

**Changing students' mindset towards entrepreneurship with experiential learning:  
experience from Peru**

**Abstract**

This article reports on an experiential learning experiment conducted among MBA students at the Universidad del Pacifico, Lima, Peru in 2012. Student groups of 3 to 5 people were given the task to create an entrepreneurial business with a CSR twist within 7 days. 20 Soles, approximately \$7 seedbed funding, were provided for each group. A group of 120 students participated in the learning experiment, a control group of 67 students just followed the traditional, case-based, course teaching about CSR and entrepreneurship. A baseline survey as well as post-course/experiment investigation were complemented by a follow-up meeting with the students. The underlying aim was to see the effect of experiential learning on students' entrepreneurial mindset. After stating that experiential learning had a higher impact on the intention to start a business we constructed a survey, based on Alain Gibb's work on entrepreneurial behaviours, entrepreneurial values, entrepreneurial competencies and entrepreneurial outcomes, to understand what factors could have influenced students to change their mind from willing to work in a multinational company to wanting to become entrepreneurs. We built a Probit model to analyse which factors can help understand changes in entrepreneurial intention of the student learners. The quantitative data analysis showed that the experiential learning experiment triggered a change in the entrepreneurial intention of the MBA students and raised significant awareness of their intrinsic entrepreneurial qualities.

**Keywords**

Entrepreneurship; experiential learning; Peru

## **Introduction**

Entrepreneurship is widely assumed to have a range of positive social and economic consequences. Accordingly, many different stakeholders, including governments, educational institutions and policy-makers aim to advance entrepreneurial thinking and behaviour in local, regional and national contexts. The development of an entrepreneurial mindset is also sought for the student population, carrying as they do the potential to revitalize economies as spaces driven by entrepreneurial, innovative and creative leaders. Given this, it is considered crucial to enhance students' awareness of what entrepreneurship involves. Some might say there is even a need to introduce entrepreneurship courses into every degree programme, to encourage and maintain an entrepreneurial culture (European union, 2013).

In practice, while recognition is growing that entrepreneurship is vital to economic and social well-being and many entrepreneurship teaching initiatives exist world-wide, we have still not found any reliably proven method of encouraging an entrepreneurial spirit through teaching. Arguably, entrepreneurship education requires non-traditional teaching approaches, to do justice to the heterogeneity of entrepreneurship and entrepreneurs. Moreover, as Fletcher and Watson (2006) emphasise, entrepreneurship is about processes of creativity and innovation, both of which are very different processes to the type of teaching and learning involved in the traditional case study and business plan teaching that we employ in our business schools.

Whereas information on entrepreneurship teaching initiatives is publicly available in developed countries, even if limited in extent, very little is known about entrepreneurship education in emerging economies and in particular in Peru. Accordingly, here we report on a practice-based entrepreneurial experiment that was conducted at the top-tier Business School, Universidad del Pacifico in 2012-2013. The project, 'creating an entrepreneurial business with a CSR twist in 7 days', was accompanied by a baseline survey conducted before the experiment, a post course survey and a feedback session at the end of the experiment. Using Z-test, Fisher test and a probabilistic model we show how experiential learning can be particularly potent in stimulating a change in career intentions towards entrepreneurship. We highlight the role of experiential learning in creating the learner's awareness of, what we posit to be, his/her intrinsic entrepreneurial abilities, which can potentially lead to increased entrepreneurial intention.

## **Theoretical background**

As Bird (1988), Katz and Gartner (1988) as well as Krueger and Brazeal (1994) suggest, entrepreneurship represents planned, intentional behaviour and thus lends itself to research using formal models of intentions. As it is from our contexts that we learn our beliefs, attitudes and assumptions about the world, so Krueger and Brazeal (1994) suggest that we should also focus on learned beliefs about starting a business if we are to understand associated perceptions.

In recent years a number of empirical studies have linked the TPB or the MEE with entrepreneurial intentions and behavior (e.g., Brännback et al., 2006; Gasse et al., 2006; Klapper & Léger-Jarniou, 2006; Kolvereid, 1996; Krueger, Reilly & Carsrud, 2000; Liñán 2008; Tegtmeier 2006, 2008; Zumholz, 2002). To the extent that entrepreneurial activity represents a

planned, intended behavior (Katz & Gartner, 1988), so does the application of formal intentional models make sense (Krueger & Brazeal, 1994; Tegtmeier et al. 2009).

Departing from much literature that focuses on students' perception of entrepreneurship and intention, Fayolle (2000) questioned entrepreneurship programme managers from 25 French "Grande Ecoles" as experts about their perceptions of the overall impact of entrepreneurship courses on students' inclinations to start a business, distinguishing between a direct and an indirect impact. In comparison, Klapper and Léger-Jarniou (2006) compared entrepreneurial intentions of French higher education students at three different establishments: (a management Grande Ecole, an engineering Grande Ecole and a university) using the MEE. They found that most of the students wanted to work in large organizations and were not intending to create a new company or work in a family business. There were significant differences, however, between management and engineering students in terms of their entrepreneurial environment, which may affect their attitudes to new business creation. The authors concluded that, while enforced learning through entrepreneurial courses and seminars may initially be off-putting, such initiatives may have longer-term beneficial impacts on entrepreneurial intentions.

Longitudinal studies tend to reveal whether entrepreneurial intentions and their influencing factors change throughout time (Tegtmeier et al., 2009). In particular work done by Audet (2004), Cooper and Lucas (2007), as well as Tegtmeier (2007, 2008), who focus on different programmes and tools at universities of different countries, falls into this category. Audet (2004) compared two pedagogical approaches, a course in business planning and a field study seminar of an SME at Concordia University, Montreal, in terms of their impact on entrepreneurial intentions. The course was compulsory for all students of business administration. Measuring the constructs perceived desirability and perceived feasibility as well

as entrepreneurial intentions, Audet found that the business planning course influenced the students' entrepreneurial intentions significantly, however in a negative direction.

## **Research Design**

In this study we focused on the impact of a practice-orientated experiential learning tool, a seven day entrepreneurial project which included a CSR dimension, conducted among MBA students at a Peruvian University in Lima. We follow Kolb (1984) in that we assume that individuals learn through concrete experience, reflective observation, abstract conceptualization, and active experimentation, with “experiential learning” characterized as “knowledge that results from the combination of grasping and transforming experience” (Kolb 1984, p. 41, read in Kolb & Boyatzis, 1999). Entrepreneurship education employs experiential learning mainly as a means to develop decision-making and critical thinking skills, involving students in direct experience with launching venture start-ups, elaborating business plans and meeting with confirmed entrepreneurs (Solomon, Duffy & Tarabishy, 2002). Such learning is different from traditional classroom learning (Corbett, 2005; Cooper, Bottomley, & Gordon, 2004). According to these authors, learning by doing allows students to explore and challenge the limits of their knowledge, beliefs and representations, and therefore develop their ability to identify new and original solutions while also engaging them to explore “what is unknown.”

The 20 Nuevos Soles Experiment conducted at the Universidad del Pacifico during the period Summer 2012 to Summer 2013 was an example of experiential learning where students were asked to perform as entrepreneurs for a week, i.e. they created and

developed an entrepreneurial idea in a group, sold the product and reported back on their success as entrepreneurs in group presentations.

## **Aims, objectives and research questions**

The aim of the study was to see the effect of experiential learning on students' entrepreneurial mindset focusing on Gibb's perception of entrepreneurship and the entrepreneur in order to understand the decision to start a business. The experiment was conducted at the Universidad del Pacifico, Lima, Peru in 2012-2013. The specific objectives of the project were:

1. to use a pre- and post-experimental survey tool to establish the impact of two educational techniques, experiential and case based learning, on students' entrepreneurial mindset and perception of entrepreneurship and the entrepreneur.
2. to compare and contrast the effects of these learning tools and comment on their implications for entrepreneurial learning theories make recommendations

## ***The 20 Soles Experiment***

We sought to investigate to what extent whether the experiential learning project (20 Nuevos Soles experiment) impacted more significantly on students' intentions to become entrepreneurs than traditional methods, i.e. a case-based learning course. The experiment was conducted among Peruvian MBA students, who face different choices after graduation. They could either choose to start their own business, work for a small or medium enterprise (SME) or

for a large multinational company (very few chose the middle option). To investigate students' perceptions about entrepreneurship and their career choices before and after both courses, we used a sequential exploratory design with a 2 phase quantitative data collection (baseline and post experiential intervention), followed by a qualitative feedback session with the students. We followed Hanson et al. (2005) who advocated a sequential exploratory design as useful for testing new emerging hypotheses and theories. Before the start of the experiment, as a first stage, a baseline survey was conducted with all the students. The sample was then split into two groups: the 'experimental' group (120 students), which was given 20 Nuevos Soles to kick-start a responsible business and the 'control' group (67 students) where the CSR and entrepreneurship content were transmitted only through case method and class discussion. We compared the experimental group to the control group using a test of significance of group differences (Chi-squared test) to find out whether the two groups differed before the experiment in terms of age, gender, years of education, sectors of working experience, working hours and previous education in entrepreneurship or CSR. The analysis showed that there were no significant demographic differences between the control and experimental group at the outset of the experiment. Two students had previous education in entrepreneurship and were dropped from the sample.

In the experimental group teams composed of 3 to 5 students received 20 Nuevos Soles which they had to return to the teacher at the end of the experiment; the control group had to work in teams of a similar size analyzing and solving business cases on social entrepreneurship.

The guidelines given to the experiential teams were the following:

1. One week to think, plan and implement a new business.
2. The business must have a CSR twist or focus.

3. The cash endowment given to the groups was 20 Nuevos Soles (around 7 dollars). No other cash could be used unless it was obtained as benefit of the business implementation and reinvested.
4. The group with the highest profits at the end of the week wins the highest mark (A) and the lowest gets an F. The other groups were graded on a bell curve.
5. Students had to document the process from the goal-setting to the implementation of the idea. Any change or evolution of the initial idea had to be documented. They also had to provide prove of the source of their profits.

## **Methodology**

### **The survey instruments**

The questionnaires (baseline and follow up/ post experiment) were elaborated from previous work by Klapper (2005) and Klapper and Leger-Jarniou (2006) as well as Stokes et al (2010) and the literature on intention theory including in particular Gibb's work on entrepreneurial behaviors, entrepreneurial values, entrepreneurial competencies and entrepreneurial outcomes. Adding CSR perception, we thus arrived at 5 constructs. The baseline questions focused primarily on the students' experiences with CSR and entrepreneurship (such as entrepreneurial courses, relatives as entrepreneurs), their definitions

and perceptions of, and attitudes towards CSR, entrepreneurship and the entrepreneur. We also enquired into their future career ambitions as well as their general perception of the future of entrepreneurship in Peru. The same questions were asked in the follow up-course survey, yet here a section was added enquiring into the perceived efficacy and the appropriateness of the intervention.

Most of the questions reflect the students' perception on a 5 point Likert scale ranging from "totally disagree" or "totally agree." Demographic variables were included investigating gender, age, previous work experience as well as its actual duration educational background and pre-understanding of CSR and or entrepreneurship. The questionnaire mixed closed and open ended questions to benefit from the strength of a combination of quantitative and qualitative approaches and minimize any biases that exist in any single research method (Creswell, 2003). We employ a sequential analysis using the qualitative results to assist in explaining and interpreting the findings of the quantitative study in further detail as recommended by Creswell (2002).

At the end of the course (and after the grades were given to the students to avoid self-serving answers), both groups (experimental and control) were given a follow up survey. The follow up survey meant to establish whether the teaching experiment had triggered changes in students' attitudes towards entrepreneurship and CSR. The course in which the questionnaires were given is CSR and not entrepreneurship therefore any bias to please the professor would come more on the CSR questions rather than entrepreneurship since the students do not know the focus of the research is entrepreneurial intentions. The experiment is given in the context of applying what is creating a "responsible" business in the real world. The 20 Nuevos Soles

Experiment was given to the students half way through the CSR course when the basic concepts were already covered and the students had fully understood the meaning of CSR as opposed to philanthropy.

Our aim was to compare pre- and post entrepreneurial intentions of MBA students having been exposed to two educational techniques (experiential learning vs. case method. We were, in particular, interested in those students who changed their mind about becoming an entrepreneur after they had participated in the experiential learning component of the course. We built a Probit model to analyze which factors can help understand the change of choice. Probit analysis is the most widely used method for estimating the relationship between choices on the one hand and attributes of alternatives and individual decision makers on the other hand, in binary choice, or two alternatives, situations (e.g., Cox, 1970).

The model is as follows

$$y = \alpha + \beta_1 CSR_1 + \beta_2 VAL_2 + \beta_3 COMP_3 + \beta_4 OUT_4 + \beta_5 FUT_5 + \beta_6 EMO_6 + \beta_7 EDU_7 \\ + \beta_8 SEX_8 + \beta_9 Age_9 + \beta_{10} FAM_{10} + \varepsilon$$

with here the dependent variable  $y$  as 0 (did not change his/her mind to become an entrepreneur, still want to work for a multinational company) and 1 (changed his/her mind to become an entrepreneur immediately after graduation). The independent variables are:

- 9 attributes for CSR Perception (CSRlaw, CSRbetteworld, CSRinnovation, CSRbetterresults, CSRreputation, CSRfad, CSRcommon, CSRmarketing and CSRbusnmodel)
- 15 attributes for Gibbs' Entrepreneurial Behaviors (BEHopp, BEHinit, BEHown, BEHcommit, BEHcontrol, BEHintuitive, BEHnetwork, BEHstrateg, BEHnegot,

BEHpersua, BEHachiv, BEHrisk, BEHoppbased, BEHcomp and BEHnew)

- 12 attributes for Gibbs' Entrepreneurial Values (VALindep, VALbeau, VALselfmade, VALowner, VALeffort, VALhardrew, VALmakehap, VALaction, VALinformal, VALknowhow, VALfreedom and VALnotgovt)
- 11 attributes for Gibbs' Entrepreneurial Competencies (COMPfindID, COMPappraisID, COMPprobOpp, COMPpeople, COMPknowhow, COMPrelation, COMPdevelp, COMPanswer, COMPselfaw, COMPemot and COMPstakeh)
- 6 attributes for Gibbs' Entrepreneurial Outcomes (OUTchange, OUTneworg, OUTvalueCR, OUTvalueENH, OUTvalueRealiz and OUTvalueREN)
- 9 attributes for Institutional Entrepreneurship Macro Context Perception (FUTspirit, FUTanybody, FUTneed, FUTcreatemploy, FUTspirit, FUTtoobeur, FUTnofinan, FUTnegativeimage and FUTeconvolatile)
- 5 attributes for Individual Emotional Micro Context Perceptions (EMOTfright, EMOTprofexpdiff, EMOTnotrightcomp, EMOpresentEcon and EMObadfamilyexp)
- Having an entrepreneur in the family dummy: Yes= 1 and 0=no.
- And demographic control independent variables: sex, education and age in their current jobs. Experience was dropped due to be highly collinear with age.

For this model we restricted our sample to the experiment group (109 students) and dropped those students who had wanted to become entrepreneurs before and after the experiment (10 students), i.e. those who had not been impacted by the experiment. We focused our investigation to those students who: a) in the baseline survey indicated that they did not want to start their own business, but had changed their minds in the follow up, i.e. wanted to create their own company

(value 1 of our dummy dependent variable) and b) those students who did not change their mind and still wanted to work for a multinational (dependent variable value 0) since we wanted to understand what differentiates them, as Figure 1 shows.

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Insert Figure 1 about here  
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## **Model validation**

The measure instrument was tested using a structural equation model based on the methodology of Partial Least Squares (PLS). The validity of the scales and the reliability of the measurement model (inner model) were also verified. The individual item reliability, internal consistency and the analysis of the average variances extracted (AVE) were calculated. For item reliability, constructs that possessed a greater loading than 0.6 ( $\lambda > 0.7$ ) were accepted following Chin (1998). Given the initial values obtained, we removed from the model, using iterative depuration processes, reflective indicators that did not meet the criterion of individual reliability. A total of 58 indicators (the 9 CSR dimensions, 15 indicators for entrepreneurial behaviors, 13 for entrepreneurial values and 15 for entrepreneurial competencies and 6 for entrepreneurial outcomes) had loadings superior to 0.6.

Internal consistency was tested using the traditional Cronbach alpha. We complemented the findings with composite construct reliability. All the results were higher than 0.8 showing very good internal consistency for all constructs. These results suggest that the theoretical constructs exhibit good psychometric properties. Convergent validity was tested using the average variance extracted (AVE). The convergent validity of the scales was generally supported with values superior to 0.55 assuring that 50 per cent or more variance of the indicators was accounted for. The validation of the model stresses the importance of including CSR perception, entrepreneurial behaviors, entrepreneurial values, entrepreneurial competencies and

entrepreneurial outcomes when analyzing SE. Our analysis corroborates the classical dimensions found in the literature with the novelty that the perception about CSR can influence SE.

## **Results and Discussion**

The experiential teaching project took place at the University of Pacifico, Peru and a cross-sectional sample consisting of 187 students participated in the project. These students attended a CSR course as part of the MBA program from March 2012-August 2013. Out of the 167 students, 58% were male and 42% female, their age ranged between 21 and 55 years with 39% in the range of 30 to 39 years old. The youngest group, 21 to 29, represented 42% of the sample and those older than 39, 19%. Most of the MBA students at the University of Pacifico are part time students and 96% were working full time job at the time of the project.

### **The Baseline survey**

In the baseline survey questionnaire, students were asked whether they perceived themselves as entrepreneurs. The results are summarized in Table 1 and Table 2. A high number (65%: 20% strongly agreed and 45% agreed) responded positively to this question, only 15% were neutral and 20% somehow disagreed. It was interesting to see the high percentage of students who in general considered the ideal of entrepreneurship positively.

We then asked further about their professional plans immediately after graduation, 5 years and 10 years post graduation to see if the ideal perception translated into real intentions to become entrepreneurs in the near future. Interestingly enough, the proportion of students who intended to become an entrepreneur immediately after graduation dropped to 11% of the overall

sample. Almost 87% of the students saw themselves as employed by a large multinational company. Small and medium size companies only attracted 2% of our sample and we had a remnant category for “Other” that had no answers. As the time frame after graduation increased (5 and 10 years) (see Table 1) the percentage of students considering starting their own business increased to 18% and 23% respectively, which is significantly lower than the initial 65% of students who had perceived themselves ideally as entrepreneurs.

This finding suggests that many of the MBA students could see themselves as entrepreneurs at a later stage in their career. This seems to suggest that they believed that they had an intrinsic pre-disposition for entrepreneurship, but at this point in the experiment did not actually want to *be* an entrepreneur. The students’ intention to become an entrepreneur increases with time which indicates that they expect to overcome the barriers to starting their own business throughout increased professional experience. This finding is very similar to Klapper & Leger-Jarniou (2006).

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Table 1 about here

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Only four students wanted to work for a SME, so for statistical purposes we dropped this option from the survey and decided to only work with two Entrepreneurial Intention options: a) Starting your own business immediately after graduation and b) working in a large multinational company. Disaggregating the results by experimental and control group we still found that the majority of the students (89% of the total sample) wanted to work for multinational companies

after graduation (table 2). The experimental group had a marginally higher percentage of people wanting to work for a large multinational company (92%) compared to the control group (83%).

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Table 2 about here

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Given that our main aim was to determine whether experiential learning employed in the 20 Nuevos Soles experiment could motivate students to think differently towards CSR and entrepreneurship we asked them in the follow up questionnaire if the the experiment/course made them change their perceptions of entrepreneurship and CSR perceptions. The results of the follow up questionnaire, subdivided into experimental and control group, are presented in Table 3.

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Table 3 about here

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The results shown in Table 3 suggest that both the experiment and the course attended by the control group impacted students' perception about CSR as 95% and 82% respectively of the the students participating in the experiment and in the normal course changed their mind about their beliefs CSR. When looking at entrepreneurship the story differs as those who had gone through the experiential learning experience indicated a change in their perception about entrepreneurship (78%) compared to only 15% for the control group. Hence we can conclude

that the experiential learning project made a difference to the students' perception of entrepreneurship.

We further performed a two proportion one tailed Z-test and Fisher's Exact Test to test to see if the changes in the proportion of learners that changed their mind in the experiential group were different (and higher) to that of the control group. We established:

I-  $H_0: P_{\text{exp}} \leq P_{\text{control}}$

II-  $H_1: P_{\text{exp}} > P_{\text{control}}$

with  $P_{\text{exp}}$  as the proportion of students that changed their mind after the course for the experimental group and  $P_{\text{control}}$  for the proportion of students that changed their mind after the course for the control group. We tested these hypotheses for both entrepreneurship and CSR perceptions. In both cases we were able to reject  $H_0$  at a 0.01 level; therefore the experimental group had a statistically higher proportion of students who changed their mind about entrepreneurship and CSR, than the control group..

Direct questioning of students as to whether the course made them change their mind can be considered a potentially sensitive question even though this survey was performed after the grades were given, and therefore biased towards positive compliant answers. To control for the possibility of this bias, we asked some additional questions about the students' future professional plans after graduation. We asked both student groups about their professional career plans after graduation; Table 4 gives the results for the experimental and control groups.

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Table 4 about here

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Comparing the follow up survey results in Table 4 to our baseline survey results in Table 2, we can see that the career plans for both students' groups have changed. The intention to create their own business increased for our experimental group from 8% to 38% and for the control group from 17% to 19%. Conversely, the intention to work for a multinational company fell for both groups, i.e. from 92% to 62% for the experimental group and from 83% to 81% for the control group respectively. In other words, thirty five MBA students, who had participated in the 20 Nuevos Soles experiment, changed their mind about becoming entrepreneurs immediately after graduation. Those MBA students who wanted to work for a large multinational company dropped conversely to 74 from 109 after the experiment.

Baseline and follow-up data were summarized and compared using McNemar's test for paired proportions. For the control group, where the adjustment to McNemar's test was not feasible, an exact test of a binomial proportion was used. We tested separately the experiment group (EG) and the control group (CG).

The hypotheses are as follows:

IV-  $H_{0EG}: P_{preEG} \geq P_{postEG}$

V-  $H_{1EG}: P_{preEG} < P_{postEG}$

and

VI-  $H_{0CG}: P_{preCG} \geq P_{postCG}$

VII-  $H_{1CG}: P_{preCG} < P_{postCG}$

We cannot rule out the possibility that the experiment exaggerated the students' stated intention of starting their own business, making students overconfident. Nonetheless the stated intention to become an entrepreneur increased from 8% to 38% of the sample after the experiment. Thus there is a significant increase in the intention to become entrepreneurs ( $P < 0.0001$ ) among those who participated in the 20 Nuevos Soles experiential learning exercise, so we reject null hypothesis IV. For the control group the intention to become entrepreneurs only marginally changed. This difference was not statistically significant ( $P < 0.119$ ) so we cannot reject the null hypothesis VI that the course has made no difference in the entrepreneurial intentions of the students.

From these initial findings we infer that the CSR course with the experiential learning component had a positive effect on entrepreneurial intentions of the MBA students at the University del Pacifico compared to the regular case based course. The literature already shows that education can influence entrepreneurial choices and intentions (for a summary see Van der Luis et al., 2008) and this study supports this, showing that experiential learning in particular can function effectively in changing at least short term attitudes.

## **Investigating the reasons for change**

There are several possible explanations of why experiential learning impacted students entrepreneurial intention to create after graduation. To gain a further insight we had integrated a number of additional questions about the students' perceptions of what it involves being an entrepreneur. In particular we were interested in knowing whether the students thought that they

had what it takes to be an entrepreneur in Peru. In Figure 2 we represent a decision tree with four layers, for their stated intention to open their business immediately after graduation, showing the association with entrepreneurial self-perception. The starting question was whether the students thought that they had the intrinsic abilities to become an entrepreneur.

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Figure 2 about here

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Figure 2 shows how the number of students that wanted to be entrepreneurs increased from 21 pre to 57 post experiment/course. One can see that before the class, 97 students that perceived themselves as having what it takes to be an entrepreneur, did not want to create and instead preferred to work for a multinational.. There were also 28 students unsure or neutral about perceiving themselves as entrepreneurs, all of whom wanted to work for a large multinational. After the course (for the whole sample) the distribution changed. There were 24 more students who perceived themselves as having entrepreneurial aptitudes and who believed that they could become entrepreneurs after graduation. We can also see that the neutral respondents split, with 10 wanting to start their own business after graduation while 18 still wanted to work for a multinational. Even the two students who believed that they were not suited to be entrepreneurs now thought about starting their own business after graduation. In Table 5 we segment these results by experimental and control group.

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Table 5 about here

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In the control group, only four students actually changed their mind about becoming entrepreneurs immediately after graduation, having followed the regular course. No student who did not originally perceive him/herself as entrepreneur and who wanted to work for a multinational changed their opinion. The change came from those neutral (3) or positive (1) about thinking that they have what it takes to be an entrepreneur. Three were also neutral or undecided, the majority of whom wanted to work for a large multinational.

In the experimental group the story differs. From those who initially wanted to work for a multi-national (80), 26 MBA students less than in the pre-survey, now considered opening their own business after graduation. For those neutral or undecided, the proportion that changed is even higher. Most of those undecided in the experimental group changed their mind for (7 of the 9 students). The two students who perceived themselves as entrepreneurs before the course retained this belief after the course.

To understand which factors are behind the probability that a student would change his/her mind about entrepreneurship, we ran a Probit model with a newly created dummy variable, where 1 equals those that changed their mind and 0 those who still want to work for multinationals (see Figure 1). We also created a dummy for 0 for the control group and 1 for experimental group to account for the effect of experiential learning. We included gender, full time employment age and family member dummies as control variables. We also integrated our five constructs on CSR perception, entrepreneurial behaviors, entrepreneurial values, entrepreneurial competencies and entrepreneurial outcomes as well as macro institutional factors and micro emotional criteria. We then performed a saturated model specification test to check

for the presence of "alternative specific effects" by McFadden (1973). This test entails inclusion of a constant representing choice characteristic which was left out of the model. We also tested a covariance Probit model. Neither of the alternative models provided significant improvement over the standard Probit model presented, at the 10% level by a likelihood ratio test) The Standard Probit model results are presented in Table 6.

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Table 6 about here  
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The results in Table 6 show that the experiment had a large positive effect of increasing the probability of a student changing his/her mind. Family background and age are also important factors in favour of changing students' entrepreneurial intention, confirming previous findings (Criaco 2012). Women and the younger MBA students were more likely to change their mind in favor of starting their own business right after graduation. Students who thought that CSR is only a marketing fad in Peru and does not present a real change to existing business models were less likely to change their mind about becoming entrepreneurs, perhaps indicating a certain cynicism about "responsible business", given the social component in the learning experiment.

In terms of Gibbs entrepreneurial behaviors, we can say that those students, who believed that being an entrepreneur involves using intuition in situations when there is little information available, were more likely to change their mind about becoming entrepreneurs. It is interesting to note that the variable 'entrepreneurship is about competitive behaviour' was negatively correlated with the probability of a student changing his/her mind and being more inclined to

create his/her venture. We can only speculate on possible reasons for this finding, which may be unusual and needs further investigation. It is unusual in the sense that entrepreneurship is generally associated with competitiveness and that a person who creates a venture accepts that (s)he will be competing for market space. The negative correlation indicates however, that this idea of having to compete in an already 'red ocean' is rather off-putting to the MBA students participating in this survey.

In terms of Gibbs entrepreneurial values the survey showed that those MBA Students who changed their mind were more likely to associate independence and being rewarded for their hard work with being an entrepreneur. It is also most likely that there is a gender component, as more women than men changed their mind. We suggest that in particular female students consider entrepreneurship as a potential solution to achieving a family-work balance (Hannes et al. 2009).

The Peruvian context and in particular its institutional environment also seem to affect the probability of students' changing their mind about creating their own enterprise. Students who perceived the Peruvian business environment as too bureaucratic and lacking financial support for entrepreneurs were less likely to change their mind about starting their own business. Students who believe that anybody in Peru could become an entrepreneur, are more likely to change their mind. In terms of the micro and emotional characteristics included in the model, students who believe that they need more professional experience to be successful in their own business were less likely to change their mind, as were students who believed that starting their own business would be stressful.

## Conclusion

In this article we reported on a unique experiential learning project run among a MBA student audience in Lima. We demonstrated through quantitative data analysis that the experiment impacted the students' entrepreneurial intention more than just the case base course.

Students that believe in CSR as a new paradigm of business were also more likely to change their mind while those that believe that CSR was just a fad or green marketing stayed wanting to be managers in large multinational companies. Students that believed they needed to acquire more experience to be successful did not change their mind. From Gibbs values, independence and being rewarded for hard work differentiated those who changed their mind and after the experiment wanted to become entrepreneurs. From Gibbs behaviors, intuition under uncertainty and not being competitive also identified the students that changed their mind. Interestingly enough, entrepreneurs are identified with competitive behavior in the literature while here we found the opposite. Having worked in a group for the experiment might have motivated this answer. This is an interesting for future research.

From the macro context students that perceived Peru as too bureaucratic were also less likely to change their mind and continue to be willing to be managers in large multinational corporations.

The attributes behind the change of mind seem to be motivated by values -independence and believing in the possibility to have a positive impact-, risk reduction –less competitive, having a family member entrepreneur and not afraid of bureaucracy. Interestingly enough this attributes are more present on younger students and females in our study.

The limitations of this project mostly lie in the fact that, although more than 100 students participated in the project, this is still a relatively small number and care needs to be taken not to overgeneralise the findings. Clearly this kind of methodology of learning about entrepreneurship and CSR as lived experience provides exciting learning for under-and postgraduate learners in all cultural contexts and hence of value for our local, regional and national economies.

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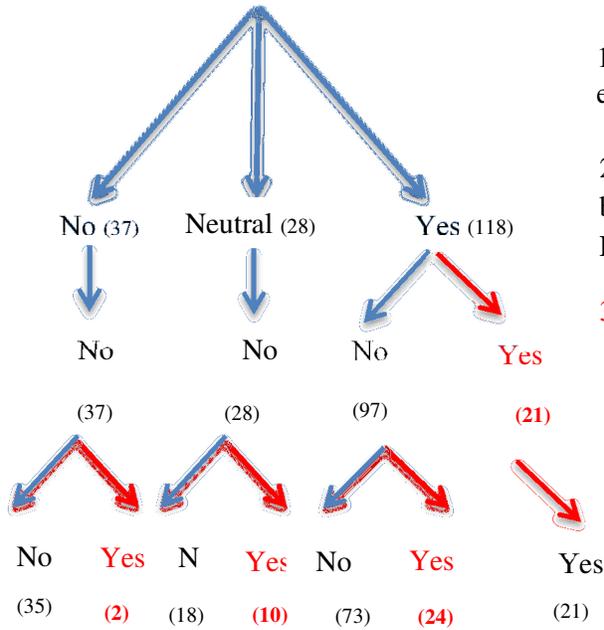
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Figure 1. Decision Tree based on Entrepreneurial Self-Perception and Intentions before and after the 20 Nuevos Soles Experiment/Course



1) Do you have what it takes to become an entrepreneur in Perú? **ENT perception PRE**

2) Do you want to start your own business immediately after graduation? **ENT intention PRE**

3) The 20 Nuevos Soles experiment/course

4) Do you want to start your own business immediately after graduation? **ENT intention POST**

Table 1 *Future perceived professional plans in different time frame*

BASELINE EXPERIMENT SURVEY						
How do you perceive yourself professionally? ENT Intention	Immediately after graduation		5 Years after graduation		10 Years after graduation	
	#	%	#	%	#	%
As an entrepreneur starting my own business	21	11	34	18	43	23
In a SME	4	2	4	2	4	2
In a large company (multinational)	163	87	150	80	140	75
Total	187	100	187	100	187	100

Table 2 *Future perceived professional plans immediately after graduation for experimental and control groups*

BASELINE SURVEY						
How do you perceive yourself professionally immediately after graduation? ENT intention	TOTAL		Experiment Group		Control Group	
	#	%	#	%	#	%
As an entrepreneur starting my own business	21	11%	10	8%	17	11%
In a large company (multinational)	162	89%	109	92%	53	83%
Total	183	100	119	100	64	100

Table 3 *Change of perceptions about Entrepreneurship and CSR, post experiment/course*

Has the 20 Nuevos Soles experiment changed your perception of ...?	EXPERIMENTAL GROUP				Has the course changed your perception of ...?	CONTROL GROUP			
	ENT		CSR			ENT		CSR	
	#	%	#	%		%	#	%	Percent
No	26	22	6	5	No	55	85	12	18
Yes	93	78	113	95	Yes	9	15	52	82
Total	119	100	119	100	Total	64	100	64	100

Note: ENT= Entrepreneurship

Table 4 *Professional intentions after graduation for the experimental and control group follow up-course survey*

FOLLOW UP EXPERIMENT SURVEY						
How do you perceive yourself professionally immediately after graduation? ENT intention	TOTAL		Experiment Group		Control Group	
	#	%	#	%	#	%
As an entrepreneur starting my own business	57	31%	45	38%	12	19%
In a large company (multinational)	126	69%	74	62%	52	81%
Total	183	100	119	100	64	100

Table 5 *Professional intentions after graduation and entrepreneurial self-perception by experimental and control group.*

Do you want to start your own business immediately after graduation? ENT intention	Do you have what it takes to be an entrepreneur? ENT self-perception							
	PRE Experiment				Post Experiment			
	Yes	Neutral	No	Total	Yes	Neutral	No	Total
As an entrepreneur starting my own business	10			10	36	7	2	45
In a large company (multinational)	80	9	20	109	54	2	18	74
Total	90	9	20	119	90	9	20	119
Do you want to start your own business immediately after graduation? ENT intention	PRE Control				Post Control			
	Yes	Neutral	No	Total	Yes	Neutral	No	Total
	As an entrepreneur starting my own business	8	0	0	8	9	3	0

In a large company (multinational)	20	17	19	56	19	14	19	52
Total	28	17	19	64	28	17	19	64

Table 6 *Probit model: statistically significant results*

Variables	Std Probit Coefficient (SE)	Variables Aggregate
ExpDummy	0.75 (0.000)	
FamilyENT	0.32 (0.0051)	
Age	-0.021 (0.0371)	
FullTime		
CSRlaw		
CSRbetteworld		
CSRinovation		
CSRbetterresults		
CSRreputation		CSR Perception
CSRfad		
CSRcommon		
CSRmarketing	-0.017 (0.010)	
CSRbusnmodel		
BEHopp		
BEHintuitive	0.16 (0.0026)	Gibbs ENT behaviours
BEHcomp	- 0.072 (0.0417)	
BEHnew		
VALindep	0.11 (0.0033)	
VALhardrew	0.02 (0.0514)	Gibbs ENT Values
COMPemot		
COMPstakeh		
FUTspirit		
FUTanybody	0.45 (0.000)	Institutional MACRO Context Perception
FUTtoobeur	-0.072 (0.0122)	
FUTnofinan	-0.14 (0.000)	
EMOTfright	-0.26 (0.0292)	Individual Emotional MICRO Context Perceptions
EMOTprofexpdiff	-0.081 (0.0042)	

Figure 2: Results of Professional intentions after graduation pre and post experiment/course vs. entrepreneurial self-perception (number of students in parenthesis).

