

Development of Emotional Competencies through Outdoor Training. An analysis within the University Context

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Abstract: Among the most recognized management training methodologies is experiential learning which helps managers to develop self-confidence and better understand organizational problems. Until now, there has not been examined how these procedures affect students of Business Management, with no empirical evidence to substantiate the results in this context. This work contributes to a better understanding of how to develop emotional competencies of Management students, based on a review of the literature on emotional competencies, experiential learning and Outdoor Training. The results of this study were obtained through an experimental design pre-test/post-test/re-test with data from 108 students. It was found that most of those who participated in the program of Outdoor Training significantly improved their emotional competencies, both the personal and the social ones.

Keywords: Emotional Competences, Experiential learning, Outdoor Training, Students.

1. INTRODUCTION

Interest regarding emotional intelligence (Stuller, 1997; Boyatzis *et al.*, 1995; Goleman, 1998; Boyatzis and Saatcioglu, 2008), competency-based learning (Boyatzis, Stubbs and Taylor, 2002; Berdrow and Evers, 2011;) and the use of experiential learning techniques such as outdoor experiential learning or Outdoor Training (OT) (Chapman and Lumsdon, 1983) has increased in recent years. Emotional intelligence is the ability to perceive emotion, have access to and generate emotions in order to help the mind and to regulate those emotions to promote intellectual growth (Goleman, 1998). Nowadays, it is well-known that even though intellectual skills and technical experience are the foundations of good performance of employees in business organizations, there is a factor that is not normally considered and that affects the performance of their work: their emotional intelligence level (Spencer and Spencer, 1993). Motivation, empathy and teamwork skills are related to emotional intelligence and the ability to produce the highest efficiency level within organizations. Therefore, these organizations look for the most emotionally intelligent employees (those who possess the greatest emotional competency). Bearing in mind that current university students, and particularly those enrolled in Business

Management degrees, are the future executives, there are no specific studies that evidence that using such techniques improves the emotional competencies of those students. This research study makes a contribution to the existing literature by providing a review of previous studies and offers empirical evidence of the results obtained with university students.

The main objective of this study is to provide a theoretical framework for the introduction of experiential learning within the university setting, as well as to contribute empirical evidence originating from several concrete OT experiences performed with Business Management students within the context of a Spanish university. The results obtained are sufficient to conclude that a specifically designed OT program is adequate within the context of application, since the participants have significantly evolved and improved their emotional competency levels. They enhance both their personal competencies (appropriate self-evaluation, self-control, success orientation, teamwork and collaboration) and their social competencies (leadership, communication, catalyzing change, teamwork and collaboration).

A summary of the literature review performed, the methodology used in the empirical study and the results obtained are detailed hereinafter. Likewise, the researcher's conclusions, including the main implications and limitations, complete the study.

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2. LITERATURE REVIEW

2.1. Emotional Competencies

The study of managerial competencies began in 1976 with a project sponsored by the American Assembly of Collegiate School of Business. Such project identified six competencies and personal characteristics that business school graduates had to master (Clark, Callister and Wallace, 2003). From then on, managerial competency based learning has been fostered in business schools, since such competencies would remedy the criticism received from executives regarding the lack of leadership and interpersonal competencies of graduates (Porter, 1983; Porter and McKibbin, 1988). Boyatzis (1982) and Bigelow (1991) provided a more theoretical and practical knowledge to this movement and later on, personal, interpersonal and social skills were included to the managerial competencies (Cameron and Whetten, 1983; Albanese, 1989; Quinn *et al.*, 1990; Whetten *et al.*, 1991; Whetten and Cameron, 2001), thus widening their spectrum.

Furthermore, research studies concerning emotional intelligence originate from the work of Salovey and Mayer (1990) who coined the term emotional intelligence. Such term was later on popularized by Goleman (1998), when he defined it as the ability to perceive emotions, have access to and generate emotions in order to help thinking and to regulate those emotions to promote intellectual growth. Thus, and for the first time, emotional intelligence was distinguished from what was traditionally known as intelligence (LeDoux, 1994; Davies, Stankov and Roberts., 1998; Ciarrochi, Chan and Caputi., 2000;).

It has been shown that competencies related to emotional intelligence (emotional competencies) are essential for success within the workplace and for mental and physical health (Hein, 1996), since they improve work relationships and, generally, personal well-being (Whetten and Cameron, 2001). Likewise, they are indispensable and cannot be substituted by cognitive intelligence or skills (Goleman, 1998; Whetten and Cameron, 2001). This emotional intelligence has been studied in relation to work insecurity and its outcomes (Jordan *et al.*, 2002), with regard to its effects in strengthening leadership skills (Goleman, 1998; Sosik and Megerian, 1999), and as an element to facilitate organizational adaptation and change (Huy, 1999). More recently, these competencies have been studied within the context of university students (Evers

and Rush, 1996; Sheehan, McDonald and Spence, 2009).

Emotional competencies have been classified into five wide dimensions within two main areas (Goleman, 1998; Weisinger, 1998). On the one hand, the personal area includes three associated dimensions (self-awareness, self-regulation and self-motivation). On the other hand, the social area includes two dimensions (empathy and the ability to manage others' emotions). Accordingly, while Salovey and Mayer (1990) originally focused on emotional awareness and emotional regulation Goleman (1998) emphasized interpersonal competencies or skills. However, managerial competencies relate to diverse dimensions of emotional intelligence (Clark *et al.*, 2003). Nevertheless, a greater emphasis is placed on interpersonal competencies (Whetten and Cameron, 2001) within the framework of the managerial competencies, while self-regulation and self-motivation are more emphasized in emotional intelligence

There are several approaches included in the literature regarding the selection of emotional competencies evaluation measures. Among them, the most popular one is the *Emotional Competence Inventory* (ECI) (Boyatzis, Goleman and Mcber, 1999; Boyatziz, Goleman and Rhee., 2000; Boyatzis and Sala, 2004). This research study specifically focuses on the university version thereof (ECI-U), which was proposed by Goleman and Boyatzis (2001).

2.2. Experiential Learning and Outdoor Training

Experiential learning is identified by the active learning methodologies and is based on involving every participant in the process and providing them with the tools to manage concrete problems (Kolb and Kolb, 2005). This type of learning allows participants to build an environment that is parallel to their day-to-day one, breaking their personal resistance and obtaining faster results than they would using traditional learning methodologies. It also offers the opportunity to experience and encourage participants solving concrete problems in less conventional ways, which in turn allows them to show themselves as they are in order to get to know themselves more in depth (Jiménez and Gómez, 2008).

This type of learning is called experiential because of the role that experiences play on the learning process (Kolb, 1984). Dewey (1938) paved the way by establishing a close relationship between experience

and education. Later on, Piaget (1948) researched the nature of emotional intelligence and how it develops, concluding that intelligence is shaped from experience he also concluded that intelligence is not an innate natural characteristic, but a product of the interaction between the individual and their environment. Subsequently, Lewin (1951) studied the integration of theory and practice and showed that the learning process is maximized when there is a direct relationship between immediate experience and analysis. Accordingly, it can be understood that experience is the foundation for observation and reflection, being these observations in turn assimilated by a new group of abstract concepts and generalizations from which new implications are obtained. The knowledge of this cycle helps individuals "learn to learn", "learn to teach" and "learn to manage organizations" (Kolb, 1984).

One of the experiential learning modalities is the outdoor experiential education or Outdoor Training (OT) (Ewert, 1989; Bunting, 1990; Priest, 1990; Bennett, 1996; Cooper, 1997; Channell, 1998; Raiola and O'Keefe, 1999; Payne, 2000;). The origin of OT is found inside the theory of adventure based education (Adventure Training) initiated by Jones (1996), and based on the aforementioned Kolb's (1984) experiential learning. This theory benefits professional competencies both mentally and physically (Wagner and Campbell, 1994).

In the field of entrepreneurship, OT has been used to develop the emotional competencies of employees (Wagner *et al.*, 1991) and is currently considered to be a very useful tool for human resource departments and the education development field (Jiménez and Gómez, 2008). It is also being included as a tool to develop different competencies such as teamwork, communication, leadership, time management, conflict management, adaptation to change, creativity, motivation, self-confidence and self-control (Wagner, Baldwin and Roland., 1991; Wagner and Roland, 1992;Tuson, 1994; Wagner and Campbell, 1994; Clements, Wagner and Roland., 1995; McEvoy and Cragun, 1997; Dufrene *et al.*, 1999; Payne, 2000). Other uses are described in Table 1.

OT is based on a methodology that uses indoor and outdoor activities. It focuses on taking the individual to new and unfamiliar environment, where they can live experiences that generate cognitive dissonance and encourage problem solving, by asking questions and personal and group reflection processes (Wagner *et*

al., 1991). On the other hand, it uses the classroom to reflect and draw conclusions (Chulilla, 2002) in order to develop and train adequate emotional competencies for behavior management. Furthermore, it involves team members in the light of new challenges, both intellectually and emotionally (Cobo, 2000), and in so doing, it helps participants to perform a self-evaluation of their strengths and weaknesses in order to learn more about themselves (Cuadrado, 1998).

In the accordance with the foregoing, this research study defines OT as a learning methodology that uses nature as a classroom and experiential learning as a tool to develop and improve emotional competencies. Table 1 summarizes some of the already existing empirical research, where it is clearly shown that OT has only been studied with MBA students, employees and manager.

On the other hand, and as previously stated, there is a close relationship between managerial skills and emotional competencies (Clark *et al.*, 2003). The authors of this study examined if empirical methods (for example, the game and group case exercises) in a managerial skill course improved the student's emotional competencies, in comparison with those students who were not enrolled in the course. This study showed that practical activities could have a positive effect on students even if they were not formally educated on the emotional learning theory or emotional competencies in the classroom.

Business management skills learning in many universities could increase its effectiveness by also promoting education on emotional competencies that companies and organizations demand for their employees. While most people's emotional competencies gradually increase over time (Goleman, 1998), these could be accelerated by encouraging students to participate in experiential programs such as OT. Taking into account the foregoing, the following general hypothesis of this study is established:

Students who participate in OT educational programs show a significant improvement in their emotional competencies, in contrast to those who do not participate in these type of programs.

3. METHODOLOGY

3.1. Research Study Design: Participants in this Study

The participants in this study were students of a medium size Spanish university who had completed 80

Table 1: Empirical Research Studies Regarding Outdoor Training (by Chronological Order)

Author	Context	Country	Sample	Methodology	Results
Burnett and James (1994)	Analyzed OT as personal change in business executives applying the "personal construct" theory.	United Kingdom	Three groups of individuals, all of them students of a full time MBA program	Qualitative analysis questionnaire.	Differences were found in the individual self-perception of each participant, but not in their self-confidence or in learning to learn.
MacLean et al. (1996)	Focused on business executives through MBA students	United Kingdom	23 students of an MBA program	<i>Personal Competence Model</i> of the MCI Standards.	The following competences improved: self-confidence, personal learning and development.
Badger, Sadler-Smith, and Michie. (1997)	Tried to measure the impact of OT in executive development programs of large companies.	United Kingdom	Employees of 100 large companies	Discriminated between participants who had used OT in the last two years.	OT was found to be very advisable for the development of executives.
Ibbetson and Newell (1998)	Studied two organizations that participated in an executive development program through OT.	United Kingdom	157 individuals, randomly assigned to teams of 20 participants	Questionnaire and group interviews. ANOVA and qualitative analysis.	The program had an immediate positive impact among delegates of both organizations.
Ibbetson and Newell (1999)	Compared the impact of the OT program using different competitive formats between individuals in order to develop teamwork	United Kingdom	61 MBA students and 56 students of a Production and Mechanical Engineering Graduate program	Questionnaire including six items related to teamwork.	Participants in the losing teams felt they had learned less during the experience compared to those in the winning teams. The competition between the teams was eliminated and the positive impact between the participants improved.
Hamilton and Cooper (2001)	Researched the impact of an OT program for the development of teamwork skills.	United Kingdom	26 executives	Pre and post program questionnaires. Average differences	The scores in the results for certain competencies (achievement of success and development, as well as motivation for the activity) increased.
Hwang (2003)	Showed the OT impact on the attitudes towards teamwork.	Singapore	345 participants in the OT program	T-test questionnaire. Structural equations	The competitive attitudes alongside the collectivism cultural values and work pace were found to be significant work variables for the efficiently of OT.
Shivers-Blackwell (2004)	Studied the reaction towards work initiatives of teamwork outdoor during MBA education.	United States	147 participants distributed between 36 groups of MBA students	Confirmatory factor analysis. Correlation. Qualitative analysis	Attitudes towards teamwork before the OT experience were positively associated with team support, power, intention of remaining in the team and group survival.
Burke and Collins (2004a)	Suggested a framework to analyze the skill transfer mechanisms.	United Kingdom	10 OT providers	Qualitative analysis. Analysis of the transcription content.	OT providers were not too concern about the transference of this type of learning.
Burke and Collins (2004b)	Suggested the analysis of the skill transfer mechanisms from the client's perspective.	United Kingdom	39 executives that had participated in at least one OT program	Questionnaire	A lack of transference relevance of this type of learning was found in the companies.
Jones and Oswick (2007)	Researched the impact of participating in an OT program geared towards young managerial executives.	Scotland	19 employees with more than 5 years of work experience within the industrial sector	Interviews	The "micro-dynamics" were found to be more relevant than the "macro-dynamics" to acquire labor skills.

(Table 1). Continued.

Author	Context	Country	Sample	Methodology	Results
Dadehbeigi and Shirmohammadi (2010)	OT effects on bank employees	Iran	68 employees of the bank sector	ECI-2	All emotional competencies were increased.
Cherniss <i>et al.</i> (2010)	Studied the leadership and social competences.	United States	170 participants (out of the 89 that belonged to the control group)	ECI-2	Emotional intelligence was related to the Manager Training.
Kolb and Kolb (2010)	Recreational area was studied as a learning tool.	United States	18 participants	Qualitative research.	Recreational learning space was found to be beneficial for increasing intelligence, ethics, spirit, competitiveness and empathy.

% of their Business Management and Administration degree credits. Table 2 shows the demographic information of the chosen sample. This sample included a total of 54 individuals who participated in the OT experience and 54 participants who belonged to the control group. In the participants' group, 18.1 % were men and 81.9 % were women. On the other hand, the control group included a 22.9 % of male participants and a 77.1 % of female participants. The average age of the participants was 23 years of age and 22 years for the control group. Furthermore, the participants' parents had a uniform level of education, that is, secondary education. It was also verified that none of the participants had had any previous OT experience, while 20 % of them had had a previous leadership experience and 90 % of them had had some type of teamwork experience. In addition, 92 % had been taught about personal and interpersonal skills and 15 % had had some previous experience with volunteer work.

In regards to the sample size, there was a total of 108 students (54 participants of the program and 54 participants of the control group). This number is greater or similar to those included in other studies; for example: 23 MBA students (MacLean *et al.*, 1996), 157 participants (Ibbetson and Newell, 1998), 61 graduate students (Ibbetson and Newell, 1999), 147 graduate students (Shivers-Blackwell, 2004), 39 executives (Burke and Collins, 2004b), 19 employees (Jones and

Oswick, 2007), 68 employees (Dadehbeigi and Shirmohammadi, 2010), 170 participants (Cherniss, Grimm and Liautaud, 2010), and 18 participants (Kolb and Kolb, 2010).

3.2. Selection and Measurement of Emotional Competencies

For the development of this OT program, competencies that had been especially significant in previous research studies, both in the personal and social areas, were selected. These competencies covered the three dimensions suggested by Goleman and Boyatzis (2001): self-awareness, self-management and relationship management (see Table 3). When selecting such competencies, the authors considered that, although traditional efforts focused mainly on the development of social competencies, the analysis of personal competencies is also essential for the development of the former (HayGroup, 2000). Therefore, the previously mentioned personal and social areas are represented within the group of competencies selected.

In order to evaluate emotional competencies, a semi-structured questionnaire based on the aforementioned ECI-U (Goleman and Boyatzis, 2001) was used. Twenty seven previously validated items were considered and much like Clark *et al.* (2003) and Sheehan *et al.* (2009) did in their studies, a scale of 1

Table 2: Groups in the Research Study

	No. individuals in the sample	% Men	% Women	Students' age (average)	Father's education level (mode)	Mother's education level (mode)
Participants	54	18.1	81.9	23	Secondary level	Secondary level
Control Group	54	22.9	77.1	22	Secondary level	Secondary level

Table 3: Characteristics of the Emotional Competences Selected for the Research

Competences			Activity Performed
Competence	Dimension	Area	
Emotional self-awareness	Self-awareness	Personal	<i>A new Life (blanket)</i>
Adequate self-evaluation	Self-awareness	Personal	<i>Electric fence</i>
Emotional self-control	Self-management	Personal	<i>Melt Down</i>
Initiative	Self-management	Personal	<i>Puzzle</i>
Success motivation	Self-management	Personal	<i>Pipelines</i>
Catalyzing change	Relationship management	Social	<i>Minefield</i>
Teamwork and collaboration	Relationship management	Social	<i>Magic Pencil</i>
Communication	Relationship management	Social	<i>Everyone Together</i>
Leadership	Relationship management	Social	<i>Square Rope</i>

to 5 was included. All Cronbach's alphas of the nine measured competencies surpassed the value of 0.6. This value aligns with that indicated by other ECI based studies (Wolff, 2005). Additionally, open-ended questions regarding the benefits perceived from the OT experience were asked. As regards to the objectivity of the measurement system, it was based on the participants' self-evaluations in respect of their level of emotional competencies. Just as it is mentioned in the limitations section of the study, this could subtract value to the results. However, previous research has shown strong evidence that ECI is validated for the evaluation, development and training of emotional intelligence in all organizational contexts (Lloyd, 2001; Sevinc, 2001; Brizz, 2004). Reliability, which is measured by the internal consistency of the ECI, is quite satisfactory in all its items (Byrne, 2003; Wolff, 2005). In addition, several studies have shown that the ECI can be successfully used to measure the development of emotional competencies (Stubbs, 2005). Lastly, the inclusion of a facilitator role within the research study -such is the case in this study- allowed for a good approximation of a 360 ° analysis, decreasing the relevance of self-evaluations (Shivers-Blackwell, 2004).

Concerning the analysis of the data, an exploratory statistical analysis and a normality test were performed through the Kolmogorov-Smirnov and Shapiro-Wilk tests. Additionally, it was verified whether the variances of each sample were the same or different,

3.3. Procedures

When the participants were invited to participate in the study, they were informed that the research study being conducted aimed to understand how their

emotional competencies changed after participating in OT programs. Such students were given extra credit for participating in the program and were also assured that their surveys would remain confidential. Before the test, the participants completed a first questionnaire in which they provided information about the several factors that could influence their emotional intelligence competencies, such as previous work experience, leadership experience and demographic information. During the post-test, the students completed the same questionnaire that they completed during the pre-test and they were asked to provide reports on the activities performed during the experience and which could have affected the study. Additionally, the participants' work load during the two month research period was examined, but no significant differences between the research and control groups were found. As a result, the existence of different opportunities in the development of emotional competence was discarded (Taylor, 1988). Likewise, the participants were asked about their leadership, teamwork and volunteer work experiences during the OT program period, because these could have also provided them with opportunities to develop their emotional competencies (Taylor, 1988; Kolb, 1998). Their answers demonstrated that there were no significant differences between the participants on any of these dimensions.

Once the sample was selected, it was randomly divided into two subgroups and the OT intervention was only applied to one of them. The students belonging to the research group participated in a research study in which outdoor activities, which were performed as challenges framed inside role games and included nine different tasks and collated reflections in order to analyze their competences. In contrast, the second group (called the control group) did not receive

Table 4: Design and Phases of the Research Study

Duration / Days	Phases of the Project	Total Group (N=108)	
		Group 1 (N=54)	Group 2 (N=54)
1st day	Pre-test	X	X
2nd to 5th day	OT Intervention Program	X	
15th day	Post-test	X	X
75th day	Re-test	X	X

the program. For the development of the OT program, an intra-group and inter-group research design—pre-test/post-test/re-test type—with a control group was used (Campbell and Stanley, 1966; Hernandez-Sampieri, Fernández and Baptistaio, 2003). In other words, a research study was performed on a group of students and it was compared to the control group. Measurements were taken before the research study, immediately after and two months after it was finished. This design allowed the researchers to control and evaluate the results as a possible effect of the intervention program, since they used a control group to establish comparisons as well as to verify the retention or omission of the training two months after the program (Table 4). As a result, the limitation mentioned by Hwang (2003) in respect of measuring immediately after the research study was avoided, since it could lead to biased answers.

Based on the literature review, it could be deduced that OT experiences do not constitute a standardized type of education and do not include a consistent program. Nevertheless, they are used for a great variety of organizations and purposes and have yielded different results according to the participants' characteristics. Therefore, a description of the experience and the context of the initiative is imperative (Shivers-Blackwell, 2004). For the purpose of this research study, the experiences were developed in two very different locations: the first one took place indoors, inside the School of Economic and Business Sciences classrooms of the university where the participants were enrolled; the second and empirical part took place in a nature site located north of the city. This site is home to numerous species of trees and springs.

The OT experience gave the students the opportunity to receive a team process training lesson and to interact with other members of the university within an informal framework. The program started at 8:00 a.m. by offering the participants a general vision of the experience. The participants were then divided into groups, keeping the objective and the total number of

participants in mind (HayGroup, 2000). The problem that the activities presented cannot be generally solved by one or two participants; it requires the entire team to commit themselves physically and cognitively. Therefore, in order to make sure there was a successful interrelationship between the participants and the facilitator and the different behaviors of the group members could be analyzed, no more than 12 individuals participated in each group (Wagner *et al.*, 1991).

The participants began the activities outdoors taking part in exercises such as low ropes, in which the risk component was minimized and safety was increased. In total, there were nine activities planned for the day (described below): *A new Life (blanket)*, *Electric Fence*, *Melt Down*, *Puzzle*, *Pipelines*, *Minfield*, *Magic Pencil*, *Everyone Together*, and *Square Rope* (Wagner *et al.*, 1991; Webster, 1994; Clements *et al.*, 1995; Rohnke, Tait and Wall., 1997). All these activities were selected in order to develop specific personal and social competencies and were in turn connected with a competency and a dimension of that competency (Table 3). Additionally, these activities were developed within a role game in which each group was a humanitarian organization with a very concrete objective: to *save lives*. To this end, the groups needed to overcome the challenges that each activity presented.

Furthermore, the different activities were guided by a group of consultants/researchers, whose mission was to monitor the safety of each participant and conduct the activity, as well as to observe the behaviors within the natural environment of the group and its members. These consultants completed an educational and training process before they were qualified to evaluate the individual and group behaviors within the natural environment.

The activity called *New Life (blanket)* consisted in providing the participants with a 1.5 by 1 meter blanket to stand on. The exercise challenged the group to turn

the blanket over, making sure that no participant stepped outside of it. These activity fostered leadership attitudes and displayed the need for change to the students.

Electric Fence consisted in placing two ropes between two trees. The first rope was placed 1.80 meters above the ground and the second was placed 1.50 meters above the ground. Every group member was asked to cross between the two ropes without touching them. This activity focused on the physical and emotional care between team members, fostering perseverance, integrity and concentration.

The activity *Melt Down* consisted of two buckets placed within a certain perimeter and one of them was full of golf balls. The participants had to use two suitable ropes to pour out the content of one cube into the other. This activity fostered creativity, coordination, communication and leadership skills.

Puzzle consisted in placing nine numbers on the ground in a three by three grid. Each participant stood over a different number and were challenged to place the numbers in the correct order by developing their communication, teamwork and leadership skills.

Pipelines consisted in placing all the team members in a row and holding a foam rubber cylinder which they could not drop while they walked through a path. If they dropped the cylinder, they had to start the path all over again. This exercise developed organization, planning and communication skills.

The Minefield consisted in designating a perimeter and the entire team was blindfolded and was asked to go through the perimeter making sure not to touch the traffic cones strategically placed on the way. This challenge developed organization, planning, teamwork and specially communication skills.

Magic Pencil consisted in writing their team name (chosen during the initial stage) on a board by using a marker hanging off a rope. This activity required the participation of the entire team in order to achieve their goal. The exercise fostered communication as well as teamwork and leadership.

Everybody Together required that all the participants stood on a small blanket in front of a field containing different small colored balls. Then, four baskets were placed in each corner of the field and the participants were challenged to introduce the balls into those baskets. However, those who were not standing

on the blanket could not see or speak. This activity fostered communication.

Finally, for the activity *Square Rope* each the students were given a two meter long rope and they had to describe a square with rope while blindfolded. This activity intended to enhance leadership aptitudes and encouraged the participants to come to a consensus, even when facing difficulties.

When the different activities were completed, all the students participated in a feedback process. This activity encouraged them to perform a detailed analysis of their behavior during the program as a way to confront their experience and use it as an opportunity to improve. To this end, the activities were video recorded.

4. RESULTS

In order to contrast the basic hypothesis of this research study, a Student's t-test was used for two dependent samples. This test is especially useful when the values taken by the variable are measured in the same sample but in two different instances; such is the case of this research study. Likewise, the sample was divided into two groups: a research group and a control group. In addition, the nine emotional competencies were measured during three specific instances: before the experiential test (pre-test), just after the experiential test (post-test) and two months after the experiential test (re-test).

Table 5 shows the results obtained from the research group during the different tasks, as well as the level of significance of the tests performed. In that regard, greater average values can be observed from the research group in all the competencies during the post-test phase in comparison to the pre-test. This difference is still greater in comparison to the re-test phase.

Table 5 also shows that during the pre-test "success orientation" yielded the lowest average value while the "self-knowledge" competency obtained the highest average. It can also be evidenced that the distribution is reduced for all the analyzed cases. On the other hand and concerning the tasks performed during the post-test, the data analysis showed that "adequate self-evaluation" yielded a low average, although it was higher than the values obtained in the previous test. In addition, "self-knowledge" and "team work and collaboration" obtained the highest average values once again. Lastly, the participants' re-tests yielded

Table 5: Summary of the Research Study Results (Pre-Test/Post-Test)

ECI-U	Participating Group						Control Group						
	Pre-test			Post-test			Pre-test			Post-test			
	Average	Typical Deviation		Average	Dev.	t	p	d	Average	Dev.	t	p	d
Self-awareness	3.839	0.363		4.358	0.461	-7.158	0.000**	0.519	3.938	0.467	-1.476	0.146	0.049
Self-control	3.246	0.727		3.753	0.641	-6.210	0.000**	0.506	3.271	0.590	-1.098	0.277	0.037
Catalyzing change	3.432	0.555		3.851	0.532	-4.325	0.000**	0.419	3.697	0.554	-0.535	0.595	0.018
Communication	3.203	0.469		3.796	0.463	-9.094	0.000**	0.592	3.413	0.589	-1.564	0.124	0.061
Initiative	3.191	0.642		3.870	0.520	-8.358	0.000**	0.678	3.463	0.707	-0.553	0.582	0.018
Leadership	3.654	0.548		4.055	0.461	-4.545	0.000**	0.401	3.740	0.687	0.000	1.000	0.000
Success orientation	3.018	0.519		3.975	0.593	-10.534	0.000**	0.956	3.296	0.623	-0.830	0.410	0.037
Teamwork and collaboration	3.605	0.730		4.240	0.524	-7.797	0.000**	0.635	3.796	0.689	-0.129	0.898	0.006
Adequate self-evaluation	3.259	0.478		3.357	0.525	-1.823	0.074	0.098	2.975	1.087	-1.695	0.096	0.123

Notes: ** p< 0.01; * p< 0.05.

Table 6: Summary of the Research Study Results (Pretest/Re-Test)

ECI-U	Participating group						Control group						
	Pre-test			Re-test			Pre-test			Re-test			
	Average	Dev.		Average	Dev.	t	P	d	Average	Dev.	T	p	d
Self-awareness	3.407	0.733		4.475	0.432	-10.475	0.000**	1.068	3.938	0.467	-1.439	0.156	0.047
Self-control	3.067	0.845		4.104	0.556	-8.120	0.000**	1.036	3.271	0.590	-0.898	0.373	0.028
Catalyzing change	3.240	0.673		4.215	0.361	-10.604	0.000**	0.974	3.697	0.554	-0.690	0.493	0.023
Communication	3.073	0.442		4.049	0.494	-10.807	0.000**	0.975	3.413	0.589	-1.601	0.115	0.632
Initiative	2.975	0.762		4.135	0.559	-11.561	0.000**	1.159	3.463	0.707	-0.625	0.535	0.020
Leadership	3.295	0.767		4.376	0.489	-10.401	0.000**	1.080	3.740	0.687	-0.035	0.972	0.001
Success orientation	2.845	0.646		4.055	0.524	-11.765	0.000**	1.210	3.296	0.623	-0.830	0.410	0.037
Teamwork and collaboration	3.389	0.833		4.431	0.433	-9.204	0.000**	1.042	3.796	0.689	-0.189	0.851	0.009
Adequate self-evaluation	3.037	0.264		3.185	0.544	-2.073	0.043*	0.148	2.975	1.087	-1.754	0.085	0.127

similar results to those during the previous tests (Table 6). It is important to mention that for almost all the competencies, the average values obtained were always higher than those for the aforementioned post-test. The t-test results for the research group generated information about the existence of significant differences between the pairs of related data. In every case, except for the "adequate self-evaluation", there was a p-value lower than 5 %. Therefore, the hypothesis stating that there were no average differences was rejected. In contrast, it was confirmed that there were significant differences between eight out of the nine emotional competencies before (pre-test) and after (post-test) the experiential test. Additionally, the highest and lowest value for the average differences of each variable yielded the conclusion that "success orientation" increased the most in the group and "adequate self-evaluation" increased the least.

On the other hand, the participants' results during the pre-test and the re-test appear in Table 6. In every instance, the p-value was lower than 5 %, which allowed for significant differences between the averages of the nine emotional competencies analyzed. Likewise, the "success orientation" seemed the competency that has increased the most while "adequate self-evaluation" increased the least. Tables 5 and 6 also display the results for the control group, always with a p-value higher than 5 % just, as expected.

The sets of results obtained in this study allowed the researchers to confirm that the evaluation of emotional competencies, both personal and social, were greater during the post-tests and re-tests in comparison to those during the pre-test. Moreover, the statistical significance of such results and its reach to all the emotional competencies measured accept the hypothesis contrasted in this study. In other words, it is evidenced that personal and social emotional competencies increased after participating in an OT activity.

As previously stated, the semi-structured questionnaire asked the participants to express their opinion about the benefits of these type of experiences concerning the improvement of their emotional intelligence. These benefits can be classified by their relation to OT as a teaching methodology and by their positive influence on teamwork.

In regards to OT as a *teaching methodology*, the most relevant opinions stated that "the OT awakens

and develops emotional competencies, both personal and social, helping them discover themselves and their possibilities", "it is a methodology that allows you to learn while you act, in other words, learn by doing which makes the transmission of knowledge immediate" and "it is a motivating methodology that uses nature as a classroom, taking us out of our daily routines and generating a greater impact and memory in us".

Additionally, regarding its *positive influence in teamwork*, the following opinions should be mentioned: "it creates a positive environment in work groups by generating a good setting that fosters teamwork, coordination and cooperation" and "it fosters the communication between individuals and groups having a positive effect in conflict management".

5. DISCUSSION AND CONCLUSIONS

The main hypothesis of this research study, concerning the students' emotional competencies after they participated in OT experiences, has been proven to be valid. In a sample of university students, the effectiveness of the OT methodology and the increase of their emotional competencies were contrasted. Specifically, their personal emotional competencies (adequate self-evaluation, self-control, success orientation, initiative and self-knowledge) have increased after participating in an OT activity. Similarly to Eisman (1995) and Lopez (2002), an increase of the participants' confidence was achieved for two main reasons: they worked in an unknown location and collaborated with their teammates in order to achieve their objectives. Self-knowledge involves fostering creative problem-solving as a way to design new innovative strategies in order to overcome obstacles (Bennett, 1996). On the same individual bases and similarly to previous studies (Payne, 2000; Lopez, 2002), the participants developed self-confidence and recognized their own strengths and weaknesses, feeling more than capable to act under pressure and taking responsibility for their actions.

Likewise, other social emotional competencies (leadership, communication, catalyzing change, teamwork and collaboration) improved considerably after participating in the OT activities. Thus, teamwork improved since individuals developed an enormous amount of pride in their actions and an increased sense of belonging to the team, similarly to what Krouwel and Goodwill (1995), Payne (2000) and Lopez (2002) evidenced.

In this respect, it was witnessed that all the competencies studied evolved favorably. However, "success orientation" increased the most in the research group. In contrast, "adequate self-evaluation" increased the least in all the tests performed. Similarly to that evidenced by Clements *et al.* (1995), the participants experienced real emotions which they could not hide or decrease. Therefore, when performing activities in a different context, it is easier for individuals to part with their old ways of thinking. OT combines nature as a classroom and experiential education as a method, which allows it to provide an even training field. It offers the participant a trial-error-success experience, which in turn leads to positive results for their self-esteem and confidence and fosters an increase of awareness through analysis and reflection.

Concerning the research model used to evaluate emotional competences (ECI-U), the results obtained validate its use in the sample's university context. Previous studies have also shown the strength of the proposed model within other environments. For example, Vidic *et al.* (2017) worked with leaders, Pittenger (2015) with professionals, and Ealias and George (2012) with workers. On the other hand, each emotional competence in the model was measured by multiple indicators and evaluated in terms of reliability and validity. Likewise, other recent OT studies have obtained similar significance and relevance of indicators (Scott and Glyn, 2017, Andre *et al.*, 2017, Largo-Wight *et al.*, 2018).

To conclude, the empirical evidence obtained is enough to confirm that a specifically designed OT program is efficient in the application context, since the research participants significantly evolved and improved their emotional competencies. Therefore, this study provides knowledge about the relationship between EI and OT. Furthermore, the efficacy of the program is verified in two dimensions of the analysis: their personal competencies (adequate self-evaluation, self-control, success orientation, initiative and self-knowledge), as well as their social competencies (leadership, communication, catalyzing change, teamwork and collaboration). Hence, experiential learning has a positive effect in the development of students' emotional competencies. Additionally, the participating students mentioned that OT awakens and develops personal and social emotional competencies, helping them to discover themselves and their possibilities. Moreover, OT directly influences teamwork since it is a motivating methodology that

generates a positive environment within the work teams, providing them a good environment that fosters to teamwork, coordination and cooperation.

Implications for Educational Institutions

Several implications from the results obtained could be mentioned for Business Management educational institutions. First, these institutions should foster experiential programs in order to increase the managerial emotional competencies of their students. This alternative could provide a solution for the demand of the organizations that are looking for employees who possess higher levels of emotional competencies. In addition, the graduates would improve their emotional competencies, which would positively influence their communication, motivational and teamwork skills and improve their demand and value in the job market. Second, the institutions should promote actions outside the classroom, either in nature or other contexts, since it has been evidenced that classroom settings are not enough to develop the competencies that are currently in high demand.

Implications for Business Management Lecturers

Given the existing relationship between the managerial and emotional competencies, several useful considerations for lecturers can be extracted from this study. First, the value of using tools to develop emotional competencies in order to improve the managerial competencies of their students. That is because these depend on the acquisition of implicit knowledge related to the competencies, not just explicit knowledge. Second, personal and interpersonal competencies must be considered. Therefore, lecturers should include group activities in their teaching methodologies.

Limitations

The limitations of this research study could be summarized in the four points described hereafter. First, the measures obtained regarding the emotional competencies are the results of the students' self-report about their behaviors, not a measure of an emotionally intelligent behavior. Therefore, the positive effect could be the result of the sensitization that the students received during the experiential program. Nevertheless, just as it is stated in the methodology section, this is the common measuring practice for this type of research study. Likewise, this study included the participation of facilitators who contributed to the

qualitative evaluation of the experience. However, it is important that future research studies evaluate the real measures of behavior in order to determine whether the improvement of the emotional competencies has been reached or not. As Clark *et al.* (2003) suggested, students could be asked how they would respond to a difficult interpersonal situation and perform the evaluation based on their answers. Second, the sample might seem small, however, as the methodology section states, 108 students is a similar sample size to the ones used in previous studies. Overall, future replications and extensions of this study that include larger sample sizes and different contexts could improve the generalization of the results. Third, the results obtained do not include the students' emotional competency measures after their graduation date. Thus, definite evidence that the increase of their managerial emotional competencies will continue in the future is not available. Fourth, diverse aspects of the research's context should be more carefully considered. For example, aspects such as the participants' demographic characteristics (i.e. sex, age, motivation), the structure of the program (i.e. duration of the activities, types of activities, reflections), the overall duration of the program (i.e. one day, two days, one week), the location (i.e. nature or a museum), and even new tools used to transmit emotions. In this sense, it would be worth studying if a pleasant setting induces a more lasting impression and stronger memories than any other learning method, just as Krouwel and Goodwill (1995) and Bennett (1996) suggested.

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