Secondary Schools in Angola" (PEC).

The Program for Entrepreneurship Education in Secondary Schools (PEC) began as part of the curricular reform underway on behalf of the Ministry of Education, and was developed in three stages: a) development of concepts and methodologies; b) experimentation in selected schools; c) monitoring and evaluation; d) launch at a national level. The objectives of the program include the development of entrepreneurial skills among adolescents and youths, to help contribute to a sustainable private sector, and to play a significant part in the fight against poverty in Angola.

The evaluation used a sample of three provinces involved in the Program for Entrepreneurship Education in Secondary Schools and one control province, and was conducted during the week of November 3 to 10, 2013. The development of the sample was based on (i) the pilot provinces; (ii) the program's interventions in the selected schools of those provinces; (iii), and the individuals or communities that benefitted from those interventions. The questionnaire was applied to 650 students.

The questionnaire included more than 20 questions and used various behavioral characteristics of a person's potential and their understanding of the key concepts associated with entrepreneurship (Kourilsky and Esfandiari, 1997; Hunt, 2003; Peterman & Kennedy, 2003). We used the responses to look at aspects of young people and the positive image of themselves, as well as the desire to exercise and rely on their judgment and their ability to resolve difficulties as an expression of their entrepreneurial ability at an early age (Rosendahl Huber et al., 2012). The questionnaire looks at entrepreneurial activity and reflects on the construct of self-efficacy, and more specifically their perception and confidence in their abilities to control and influence their own surroundings and success. (Alvarez & Jung, 2003; Bandura, 1977; Ehrlich et al., 2000; Frank et al., 2005; Galloway et al., 2005; Lans et al., 2005; Moberg, 2013; Rosendahl Huber et al., 2012).

The results show that the students in the PEC have a greater sense of self-efficacy and higher levels of self-confidence, as well as reinforced knowledge of entrepreneurship, skills, attitudes and entrepreneurial intentions, when compared to the control group. Teachers and school administrators verified that the materials and curricular manuals supplied were in line with the needs of the students and adapted to the Angolan context. It was observed that the grades of the students in the PEC did not suffer as a result of the introduction of the entrepreneurship discipline.

The Global Entrepreneurship Monitor special report on Entrepreneurship Education and Training (GEM, 2010) noted that training appears to double intention rates, though not activity (business creation) rates, in factor-driven economies. (p.36) In this study, this tendency did not hold true. Not only is there a 19.6% difference in entrepreneurial intentions between the control group and the PEC group, there is notably a 12.3% difference in students who have created their own businesses. As the PEC program is compulsory in the schools where it has been implemented, these increases reflect closely the differences made by the program and do not reflect any of the self-selection bias that is prevalent in other entrepreneurship education research in programs where people have chosen to enroll and it is more difficult to attribute higher rates to the results of having participated in the program.

The levels of awareness of entrepreneurship were found to be very high among students from the control group (93.8%). Interestingly, of those students that participated in PEC only 40.2% said that they had heard of entrepreneurship before the course. In Angola, entrepreneurs are celebrated figures. On the average nightly newscast there are regular reports on entrepreneurial activity. It has been found previously that in efficiency-driven economies, effects on awareness and attitudes have been rather muted (GEM, 2010).

The question of where schools are supportive of a student's desire to be entrepreneurial has been researched and is seen as very important factor for the development of entrepreneurship education (GEM, 2010). In large majority both the control group (85.1%) and the PEC group (92.4%) feel that their schools should encourage students to create their own business and feel that word "entrepreneur" has something to do with them (85.8% and 86.8% respectively). However, whereas 92.4% of students in PEC feel that their school encourages them to create their own business, only 36.3% of students in the control group are of the same opinion.

According to the GEM (2012), 38% of the Angolan population has a “fear of failure” (p.23). This fear of failure is, generally, more prevalent in developed economies. However, the rate in Angola is nearer to the rate in Portugal (39.6%) and elsewhere in Europe than it is to the other sub-Saharan African countries (GEM, 2011, p.8). At a general level, entrepreneurship education doesn't seem to have an evident outcome in helping students deal with failure. Despite this, 66.2% of the PEC students recognize that their teachers “help us learn from our mistakes”.

The students involved in PEC showed a greater commitment to their “sense of community”, and to their part in society. Some 90% (83% in the control group) strongly agree that entrepreneurs are important for communities. This “sense of community” is also visible in the reasons to open a business. Doing it to improve life is rated higher than opening a business to earn money (62% strongly agree with the first and 48% with the second), while in control group is the opposite (58% and 65%). Also PEC students feel more support from families when it comes to creating a business (91% in PEC, 84% in control group). Families supported the students, and were even able to benefit from the fact that they were more prone to creating a business, or to run a business already, alone or with others. This greater involvement of families in the school life of the students improves inter-family relationships and reinforces savings-oriented behavior.

The conclusions point to the potential to boost results from the timely distribution of manuals and training plans for teachers. The materials should be made relatively flexible so as to not overly structure a discipline that promotes creativity and innovation. In pedagogical terms the recommendation is for greater coordination with other disciplines, to increase the impact of the activities developed in the area of entrepreneurship. In order to bolster entrepreneurship in secondary education further support for schools is needed, as well as more partnerships, to allow for the longitudinal oversight of the students. The evaluation of the roll out of the program should, from the beginning, include a baseline study and, the diverse programs of support for entrepreneurship should be integrated into a national strategy.

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