
Developing management skills through experiential learning: the effectiveness of outdoor training and mindfulness

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Abstract: The primary goal of this study is to develop a tool to measure the personal and interpersonal skills of individuals who participate in experiential learning based on outdoor training and mindfulness sessions. This paper presents the results of an application of this method to a sample of 97 participants (49 employees and 48 master's and undergraduate students). Using competency questionnaires, participants were evaluated by managers and tutors. Participants were assessed individually. The following competencies were analysed: teamwork, communication, leadership, motivation, stress tolerance, organisation and planning, responsibility, and analysis, resolution and anticipation of problems. The results show that students and employees require further development in terms of their leadership, teamwork, responsibility and stress tolerance. Teamwork should be promoted. Individuals should be encouraged to delegate and accept opinions, ideas and criticism from other team members. It is important to identify the leader and the followers. This requires all individuals to accept their roles and responsibilities by taking charge of their actions. For the sample of workers, the manager's evaluations were consistently less positive than the evaluations by the workers themselves.

Keywords: outdoor training; mindfulness; tools; evaluation; emotional skills.

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1 Introduction

Intelligence is defined as the ability to acquire knowledge and use this knowledge in new situations. This entails the development of planning, organisation, analysis and visualisation skills. These skills are needed in daily and professional life, where individuals have to absorb new mental and sensory information and steer their actions towards achieving goals. But the exact way in which these skills interrelate and combine to form what we refer to as intelligence is still a mystery (Cohen, 2000).

Outdoor training activities and the practice of mindfulness are experiential learning tools. Experiential learning means that people do not learn and develop until they are able to put theory into practice. The primary goal of experiential learning is to develop individuals' emotional intelligence so that these individuals are aware of their limits, capabilities, expectations and objectives.

Outdoor training consists of experiential learning because participants live the experience and receive feedback on their behaviour and the effect it has on the environment. Outdoor training is focused on developing techniques to enhance integration (improving the working environment for disadvantaged groups, conflictive children, etc.), leadership and communication, and motivation. It is based on leaving

behind the everyday environment, which is full of uncertainties, to reveal a hidden environment, enabling the development of attitudes through behaviours that define these attitudes. The goal of outdoor training is to foster the integration, teamwork and cohesion of groups and to promote motivation, professional competitiveness and result orientation. Therefore, outdoor training offers a dynamic, distinct and innovative way to provide training to develop high performance groups with a strong capacity for innovation and creativity.

The goal of mindfulness is to make people aware of their roles and help them feel comfortable with themselves, ensuring that people keep sight of the objectives associated with their role. For example, the role of a student is to pass exams or obtain a degree, whereas the role of a worker is to earn his or her salary. People often lose sight of the objectives associated with a given role and suffer anxiety or stress. Anxiety is a self-defence mechanism generated by the mind when it perceives danger, strays outside its comfort zone or becomes burdened with negative thoughts. Therefore, mindfulness helps individuals get to know themselves and motivates individuals to become aware of the role they must play and thus learn to accept whatever occurs at each moment.

These techniques pursue coexistence and integration outside people's comfort zone so that people learn to work in a team, get to know themselves and their colleagues, and become aware of the role they play in different situations. In their daily lives, people might find that they are able to identify their purpose, thereby increasing their frustration tolerance.

The goal of this study is twofold. The first objective is to use these tools to measure the personal and interpersonal skills of a sample of workers and a sample of business administration students enrolled in undergraduate and master's programmes. The second objective is to investigate the way in which individuals develop interpersonal and management skills to steer their behaviour towards achieving their goals. However, individuals' perceptions are subjective. Therefore, in addition to self-evaluations, the method presented herein is based on the evaluations of an external agent. It is important to establish a different way of assessing individuals without indicating that they are being assessed. However, the effectiveness of these techniques is a complex issue when progress in the evaluated competencies is measured. Therefore, a dictionary must be developed to define each competency and the behaviours that are associated with each level of that competency.

Following this introduction, the second section reviews the primary concepts that are associated with emotional intelligence and the literature on the application of outdoor training and mindfulness. The third section describes our objectives, assumptions and method. The fourth section presents the primary results of the application of these methods. The fifth section provides the conclusions of the study.

2 Emotional intelligence and outdoor training practice

Binet (1903) defines intelligence as the general ability to adapt. This ability consists of superior psychological processes such as the capacity for judgement, comprehension, memory, reasoning and so forth. Children acquire these abilities at different speeds, so an individual's intelligence is expressed in terms of the standard mental development for someone of that individual's age. Binet's method for evaluating intellectual development

is to classify each subject by comparing the number of questions that the subject correctly solves with the average number completed by all subjects of a given age to standardise the score. Based on this comparison, each subject is assigned a score expressed in units of age to reflect the subject's mental age.

To operationalise the concept of mental age, Stern (1912) introduced the concept of intelligence quotient (IQ), expressed as the quotient of mental age to biological age. This quotient is a numerical indicator that describes relative performance in a test of mental abilities by comparing a subject's score with the scores of other subjects of a similar age. Mental age is the expected performance for a certain age and certain period of development, whereas the chronological age is a person's age in years and months at the time of the test (Galton, 1969). The IQ is a construct that explains intellectual differences between individuals. Human intelligence is essentially considered an innate capacity that can be quantified and that predicts people's academic, social, cultural or professional success or failure. Thus, a student with an IQ of 130 should have good university grades, social success and high performance and should generally be better adapted to the environment than a person with an IQ of 90. But the use of the IQ to explain individual intelligence and predict people's general performance is riddled with difficulties.

Contrary to the approaches posited by IQ theorists, a group of scientists, led by Gardner (1983), consider that there is not one single type of intelligence that is essential for success in life but rather a wide range of multiple intelligences. Gardner lists seven types of intelligence: verbal ability, logical-mathematical aptitude, visual-spatial ability, kinaesthetic ability, musical-rhythmic intelligence, interpersonal intelligence and intrapsychic intelligence. Gardner's multidimensional theory of intelligence is a clear precursor of current approaches to emotional intelligence. Thus, the concept of emotional intelligence was essentially born because of the need to respond to two seemingly simple questions: Why do some people adapt better than others to different real-life situations? Why do some people have a more developed ability to relate to others, despite not standing out for their intelligence?

To answer these questions, McClelland conducted a series of investigations into human behaviour and attitude. In one of his studies, McClelland (1989) examined the behaviour of American ambassadors. All subjects had obtained similar IQs and had studied the same subjects at similarly prestigious institutions. However, the results that these ambassadors achieved differed significantly across the countries where they worked. Whilst some had excellent relations and secured attractive agreements and negotiations for US interests, others failed to achieve similar results and even had to give up work or leave the country where they worked. After isolating the greatest number of variables and factors that could explain such discrepancies (political relations, culture, etc.), McClelland found that the primary explanatory factor was the difference in the way the ambassadors adapted to the environment. Whilst some were steeped in the country's culture (wearing the same clothes, respecting local customs, etc.), others tried to impose the American culture or failed to dispense with their traditional ways.

Continuing in the same vein as McClelland, Daniel Goleman argues that the most effective leaders all resemble one another in one crucial way: they all have high levels of emotional intelligence. This does not mean that IQs and technical skills are irrelevant. They are important, but only up to a point. These skills act as entry requirements for top executive positions. Prior investigations, together with recent studies, show that emotional intelligence is the sine qua non of the ability to adapt. Despite having the best

training in the world, an analytical and incisive mind and a myriad of ideas, someone who lacks emotional intelligence will quite possibly struggle to adapt to the environment. Thus, many people who have great intellectual prowess yet lack emotional intelligence ultimately work under people who might have lower IQs but greater emotional intelligence. Professionals who require exceptionally high emotional intelligence include managers, psychiatrists, teachers, social workers and public relations professionals.

In 1990, two North American psychologists, Salovey and Mayer, coined the concept of emotional intelligence, which consists of two components. The first is general, essentially hereditary, intelligence. This kind of intelligence is measurable and corresponds to academic performance or a student's aptitudes and abilities. The other part of emotional intelligence can be partially trained but cannot be measured quantitatively. It corresponds to personal attitudes or skills. Emotional intelligence is the human capacity to feel, understand, control and modify emotional states in oneself and in others. It refers to aptitudes that complement yet are distinct from academic intelligence, which refers to the purely cognitive abilities that are measured by the IQ. The IQ determines what an executive knows, but emotional intelligence determines what the executive will do. The IQ is what allows a person to enter an organisation, but emotional intelligence is what allows that person to grow within the organisation and become a leader.

One way to bring out this emotional intelligence is through experiential learning based on outdoor training. This focuses on living experiences, which is when skills are acquired and developed. According to the learning curve, we remember 10% of what we read, 26% of what we hear, 30% of what we see, 50% of what we read and hear, 70% of what we say and 90% of what we say and do (Fischman, 2012). In this study, we focus on emotional skills such as self-knowledge and self-motivation (Goleman, 1995). This focus justifies the use of mindfulness techniques. Kabat-Zinn (1979) defines mindfulness as being 'not doing', 'not nothing'. The concept of mindfulness encompasses meditation, but that does not mean that mindfulness is just about meditation. Mindfulness is a skill that every human being has but that most ignore. Therefore, it can be taught.

So far, experiential learning has rarely been applied in the classroom and much less in business, although studies have examined experiential learning. Empirical research suggests that mindfulness exercises are beneficial for children and adolescents (Burke, 2010; Garrison Institute, 2005; Zelazo and Lyons, 2005). Napoli et al. (2014) employed exercises including breathwork, bodyscan, movement and sensorimotor awareness activities to train elementary school students over a 24-week period. The aforementioned study was designed to help students learn to focus and pay attention. Results show significant differences between those who did and did not participate in mindfulness training. These results are based on the formative evaluation of whether participation in a mindfulness training programme affects first, second, and third grade students' attention. Cognitive and social-emotional development can be enhanced through a simple-to-administer mindfulness-based school programme for elementary school children. At the University of Malaga, Extremera and Fernández (2000) tested different methods of assessing emotional intelligence in the classroom. This study was based on observing emotional competencies using two types of questionnaires: Trait-Meta Mood Scale (TMMS) and Schutte's emotional intelligence scale. The conclusions were that the assessment instruments capture only intrapersonal aspects of emotional intelligence.

Executive function, perspective-taking and emotion regulation are closely related in development, arguably because they depend on the same underlying processes of reflection, which are made possible by neural circuits that coordinate hierarchically arranged regions of the prefrontal cortex (Bunge and Zelazo, 2006; O'Reilly, 2010). Experimental evidence from studies of adults indicates that mindfulness training produces a variety of positive health effects, including reduced stress, improved immune function, and improved performance on measures of executive function and emotion regulation (e.g. Baer, 2003; Davidson et al., 2003; Grossmann et al., 2004; Tang et al., 20010; Zylowska et al., 2008).

But how does mindfulness relate to emotional intelligence? Both are associated with positive life outcomes, including greater subjective well-being. Higher emotional intelligence has incremental validity (Petrides et al., 2007) in relation to many beneficial psychological outcomes (Martins et al., 2010; Zeidner et al., 2012). Research has shown that university students with high emotional intelligence are more likely to graduate (Keefer et al., 2012) and that adolescents with high emotional intelligence have significantly fewer depressive symptoms and disruptive behaviour than those with low emotional intelligence (Davis and Humphrey, 2012). A pilot study adapted mindfulness-based stress reduction to increase trait emotional intelligence in psychology graduate students (Cohen and Miller, 2009). Emotional intelligence mediates the relationship between mindfulness and higher positive affect, lower negative affect and greater life satisfaction (Schutte and Malouff, 2011).

As this literature review shows, few studies have focused on the use of tools to measure emotional competencies (Bar-On and Parker, 2000; Carpena, 2001; Fernández-Berrocal and Duran, 2003; Bisquerra and Pérez, 2007; Pena and Repetto, 2008; Agullo et al., 2011). Building new instruments that assess other aspects of emotional intelligence remains an open research question.

3 Objectives, hypotheses and method

The primary goal of this study was to apply different methods to objectively test the personal and interpersonal skills of individuals who participated in outdoor training and mindfulness sessions. To achieve this goal, we followed four basic steps: (1) detect an evaluation tool that offers quantitative and, therefore, objective data; (2) offer a tool that identifies transversal competencies and enables their measurement in academic and work environments; (3) allow the evaluation and development of emotional intelligence skills; and (4) transfer cross-disciplinary skills to behaviours.

Two methods were used in this study. The first consisted of data collection using a closed questionnaire during a day of outdoor training and mindfulness. The participants themselves provided self-reported data on their own emotional competencies. The objectives of this first method are twofold. First, it teaches people to live together, mix and work in a team. At university and at work, individuals cannot choose their classmates, so people must adapt. Second, it develops people's interpersonal and directive skills, teaching people how to channel their behaviours to achieve their goals. This is developed through the following practices in the selection process and evaluation of activities: teamwork, communication, leadership, motivation, public presentations and so forth.

This study continues the tradition of prior research based on questionnaires such as the study by Pérez-Escola (2016), who used four questionnaires (the extended version of the Emotional Development of Adults CDE-A, the abridged version of the Emotional Development of Adults CDE-R, Emotional Development for Secondary Education CDE-SEC and Emotional Development for Children CDE-9-13) developed by the GROU emotional competency theories for the evaluation of emotional competencies and emotional education programmes for students over the age of nine. Lopes et al. (2003) conducted a study using a sample of 103 university students to explore the measures of a set of skills and personality traits and the contribution of both factors to the perceived quality of interpersonal relationships. According to the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), students were more likely to report positive relationships with others and perceived parental support and less likely to report negative interactions with close friends.

In this study, we measured emotional intelligence competencies for two groups of individuals: 1) workers and 2) students who were close to finishing their degrees or who were enrolled in postgraduate programmes. Although this study is most applicable to the workplace, the current education system requires students to develop professional skills that they will use in their future jobs. Therefore, in this study, students were considered a comparison or control group, as in similar studies (Lopes et al., 2003). Specifically, the criteria that were required of the individuals in the sample were as follows: Students were enrolled in undergraduate Administration and Management programmes and master's degrees in Management and Change Management for the academic year 2016/2017. The sample consisted of students from the University of Alcalá. These students were enrolled in a management course during which this training day took place. Workers had been with their company for at least six months. This company arranged management skills training for its employees. This training included this training day.

Faced with mounting competitive pressures, many companies attempt to raise their profiles by offering new services. As a result, in recent years, researchers and businesses alike have paid far greater attention to new service development and service engineering (Thomas Meiren et al., 2009). Differences in programme of stress in professionals (PSF) performance across different ownership and governance structures are associated with differences in professionals' incentives and motivation and differences in agency costs for PSFs. In PSFs, costs occur when an employee's behaviour deviates from that which is best for the firm. Agency costs are particularly high when there is a clear separation of ownership and control or when an employee's behaviour may go largely undetected unless the PSF incurs significant costs associated with monitoring the behaviour of its employees (Jensen et al., 2010).

Participants who were absent from the outdoor training and mindfulness session for more than two hours were excluded from the study. Each sample was divided into teams. Each team worked on different computers, with a monitor team responsible for coordinating the activities, monitoring compliance, monitoring and analysing deviations, and observing the behaviour of the equipment. All teams started the circuit at the same time but at different stages. Each test corresponded to an area emotional intelligence, which explained the skills that the test measured. After several tests for a single environment, results were discussed. To create the exercises, we used *The Knight in Rusty Armor* by Fisher (1987), which explores the competencies defined by Goleman. These exercises focused on the competencies shown in Table 1.

Table 1 Guide to our method

<i>Part</i>	<i>Evaluated competencies</i>	<i>Exercises</i>
<i>Completion of the initial competency assessment questionnaire</i>		
PART I: The Caste of Silence	Self-knowledge and self-monitoring. Self-confidence and developing confidence and trust in others.	E.g. <i>The row blind</i> <i>Human caterpillar.</i>
PART II: The Castle of Knowledge	Teamwork. Developing analytical thinking and decision making, creativity, coordination and communication, collaboration, empathy, teamwork, communication, and definition of strategies.	E.g. <i>the cobweb, human turtle, tablecloth</i>
PART III: The Castle of Will and Daring	Self-motivation. Promotion of initiative and decision-making, strategy and coordination, and leadership and communication.	E.g. <i>the rings, square, crossing the snow.</i>
PART IV: Synergy	Gather the clues obtained along the path to solve the enigma to unite the synergy.	Participants rebuild the puzzle, read it and find a solution and reach the 'Top of the Truth.'
PART V: Mindfulness meditation	Managing self-control, overcoming fears of ridicule, accepting the role in the present moment, improving concentration and memory, and reducing anxiety.	Mindfulness.
PART VI: Discussion of findings	Establish the strengths and areas for improvement of teamwork and extrapolate it to participants' daily work within the university or company as members of a team.	The nominal group technique was applied to yield comprehensive conclusions.
<i>Completion of the final competency assessment questionnaire</i>		

Source: Compiled by authors based on *The Knight in Rusty Armor* by Fisher (1987)

To provide a better understanding of why these exercises were chosen, we provide a brief description of two exercises. To evaluate teamwork, the spider's web exercise was used. In this exercise, all members of the group start on one side of the spider's web (fixing strings with different holes), and all members have to finish on the opposite side, each member passing through a different hole without touching the strings. Each group has to devise a strategy to cross the spider's web without touching the ropes or repeating a hole. The competencies that are evaluated are analytical thinking, decision making, coordination, communication, collaboration and teamwork. In the square exercise, each team forms a square consisting of a certain number of strings whilst the members are blindfolded. The ropes are found on the ground, and the groups have to look for them. Each group must meet before the beginning of the exercise to devise the strategy that they will follow (i.e. how to find the ropes, how to form the square, etc.). The competencies that are evaluated are teamwork and collaboration, communication, leadership and initiative, and analytical thinking.

Once the exercises had been performed, the participants completed a competency assessment questionnaire. The participants completed a questionnaire at the beginning of the day and at the end of the day. These questionnaires gathered data on personality

variables such as introversion, affect and empathy. These questionnaires consisted of 32 short verbal statements. The worker or student evaluated his or her emotional intelligence by choosing a value on a Likert scale (1 = *never*, 2 = *occasionally*, 3 = *regularly* and 4 = *always*). Example statements are as follows: (a) I consider that I can get better grades when I work individually than when I work in a team; (b) When I am transmitting ideas, I am able to capture the attention of my colleagues, and they follow me; and (c) I have the initiative to resolve conflicts that may arise in a group, but I need external help to resolve them.

However, measuring individuals' perceptions of improving capabilities requires a second method as an external audit. We therefore gathered personal feedback for each participant through ex-post external evaluation by the workers' managers or the students' tutors. This was essential to objectively analyse the improvement in individuals' competencies and offer a guide to reduce the divergence between individuals' perceptions and the perceived opinion of the external evaluators.

Table 2 Example emotional competency in the dictionary (leadership)

<i>Leadership</i>	
A leader is a person who influences his or her peers, getting them to commit to pursuing their goals and guiding them effectively towards these goals.	
<i>Level</i>	<i>Behaviour</i>
1	Level 1 leaders do not care about providing unified criteria to the group. They show a lack of decision and interest in intervening or resolving conflicts. They act according to the position they hold, disregarding functions that do not directly affect them. They are afraid of the unknown. They easily lose confidence in themselves.
2	Level 2 leaders provide occasional developmental orientations for the group in general, without specifying individual functions. They do not acquire a leading role within the group. They struggle to resolve personal conflicts. They have greater ability than level 1 leaders to resolve conflicts. In normal environments, they maintain a certain confidence in themselves and their skills, although they show a low tolerance for criticism and lose confidence in the face of new challenges.
3	Level 3 leaders have the security and initiative needed to influence the rest of the team and involve them in the activity. They identify themselves as leaders. They are concerned with detecting and anticipating conflicts, relying on colleagues to find appropriate solutions to the problem. Colleagues relate to them as guides in the pursuit of activities, although at times they have to resort to authoritarian styles to put these activates into practice. They are able to transmit enthusiasm and not lose control of the group in stressful situations, although they struggle to adapt to changes.
4	Level 4 leaders are concerned with organising the work by following clear and agreed criteria in which the group has previously participated. They promote team spirit, ensuring the participation of all members, contributing new ideas, providing guidelines for change and getting involved in the tasks. They inform each team member of his or her responsibilities, taking care that each team member is prepared so that he or she knows the situation and can be proactive. They adapt their management style to the people they manage, adapting to any environment without losing team union or team vision (situational leader).

Source: Compiled by authors

The external evaluation was based on previously defining the competencies for evaluation. These competencies were defined by a panel of experts through the development of a dictionary of competencies. These competencies were then converted into directly observable behaviours at four levels: 1 (low level) to 4 (high level). These levels served as a guide to define the exercises and outdoor training tests.

The following is an example of the dictionary ad-hoc design for this study. This dictionary was developed based on the chosen emotional competencies (Table 2): Teamwork (C1), Communication (C2), Leadership (C3), Motivation (C4), Analysis, resolution and anticipation (C5), Stress tolerance (C6), Organisation and planning (C7) and Responsibility (C8).

The questionnaire was re-evaluated to observe the participant's and external evaluator's responses. For the dictionary of competency levels, the scores were as follows: 1 = *room for improvement*, 2 = *acceptable*, 3 = *good* and 4 = *outstanding*. To avoid central tendency bias, the evaluator was asked to focus on the participant's behaviours in each particular competition. These evaluations were then contrasted with the participant's self-image reported in the self-evaluation test and the conclusions of the group from the nominal group technique to ensure that the feedback on the participant reflected the reality. Table 3 presents an example of setting different levels of the evaluated emotional competencies.

Table 3 Example of the levels of emotional competencies

<i>Emotional competency</i>	<i>Level</i>
1. <i>I think I can get better grades when I work individually than when I work in a team.</i>	Level 1 – Teamwork
2. <i>When transmitting ideas, I am able to capture the attention of colleagues.</i>	Level 4 – Communication
3. <i>I have the initiative to resolve possible conflicts that may arise in a group, but I need external help to resolve them.</i>	Level 2 – Leadership
4. <i>When I work on different jobs or projects, I have to organise everything. I do not like improvisation.</i>	Level 3 – Organisation and planning
5. <i>When I work, I focus exclusively on the established steps. I struggle to solve problems that may arise.</i>	Level 1 – Analysis, resolution and anticipation of problems
6. <i>I am not satisfied with passing exams. I want to be top of the class because I have the ability to do so.</i>	Level 4 – Stress tolerance
7. <i>I easily accept comments and criticism from colleagues, leading me to change attitudes rather than face them.</i>	Level 2 – Motivation
8. <i>In tasks or situations I do not control, I seek external support from colleagues, professionals, etc.</i>	Level 3 – Responsibility

Source: Compiled by authors

Table 4 provides an example of how the questionnaires were completed. To measure the emotional competency of a participant in a team, variables 1, 9, 17 and 25 focused on the competency. Variable 25 was assigned level 4, variable 17 level 3, variable 9 level 2 and variable 1 level 1. As the example shows, variables 25 and 17 received high scores with a mean of 3.5. Variables 9 and 1 received low scores as defined in the dictionary. These scores imply that the subject has a high level of teamwork skills, with a score of 3.5 out

of 4. The external evaluation was supported by the behaviours displayed by the subject. The scores were assigned according to the questionnaire of values and levels of compliance.

Table 4 Example of the levels of different emotional competencies

1.	I think I can get better grades when I work individually than when I work in a team.	1	2	3	4
9.	When I work in a team, I act according to my responsibilities and rarely ask for help in solving problems.	1	2	3	4
17.	I worry about contributing ideas and putting them into practice with the opinion and participation of other colleagues.	1	2	3	4
25.	The group recognises me as a useful and necessary figure in the completion of activities.	1	2	3	4

Source: Compiled by authors

Based on this method, we tested three hypotheses. The first hypothesis is that the application of outdoor training and mindfulness yields short-term improvements in terms of individuals' perceptions of emotional intelligence capabilities. The second hypothesis is that the perception of improvements is greater for the sample of workers than for the sample of students. The third hypothesis is that there are significant differences between the individuals' perceptions of improvements and external evaluators' perceptions of improvements.

4 Results

The primary results are presented separately for the two groups of individuals that participated in the sessions. Table 5 shows the average assessment of the participants before and after the sessions, as well as the assessment of the external evaluators with respect to the average assessments of the subjects in each competition. In all competitions, improvements were observed, especially in competitions related to stress tolerance, organisation and responsibility. The group with the least impact on the day was the group of students, especially in terms of the leadership competency.

We also examined the differences between individuals' and the external evaluators' assessments. There was a clear convergence between what the individuals reported and what the tutor reported for the students. The greatest differences were for the sample of workers, for whom the ex-post evaluation was conducted by one of their superiors. In this case, the manager's assessment was always lower than the individual's assessment, especially in terms of skills that related to leadership and stress tolerance.

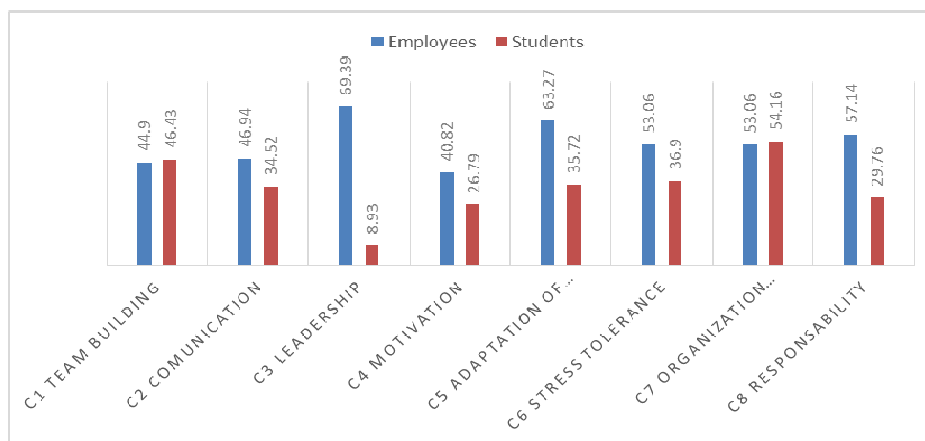
The differences in means between the two groups were significant at the 5% significance level, according to the non-parametric Kruskal-Wallis test. Likewise, the relationships between the initial and final evaluations and between the final evaluations and the external evaluations had non-parametric correlations that were significant at the 5% significance level. To explore the primary differences between individuals' assessments and those of external evaluators, Figure 1 shows the total differences in evaluations expressed as percentages.

Table 5 Comparison across evaluations before and after the training and the external evaluation

Competency	Initial evaluation	Final evaluation	External evaluation
C1 – Teamwork			
Employee	2.63	2.94	2.78
Students	2.2	2.35	2.30
C2 – Communication			
Employee	2.63	2.83	2.66
Students	2.19	2.34	2.34
C3 – Leadership			
Employee	2.67	2.89	2.59
Students	2.3	2.3	2.39
C4 – Motivation			
Employee	2.72	2.91	2.72
Students	2.18	2.33	2.38
C5 – Adaptation problems			
Employee	2.68	2.85	2.58
Students	2.29	2.34	2.29
C6 – Stress Tolerance			
Employee	2.56	2.88	2.6
Students	2.15	2.35	2.36
C7 – Organisation and planning			
Employee	2.66	2.91	2.68
Students	2.33	2.5	2.44
C8 – Responsibility			
Employee	2.73	2.96	2.7
Students	2.28	2.52	2.5

Source: Compiled by authors

Figure 1 Percentage difference for each emotional competency by group



Source: Compiled by authors

For workers, the greatest difference of opinion between managers and employees was observed for the variable leadership (C3), followed by stress tolerance (C5) and accountability (C8). Notably, 24.48% of workers' opinions differed from those of managers in four activities. These individuals must change their behaviour and improve over the medium to long term or they may jeopardise their position within the company if these skills do not improve to support the company and the completion of their work tasks.

There were fewer discrepancies between students' and tutors' evaluations. The greatest differences were for the variable associated with organisation and planning (C7), followed by teamwork (C1) and stress tolerance (C6). There were fewer differences in evaluations than there were for workers' evaluations. For communication, stress tolerance and responsibility, tutors' and students' opinions almost matched. In this case, 18.75% of students expressed exactly the same opinion as their tutors. For 47.91% of students, there was only one discrepancy. For the remaining students, there were two, three or a maximum of four discrepancies with respect to the opinions of the external evaluators. The students themselves were aware that they must encourage teamwork, improve their organisational capability and planning and adapt to changes.

In addition to our observations, when we compared the opinions of experts with statistics, the results did not coincide, except for teamwork (Appendix 2). Once the individuals had completed the questionnaire, the variables were grouped into eight categories based on a panel of experienced experts, applying a logic derived from professional practice. However, if we had reduced the 32 base variables to eight factors using the statistical technique of principal component analysis with varimax rotation, we would have obtained different results. For example, the first factor comprised variables that were positively associated with high levels of responsibility, stress tolerance, motivation and analytical ability and negatively associated with poor communication. Factor two was positively correlated with good communication, organisation and leadership and was negatively correlated with weak motivation. Only the fourth factor fully coincided with the experts' assessment, including all variables associated with teamwork.

Our results indicate that the competencies that must be emphasised to improve individuals' professional development are leadership, teamwork, responsibility and stress tolerance. Teamwork should be encouraged. The leader must know how to direct, delegate and accept opinions, ideas and criticisms from other team members. It is also important to know how to choose the leader and followers. The result is that individuals accept their roles and responsibilities by taking charge of their actions.

The importance of being aware of one's role by understanding and accepting what is expected at all times facilitates teamwork and the development of leadership skills. A lack of confidence in oneself, a fear of failure or a lack of empathy affects the development of the group even if individual members have the technical competencies they need to excel. It is important for individuals to accept their role in each task and eliminate role resistance, leader discussions and a lack of involvement to avoid delaying teamwork and ultimately harming individual performance.

5 Conclusions

Through this study, we seek to establish a method to evaluate the development of certain individual skills associated with emotional intelligence. Our study highlights the importance of self-knowledge (awareness of one's role) and the development of empathy

skills to establish personal relationships and networking. We present an innovative methodology by merging mindfulness techniques with outdoor training to evaluate various emotional competencies.

The use of assessments by external agents lends subjectivity to the study, thereby offering an alternative perspective that is not necessarily reliant on quantitative data. We are nevertheless aware of the complexity of the effectiveness of these techniques when analysing changes in competencies, hence the development of the dictionary of competencies.

The objective of this evaluation is to improve and develop the skills of students and employees by building competencies, improving the skills of partners and allowing fellow team members to get to know each other, themselves and the environment (self-knowledge, self-motivation, empathy and relational skills). The goal is to develop resilience strategies that allow individuals to increase their frustration tolerance. This process allows individuals to assess themselves and realise where their strengths lie and where they must improve to continue to grow personally and professionally. By developing experiential learning techniques, we learn to criticise ideas and functions rather than people. Also, managers and teachers can use this tool to evaluate their workers or students objectively and quantitatively. The competencies are reflected by behaviours that deviate from the purpose. People are not judged, which is why the behaviours and knowledge are captured by observable variables.

The evaluation system that is presented in this study consists of representing the values and transversal competencies as behaviours and assessing people's degree of compliance with these behaviours. This method provides precise feedback that helps develop suitable behaviours for the cultural environment of the candidate, thereby reducing the gap between the candidate's self-image and the social self in the environment. It is about correcting behaviours not about judging the person. The so-called soft skills facilitate interaction with the cultural environment by eliminating friction and favouring behaviours that enable role success. It is not about judging the person, but about developing the competencies to succeed in each cultural environment and attain goals. The conclusions of each competition reveal the specific behaviours we must develop to encourage success in a given cultural environment.

For each competency, participants' self-evaluations are compared with managers' or tutors' evaluations. An internal communication channel is reinforced as a system to enrich the evaluation of performance. Our results show that workers feel more optimistic about their skills than their managers do, which poses problems for the company. If these distances deepen, cultural noises could occur in the medium to long term, where the worker's lack of adaptation to the cultural environment could cause poor performance, even if the worker has the necessary technical skills to perform the job. The larger differences between workers' and managers' evaluations than between students' and tutors' evaluations may owe to the closer relationships between company managers and workers because of their day-to-day contact. However, there are more pessimistic students at the time of evaluation.

To emphasise the qualitative part of this study, the results indicate that teams that gel easily, quickly make a good choice of leader and carry out their roles are more successful in these training activities than teams that attribute mistakes to external causes and fail to use the outcome of each test as way to mature, instead looking for external causes to justify their failure to achieve their goals. The lack of frustration tolerance is an important element for predicting the success of the group in terms of performance and motivation. The more individuals who move away, the more difficult it is to successfully complete the task.

The primary contribution of this study is to provide a tool that objectively measures crucial skills in education and work. In every company, it is essential to have a tool that accurately evaluates employees. Likewise, in universities, such a tool can help teachers evaluate the competencies that are taught in the teaching curricula.

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Appendix 1. Variables used for the collective of workers

<i>Variable</i>
1. Within a team, I struggle to mix with the rest of my colleagues.
2. When I have to transmit information, I look at how I can adapt my language to the target audience.
3. I provide development guidance to the team but without specifying individual roles.
4. When carrying out tasks I am methodical and orderly. I ask the teachers if I am doing it the right way.
5. Despite alternatives that can reduce my effort when carrying out a task, I prefer to follow the guidelines that I already know.
6. If I disagree with what a teacher or colleague says, I don't hesitate to support my opinion with arguments, even if it contradicts what is being said.
7. I get involved in achieving the team's goals, although I struggle to see the purpose of each task and need the help of my teammates.
8. I consider the date of exams and deadlines for papers on the first day of class. I am concerned with getting additional information that optimises my performance.
9. When I lead the group, it bothers me when people don't meet their responsibilities.
10. I prefer to speak in small groups with people I already know.
11. When a problem occurs because of a colleague's misbehaviour, I have no difficulty correcting it in a constructive manner (without criticising).
12. I can see whether a partner has a problem and I help him or her fix it.
13. When working with colleagues, I focus only on the aspects that affect me directly.
14. During the exam period, I keep calm and tackle the exams with assuredness in my skills.
15. When carrying out a task, I don't worry about destructive opinions expressed by those around me; I just follow my goal.
16. In certain situations, it's justified to copy exercises, exams, etc.
17. I have enough skills and ability to establish contacts with other colleagues through networking.
18. When I pass on an idea, I don't ask colleagues whether they have understood it.
19. When exercising responsibility in a work group, I adapt my management style to each person, empathising with each one of them.
20. When I have to do several tasks at a time, my only concern is to finish them within the set deadline.
21. During group work, I propose improvements to get the maximum score. These are applied by my peers.
22. I'm able to transmit instructions to the team under pressure, but I don't keep calm, which makes others perceive my insecurity.
23. I deal with any problems that may arise as challenges to aid my personal and professional development.
24. Before a new task, I don't follow the established patterns. I ignore information from other years or my own experience.

Appendix 1. Variables used for the collective of workers (continued)

<i>Variable</i>
25. I detect, anticipate and consider problems that may arise during teamwork. I have no difficulty in changing strategy or assuming my teammates.
26. When we do group presentations, I choose the simplest part because it's a major effort for me to speak in front of my classmates.
27. In new or unknown situations, I find it hard to express enthusiasm because of my insecurity.
28. When working in a team, I'm able to set goals, although I struggle to manage resources efficiently.
29. I seek to find areas for improvement in methods and work processes as well as anticipate unexpected and conflicting situations.
30. When I set short deadlines to perform a task, I struggle to perform it individually. I defer to colleagues to help me carry out the task.
31. In situations that are out of my control, it's difficult for me to be optimistic.
32. I acknowledge the merits and contributions of my colleagues during teamwork, addressing my assigned tasks with determination and initiative. I don't mind helping others.

Appendix 2. Factor analysis for eight members

	<i>Main components</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
v1	-204	150	.080	-.616	.115	.095	.051	.248
v2	-.079	487	314	215	-.458	259	-101	.318
v3	.035	-.197	.045	-264	013	.838	.129	-.027
v4	364	027	-126	195	273	605	198	-.213
v5	-105	041	-.072	369	.736	163	-110	.118
v6	-.035	244	-.033	.089	162	-.043	.040	821
v7	-120	012	292	-.203	428	442	-162	367
v8	554	384	148	-.098	331	.077	-.165	.026
v9	-.226	-.016	.071	.867	-137	-.081	157	133
v10	.199	.573	.067	511	-100	.082	-.090	-105
v11	-.061	009	830	-.098	-.045	.074	-.018	020
v12	-106	587	-.090	-118	.291	.458	-.089	011
v13	.058	-.012	-.673	.567	043	-.140	.124	.083
v14	.832	-.009	.052	006	.166	-166	.079	008
v15	575	-.034	.118	.210	-.047	.051	.581	.099
v16	.067	.059	-247	-.094	569	-.015	.200	.096
v17	422	-.327	.114	.452	408	.064	146	.161

Appendix 2. Factor analysis for eight members (continued)

	<i>Main components</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
v18	-680	292	-.069	122	191	-.050	.095	.049
v19	138	.543	-.067	.104	-.196	.506	254	-264
v20	108	-.345	-139	-.468	-274	-.158	.042	.624
v21	.584	.094	-.037	191	-.085	299	.604	.029
v22	-162	-.011	-.632	-.234	320	183	-.007	313
v23	751	148	-.048	.184	-.273	.291	279	.057
v24	-.113	382	-.244	003	-.006	195	.513	-.466
v25	.075	652	127	-.033	.030	-.125	-.023	.030
v26	577	-.046	-.293	-.205	-.039	-.441	250	-.029
v27	.053	-.149	.056	-.045	.077	012	822	023
v28	-.127	.093	.611	.129	.318	.046	.421	-.091
v29	594	459	014	.095	-.025	242	-150	-.310
v30	-.039	.028	.095	-.342	.784	.037	-.020	-.086
v31	117	-.679	020	149	-.041	157	-.028	-155
v32	311	.105	704	.079	-.076	-.107	.032	.282