

Educational paper

Promoting innovative experiential learning practices to improve academic performance: Empirical evidence from a Spanish Business School

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ABSTRACT

There are plenty of theoretical studies addressing how active-based practices and methodologies influence university students' level of performance. However, there is a scarcity of works that bring empirical evidence to sustain the existence of a positive link between the students' involvement in experience-based learning methods and their academic results. The aim of this paper is to examine the impact exerted by an experiential learning based educational methodology on students' level of academic performance. This research was carried out within the specific context of a Spanish private business school, using a sample of students belonging to the Bachelor's Degree in Business Administration at a Spanish Business School. Pearson's correlation and structural equation modeling are applied to test the relationship hypothesized. Our results derived from the analysis of an undergraduate business students sample suggest that getting involved in experience-based practices and managerial simulations constitutes an effective approach to develop their competencies. Thus, we may conclude that fostering experiential learning strategies favors the students' understanding of theoretical concepts and leads to the attainment of superior performance. This paper contributes to management education by empirically testing the value of innovative experiential learning based training.

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Introduction

"Education is a social process; education is growth; education is not preparation for life but is life itself." – John Dewey.

"I hear, and I forget. I see, and I remember. I do, and I understand" – Ancient Chinese proverb.

Since organizations and educational institutions are nowadays increasingly turning into the application of teaching and training approaches that emphasize the individuals' active immersion and involvement during the course, there exists an emergent awareness and interest in grasping how the employees' or students' practical engagement during the learning process affects their learning outcomes and drives its academic and professional success.

Firms are these days increasingly demanding new learning approaches that are more clearly oriented or in line with competencies acquisition by means of training and experience. Such

approach involves on the one hand the individuals' full absorption and commitment (Kahwajy, Kemanian, Keys, & Strebel, 2005), and on the other hand, the existence or availability of trainers, coaches or mentors that serve as guides during the learning process. As Salas, Wildman, and Piccolo (2009) point out, under this experience-based learning framework, individuals become notably more responsible for their own learning, and there exists a more robust link between the learning experience and reality (e.g., role playing, business games, computer-based simulations, virtual reality, etc.).

This training approach is considered a much more efficient method while transferring tacit knowledge than other more traditional forms of learning (Salas et al., 2009). Coherently with this tendency, and as a response to the increasing demand for more dynamic, participative and engaging learning experiences, universities and educational institutions are positioning toward the design and development of learning approaches that foster learners' immersion and active participation. Several studies have stressed the paybacks of such highly engaging learning approaches (Benbunan-Fich & Hiltz, 2003; Druskat & Kayes, 2000).

After many years stuck in the past, universities have finally understood the positive impact exerted by experiential learning

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and have begun to design and include some kind of experience-based learning methods within their courses that come to complement the traditional learning approach, where lecture stands as the cornerstone of the learning process (Bisoux, 2007). Furthermore, following Peris-Ortiz, Gómez, Vélez-Torres, and Rueda-Armengot (2016) fostering an experience-based learning environment with innovative educational, technological and pedagogical tools is turning increasingly imperative to universities. University chancellors, along with educational policy-makers and other faculty members and staff have acknowledged that students may have different learning styles (i.e., passive and active learning). Traditional learning is narrowly focused on the student's passive absorption of knowledge and information from theoretical lectures and its application and external measurement through a set of objective proofs, assignments, tests and exams (McKeachie & Gibbs, 1999). Reaching higher levels of engagement from students is unlikely to follow the traditional lecturing system, where the continuous and often unidirectional flow of information leaves students with very scarce time to process and interiorize concepts (Gasiewski, Eagan, Garcia, Hurtado, & Chang, 2012).

Although there exists a certainly wide variety of approaches related with experiential learning, Kolb's (1984) experiential learning theory (ELT) is still among the most prominent theories within the field of management learning and is at the very core of this study. In this vein, plenty has been researched in this particular topic and many scholars have hypothesized the existence of a positive effect of experience on the learning outcomes of individuals. The ELT approach has been addressed and applied by distinct disciplines such as education, strategic management, information systems, psychology, sociology, medicine, nursing, accounting, and law, among others (Kolb, Boyatzis, & Mainemelis, 2001).

Nonetheless, although numerous academics and practitioners consider experience to be at the core of successful management learning, this notion has also attained several criticisms. Disapprovals of the so-called experience-based learning arise for both empirical and theoretical reasons (Kayes, 2002). The main empirical criticisms deal with the validation of the measuring instrument, which comprised a students' self-assessment instrument. Concerning the theoretical aspect, critics from the psychodynamics perspective question the nature of learning and suggest lessening some assumptions of the ELT related with the emphasis on experience, advocating for stressing the importance of reflection within the learning process (Reynolds, 1999). Besides, Holman, Pavlica, and Thorpe (1997) and other critics from the social perspective criticized that the ELT overstresses the role of the individual and decontextualizes the learning process. These critics highlight the social component of the learning activity over emotions as a way to neutralize perceived cognitive bias in ELT. Along with these criticisms there have arisen several alternatives or modifications that deal with the introduction of critical theory, social learning theory, psychodynamics and phenomenology. Besides, several authors, while reflecting further on experiential learning classroom practices, Buck and Akerson (2016) incite educators to assess the incongruence between espoused values and values in practice within their classes, claiming that many educators frequently lecture about student-centered learning theories while they remain largely teacher-centered (Breunig, 2017; Buck & Akerson, 2016). This might generate a disentanglement between experiential theory and classroom practice.

In this line, the aim of this paper is to shed light upon this phenomenon while examining the relationship between an experiential learning based education methodology and students' academic performance. There are plenty of theoretical studies addressing this topic. However, there is a scarcity of works that bring empirical evidence to sustain the existence of a positive link.

This research was carried out within the specific context of a Spanish private business school, using a sample of students of the subject "Management Skills", belonging to the Bachelor's Degree in Business Administration at a Spanish Business School. Pearson's correlation and structural equation modeling are applied to test the relationship hypothesized. This paper proceeds as follows: "Conceptual framework" section contains the conceptual framework underlying this research, "Method" section describes the statistical methodology employed, "Results" section brings the empirical results, and "Discussion and conclusions" section contains the discussion, implications and limitations of this work.

Conceptual framework

Experiential learning, know-how and learning by doing

Following Kayes (2002), at the managerial level, experiential learning theory is focused on how managers are actually able to absorb and transform new experiences into critical knowledge assets, and how such experiences hence enhance their levels of fulfillment, motivation, or performance. Applying this framework to the classroom context becomes fundamental while attempting to provide students with key practice-based knowledge and learning by doing insights.

Katula and Threnhauser (1999, p. 240) label experiential learning to refer to the learning "process that takes place beyond the traditional classroom and that enhances the personal and intellectual growth of the student. Such education can occur in a wide variety of settings, but it usually takes on a learn-by-doing aspect that engages the student directly in the subject, work or service involved". Kolb and Kolb (2005, p. 193) quote John Dewey's reflection on the need to foster experiential learning in education: "There is a need of forming a theory of experience in order that education may be intelligently conducted upon the basis of experience".

One of the most remarkable models on the field of experiential learning, perhaps the best developed one is Kolb's (1984) experiential learning theory (ELT). Kolb's model relies on the prior related works of 20th century noteworthy academics (i.e., John Dewey, Kurt Lewin, Jean Piaget, William James, Carl Jung, Paulo Freire, Carl Rogers and others), which had previously highlighted the key role of experience in the process of human learning (Armstrong & Mahmud, 2008). Under such framework, experiential learning is described as: "the process whereby knowledge is created through the transformation of experience (Kolb, 1984, p. 41). Hence, knowledge arises from the combination of the individual's reflecting, grasping and transforming new and prior experiences.

Kolb's theory lucidly points out that to become an effective learner a person ought to respect the following process: thinking, feeling, perceiving and behaving. Firstly, the individuals must perceive information and reflect on how it might impact on some aspects of their life. This entails integrating this information with its own experiences and knowledge bases. Following Kolb and Kolb (2005) individual learning involves further more than the mere seeing, hearing, moving, or touching. In other words, it is critical to integrate what the learner senses, and thinks with what he or she actually knows and feels. One of the key features of this learning approach is that "learning results from synergistic transactions between the learner and the environment" (Kolb & Kolb, 2005, p. 194). Thus, learning is a holistic process of adaptation to contextual changes, trends, and circumstances that shape individual experience.

Table 1
Course syllabus and chapters structure.

Course syllabus for the subject MS
Chapter 1: Approaching the managerial reality: the managers' work and skills development.
Chapter 2: Talent management and emotional competencies.
Chapter 3: Leadership skills: leading people and teams.
Chapter 4: The capability of motivating people and groups.
Chapter 5: Teamwork capabilities: the manager as revitalizer of team spirit.
Chapter 6: Effective communication and negotiation skills.
Chapter 7: Organizational change and diversity management.

Note: MS: management skills.

The link between experiential learning and students' performance

After introducing the main concepts and ideas that serve as theoretical framework of this paper, we aim to describe the experiment carried out in a particular university context. We also propose empirical evidence to sustain the validity of our hypothesis and the global fit of the theories with the data gathered from the sample. Table 1 shows the syllabus of the subject.

In our experiment, the students enrolled in the "Management Skills" subject at a Spanish business school are asked to carry out a practice-based activity, in which they have opportunity to put into practice the theoretical concepts acquired during the semester and to obtain some others through their involvement in learning-by-doing mechanisms. The activity consisted on expending several days (15–20 h) with a top or middle level manager/executive of a real company. Each group of 4–5 students were asked to choose a professional with managerial responsibilities at a real company, and assess the managerial competencies inherent to this professional in his/her daily working routine. This task aimed to provide a deeper insight and understanding of the skills that managerial work entails. The method comprised obtaining critical knowledge and information by means of direct observation and the carrying out of a series of interviews to a real manager. The groups must hand a report as final assignment.

We expect that experiential learning might constitute a positive step in helping students to attain successful outcomes in their final exam. For this motive, it is vital to make an effort during the practice exercises, since knowledge can be more easily absorbed and retained through experiential learning. According to Chapman, Schetzle, and Wahlers (2016), students under innovative teaching methods tend attain superior performance and show a positive impact in the class, while they enjoy the learning experience. Moreover, these two experience-based activities enable the groups' learning approach, in which participants exchange information, manage different perspectives, and are in position of questioning and facing real problems (Rodríguez-Félix, Albort-Morant, & Leal-Rodríguez, 2016).

Hence, the students' involvement within this experience-based activity are expected to be positively related with their level of performance within the subject and, consequently with the final grade they might obtain. The reason underlying this assumption is that students apply the knowledge and theoretical concepts acquired throughout the semester and during their practical experience to develop their projects. Hence, students grasp the theoretical concepts at the same time that they put them into practice, expanding their perspectives and promoting their personal development (Takahashi & Saito, 2013). This enables in turn the better understanding and revision of the contents of the subject for the final exam. Consequently, the successful completion of the group assignment is also likely to be positively linked to the students' development on the exam, since the process of recycling knowledge, namely relearning comprises an incremental change or increase on the new knowledge generated (Burke & Rau, 2010).

Integrating all these arguments above, we hypothesize (see Fig. 1):

H1. Here is a positive link between the students' experiential learning involvement and their performance in the final exam.

Method

Sample overview

The sample comprises 80 students belonging to a Spanish Business School. The students correspond to the 2016–2017 academic course. This group is shaped by students enrolled in the subject entitled "Management Skills" that is taught in the Business Management Bachelor degree. Table 2 presents some descriptive statistics for the sample.

Pearson's correlation

A Pearson product-moment correlation was run to determine the relationship between the students' performance within the project assignment (measured by means of the project grade) and the students' performance in the final exam (measured by means of the exam grade).

The Pearson's correlation coefficient measures the strength and direction of the linear relationship existing between two variables, describing the direction and degree to which one variable is linearly related to another. Using this method involves several statistical assumptions: both variables are interval or ratio variables, they are well approximated by a normal distribution, and their joint distribution is bivariate normal.

We used Pearson's correlation since we consider it is an appropriate method, since our data complies with the four assumptions that are required: (1) the two variables are measured at an interval or ratio level (i.e., they are continuous); (2) There variables present a linear distribution; (3) there are no significant outliers; and (4) the variables are approximately normally distributed (see Fig. 2).

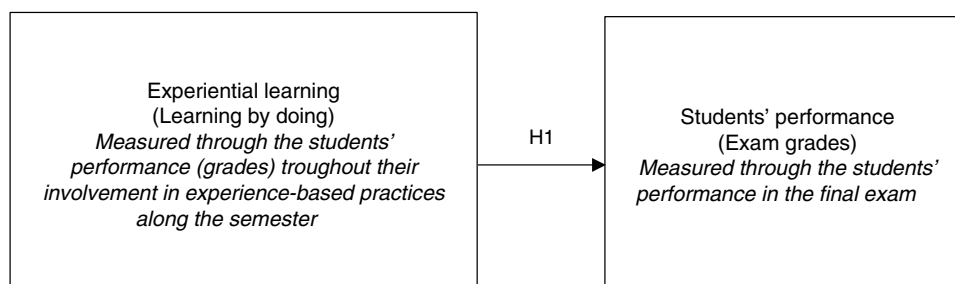
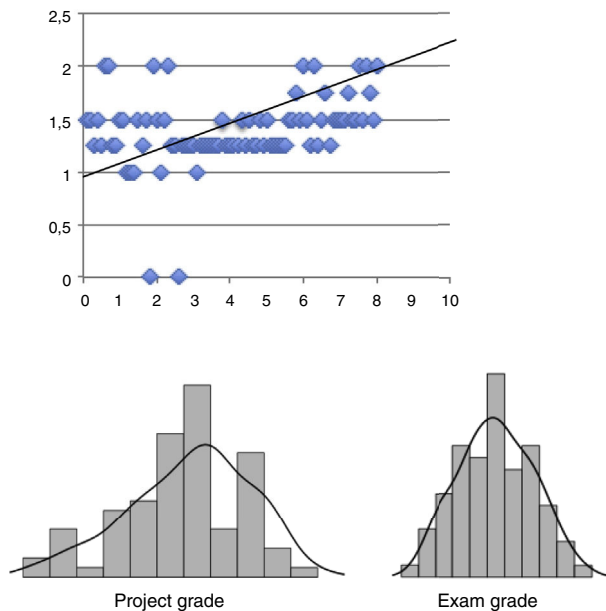


Fig. 1. Research model and hypotheses.

Table 2
Descriptive statistics.

	N	Min.	Max.	Average	Std. dev.
Project grade	80	0	2.00	1.397	0.3461
Exam grade	80	0	10	7.152	2.047

Note: Project grade is on a 0–2 scale; Exam grade is on a 0–10 scale.

**Fig. 2.** Dispersion and distribution plots.

Structural equations modeling

Subsequently we propose and test a second research model through the application of partial least squares (PLS) path modeling, a variance-based structural equation modeling (SEM) technique (Roldán & Sánchez-Franco, 2012). PLS enables the evaluation of the reliability and validity of the measures of theoretical constructs jointly with the estimation of the relationships posited between constructs (Barroso, Carrión, & Roldán, 2010). We selected PLS principally because the constructs that shape our research model correspond to a composite measurement model. Both theoretical contributions (Henseler et al., 2014; Rigdon, 2012) and empirical simulation studies (Becker, Rai, & Rigdon, 2013; Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016) endorse the usage of PLS for composite models.

In this second model, we test the effect relationship between the students' self-perceived attitude toward experiential learning (SAEL) and their academic performance. The construct pro-experiential learning attitude was measured through a 15 items Likert scale evaluating students' attitudes toward experiential learning. This scale was proposed by Chavan (2011) and has been previously tested and validated. To this aim, we use the software ADANCO 2.0.1 (Henseler & Dijkstra, 2015)

Results

Pearson's correlation results

The Pearson's correlation coefficient can range between -1 and $+1$ values. A value of $+1$ shows that the two variables are perfectly linear related by an increasing relationship, a value of -1 shows that

Table 3
Correlations matrix.

	Project grade	Exam grade	
Project grade	Pearson correlation	1	0.523 ^a
	Sig. (2-tailed)		0.000
	N	80	80
Exam grade	Pearson correlation	0.523 ^a	1
	Sig. (2-tailed)	0.000	
	N	80	80

^a Correlation is significant at the 0.01 level (2-tailed).

Table 4
Linear regression results.

Model 1	R	R ²	Adjusted R ²	RMSE
	0.523	0.124	0.113	1.174

the variables are perfectly linear related by a decreasing relationship, and a value of 0 shows that the variables are not linear related by each other. There is considered a strong correlation if the correlation coefficient is greater than 0.8 and a weak correlation if the correlation coefficient is less than 0.5 (Bolboaca & Jäntschi, 2006).

As our results (see Tables 3 and 4) reveal that a moderate positive correlation exists between the two variables under study – project grade and exam grade –, which is statistically significant for the sample assessed ($r = 0.523^{**}$; $N = 80$; $p = 0.000$). Results for the linear regression analysis (Table 4) also come to proof the existence of a positive relationship between the two variables, since the linear correlation coefficient (r), which measures the strength and the direction of a linear relationship between two variables, is positive.

Table 5 comprises some of the feedback concerning their practical experience provided by the students shaping the sample. These assertions manifest the students' positive view and gratitude for the opportunity they were given to train, acquire and improve their course-related competencies through practice. Overall, the students emphasize the positive significant role exerted by the practical experience in their learning outcome, mentioning how constructive and useful this approach has been for them.

Structural equations modeling results

The assessment of the measurement model depicts acceptable results. First, the indicators satisfy the requirement of individual item reliability, because their loadings are, in general, greater than 0.707 (Table 6) and only some of the outer loadings are slightly under this critical level. Notwithstanding, the decision is to retain them to support the content validity of the scale. Second, the SAEL construct meets the requisite of construct reliability, because its composite reliability, Cronbach's Alpha and Dijkstra-Henseler's indicator (Rho.A) are greater than 0.7. Third, this latent variable attains convergent validity because its average variance extracted (AVE) surpasses the 0.5 critical level (Table 6). Lastly, Table 6 reveals that all variables achieve discriminant validity following both the Fornell-Larcker and the HTMT criterion (Henseler, Ringle, & Sarstedt, 2015).

Following Hair, Sarstedt, Hopkins, and Kuppelwieser (2014), a bootstrapping technique (5000 re-samples) is employed in order

Table 5
Students' feedback on their experiential learning activity.

Students' feedback	Suggested theoretical links
"The practical participation throughout the semester has been highly beneficial for the attainment of key insights that can only be learned through experience and direct observation".	Tacit knowledge; experiential learning
"It made me aware of connections between theoretical concepts addressed during the course and real managerial problems".	Experiential learning; learning by doing
"The experience enabled me to apply the skills and knowledge acquired in class as well as to contextualize them in real situations".	Experiential learning; learning by doing
"This practical experience was a great opportunity to learn about how we may react to real life situations and business problems. I loved what I learned during this course".	Experiential learning; learning by doing
"The practical experience was a great way to catch the students' attention and enable learning managerial skills in a new way, by mutual knowledge exchange and by observing others".	Tacit knowledge, experiential learning; relationship learning
"This simulation practice is one of the most interesting projects I have faced during my university experience. It really helps you to learn from observation and to assimilate concepts and theories in a practical manner".	Tacit knowledge; experiential learning

Note: This feedback corresponds to the students' belonging to the sample drawn at a Spanish Business School. It was extracted from their anonymous evaluation of the course and teaching quality.

Table 6
Measurement model results.

Construct/indicator	Outer loading	Weights	Jöreskog's rho (ρ)	Cronbach's alpha (α)	AVE
Students' attitude toward experiential learning			0.932	0.938	0.583
SAEL1	0.465	0.062			
SAEL2	0.576	0.077			
SAEL3	0.448	0.059			
SAEL4	0.625	0.083			
SAEL5	0.538	0.072			
SAEL6	0.841	0.112			
SAEL7	0.679	0.090			
SAEL8	0.711	0.094			
SAEL9	0.853	0.113			
SAEL10	0.661	0.088			
SAEL11	0.663	0.084			
SAEL12	0.765	0.102			
SAEL13	0.707	0.093			
SAEL14	0.755	0.100			
SAEL15	0.982	0.133			
Exam grade			N.A.	N.A.	N.A.
Grade	1.000	1.000			
Construct	Students' attitude toward experiential learning		Exam grade		
Students' attitude toward experiential learning	0.488				
Exam grade	0.213				

Notes: N.A.: Non applicable; Rho_A: Dijkstra-Henseler's indicator; AVE: average variance extracted. Fornell-Larcker Criterion: Diagonal elements (italics) are the square root of the variance shared between the constructs and their measures (AVE). For discriminant validity, diagonal elements should be larger than off-diagonal elements. Off-diagonal elements are the correlations among constructs. Heterotrait-Monotrait Ratio (HTMT) criterion should be under the threshold of 0.85.

Table 7
Structural model results.

Effect	Path coefficient	t-Value	p-Value	2.5%	97.5%
Students' attitude toward experiential learning → Exam grade ($R^2 = 0.213$)	0.461***	7.028	0.000	0.341	0.593

Notes: Bootstrapping 95% bias corrected confidence intervals (based on n = 5000 subsamples).

*** $p = 0.001$.

** $p = 0.01$.

* $p = 0.05$ (based on $t(4999)$, one-tailed test). $t(0.05, 4999) = 1.645$; $t(0.01, 4999) = 2.327$; $t(0.001, 4999) = 3.092$; ns, not significant.

to generate standard errors and t-statistics that permit the assessment of the statistical significance for the link considered within the research model. Table 7 includes the main parameters obtained for the structural model under study. The coefficient of determination (R^2) is assumed as the main criterion for the explained variance, which is shown in the dependent variable. These results endorse that the structural model has acceptable predictive relevance for the endogenous variable – Exam grade –. Results from PLS analysis

provide evidence to support the hypothesis suggesting a positive relationship between the students' self-perceived attitude toward experiential learning methods and their academic performance.

Discussion and conclusions

Following Park and Choi (2014, p. 749), "the traditional college classroom design is based on the educational space that

first appeared in medieval universities. Since then classrooms have not changed except in their size". Students are traditionally involved in eminently theoretical lectures, and often obtain their degree having a very limited contact with practice. In order to face this challenge, the educational community has been increasingly focusing and struggling toward preparing their future graduates to be as 'work ready' as they can be (Baldwin, 2015). In this line, during the past decades it has increased the number of scholars and practitioners who recognize experiential learning as one of the most significant trends in higher education science. University and college professors have gradually embraced teaching techniques and tools that are grounded on best practices for student learning and on the development of pedagogical methodologies that aimed at boosting students' involvement within the learning process. The introduction and deployment of novel and fresh teaching ways that intend to enhance the students' ability to absorb knowledge involve attending to practical workshops and seminars, reading, analyzing and grasping case studies, relying on experience-based activities and learning by getting involved in simulations. These educational practices are designed and expected to enhance students' retention and engagement toward the learning process.

The main purpose of this study was to test the effectiveness of experiential learning, learning by doing and management simulations to develop the students' actual and potential learning skills. Our results derived from the analysis of an undergraduate business students sample suggest that getting involved in experience-based practices and managerial simulations constitutes an effective approach to develop their competencies.

In addition, another interesting point extracted from this study is that we could verify how the students who have worked consistently during the semester, relying on group work to accomplish the different evaluation assignments have attained better grades at the final exam. Thus, we may conclude that fostering experiential learning strategies favors the students' understanding of theoretical concepts and leads to the attainment of superior performance. In addition, students usually feel deeply enthusiastic and motivated about getting involved in group-working activities and hence, learning by doing. In this way, students are able to apply the theory and concepts studied into practice, thus enhancing their individual results in the final exam, and consequently, improving their global grade. Our results are in line with previous studies attempting to unveil the benefits of experiential learning, such as the one developed by Deeley (2010), which proves how intellectual and personal development might arise due to experience-based learning. This study shows that although there can exist some potentially negative effects, overall, this learning approach usually leads to students' enhancement.

Our results are consistent with prior studies like the one developed by Burke (2013, p. 260) who claim that "by implementing professional development in schools that is experiential in nature, teachers can integrate innovative instruction such as differentiation, constructivist theory, discovery learning, inquiry-based learning, simulations, critical thinking, problem solving, technology-based learning, and performance-based assessment through demonstration, observation, collaboration, fieldwork, and reflection".

In conclusion, we contribute to management education by empirically testing the value of experiential learning based training as a significant driver of students' academic outcomes. These results might be helpful for the generation and development of supplemental pedagogical policies aimed at enhancing students' skills. Thus, our results provide support for this claim. Additionally, this paper sheds light to the learning-performance debate by revealing that experiential learning leads to superior performance. Therefore, we suggest that providing students with more experience-based

learning opportunities leads to performance enhancement and skills improvement.

Nonetheless, this research involves several limitations. We employed no control group so we are not completely sure that learning is due to the experience-based activities versus other factors such as readings, lectures or reflection. Besides, we failed to analyze demographic variables such as cultural level or personality traits, which could have provided additional information about the students' learning approach. In addition, we focused on a particular geographic – Spain – and academic – undergraduate business students – context. Hence, we must be cautious while generalizing our results. Future research should be directed toward the exploring of best practices regarding experience-based training and teaching methods. Moreover, replicating this study or collecting data from alternative sources could be helpful in order to validate these results.

Appendix.

7 point Likert scale evaluating students' attitudes toward experiential learning (1: total disagreement; 7: total agreement).

- Interesting
- Satisfying
- Informative, obtained pertinent knowledge in management skills
- Applicable to the real world and my own life
- Learning processes were simple
- Helped to develop my professional skills
- The learning process was pertinent to my self-development
- I felt active and involved
- I felt the course challenged me
- I liked participating in these activities
- Observed internal changes in confidence levels and knowledge
- Experiential activities helped in integrating course material
- I felt the course required me to exercise independent judgment in evaluating text book theories
- I learned things from this activity that I did not know earlier
- I am glad I took the course

Source: Adapted from Chavan (2011).

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