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MEASUREMENT AND ANALYSIS OF THE LEVEL OF EMOTIONAL INTELLIGENCE IN THE MIDDLE MANAGEMENT OF AN AUTOMOTIVE COMPANY IN MEXICO

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ABSTRACT

The middle managers have an essential role in reaching the objectives of the company. Meeting the objectives requires that leaders have an acceptable level of Emotional Intelligence (EI). In the present investigation, the Emotional Intelligence Coefficient (EIC) was measured in 25 employees who occupy the middle managers position in a company from the automotive sector in the city of Puebla. Between 1995 and 1997, the capacity model of the emotional intelligence of Salovey and Mayer (1990) was modified. This modification served to clarify the skills involved and those not involved in this concept. The result of this work was the model of the four branches of Emotional Intelligence of Mayer and Salovey, 1997. The measurement was made using an instrument called MSCEIT (Mayer-Salovey-Caruso Test of Emotional Intelligence). During the research and analysis process, it was determined that two-thirds of the middle managers have a EIC in a level of competence (CO); while the remaining third has a level of aspects to develop (AD). In conclusion, it is convenient to take into consideration this study to develop strategies that increase the level of the EIC concerning the obtained result; and gradually bring this group of middle managers to the very competent (VC) level, and finally to expert (EX).

INTRODUCTION

Emotional Intelligence

Salovey and Mayer (1990), define the term of EI. EI describes it as a form of social intelligence. This social intelligence implies the capacity of the person to supervise himself and others. On the other hand, Mayer (1997) defines EI as the ability to perceive, assimilate, understand and regulate one's own emotions and that of others. This author expresses that emotional and intellectual growth is promoted with EI.

Emotional intelligence in the company

The growth and survival of the organization depends on the increase in collective EI. A developed EI is the basis for positive results in the organization. (Goleman, 1995).

There are people who have a high intellectual quotient (IQ) and do not adequately perform their job functions. There are people with a lower IQ, and achieve better execution in their tasks. (Araujo and Guerra, 2007). EI is a personal tool that helps solve conflicts successfully. Organizations look for professionals who adapt to changes and who are flexible in their habits. Organizations require agile and resourceful professionals to solve problems. (Castro and Aros, 2012).



Emotional Intelligence Measurement

Salovey and Mayer in 1990 create the concept of EI. Salovey and Mayer begin to scientifically study the EI construct in Four Branches or Phases. (Mayer, Salovey and Caruso, 2004). The four branches are:

- 1) The ability that allows individuals to perceive, evaluate and express emotions.
- 2) The facilitation of thought processes.
- 3) Understanding and analyzing emotions and
- 4) The reflexive regulation of those emotions (Mayer, Salovey and Caruso, 2004).

MSCEIT questionnaire

The theoretical model of the four branches generated research that supports the creation and standardization of several EI measurement questionnaires. These EI measurement questionnaires have high levels of reliability and validity. One of these questionnaires is The Meyer-Salovey-Caruso Emotional Intelligence Test or its English abbreviation MSCEIT (2002). The MSCEIT questionnaire is precisely the one used in this investigation.

Automotive section

In the automotive industry that was taken as a case study, there are approximately 500 workers. These workers are operatives and administrative. The organizational structure has vertical and horizontal information links. In this structure, employees have defined responsibilities. Employees also have defined relationships, which are expressed in the organizational chart. (Figure 1).

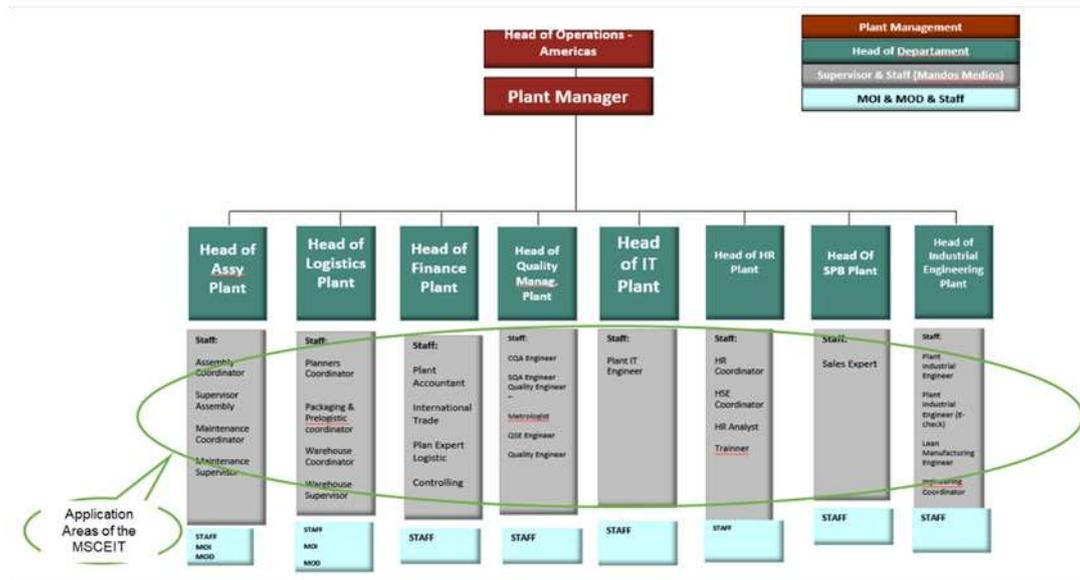


Figure 1. Automotive company organizational chart

These middle managers are the leaders who have the most interaction, contact and influence on the company's population. This is the reason for the relevance of this study.

MATERIALS AND METHODS

The methodology used for this study is exploratory and descriptive with a non-experimental design. The researchers applied a skills survey to reflect a global level of emotional intelligence. This survey was applied to a representative group of people (middle managers). A descriptive transectional method was applied for the demographic survey. The representative group or population includes all the employees defined in the organizational chart as administrative personnel with a middle management function (area manager) within the company.



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The sample is oriented to a list of members by department, with a non-probabilistic sample size according to the qualitative methodology (Johnson, 2014, Hernández -Sampieri et al., 2013 and Battaglia, 2008). The sample was applied to 25 participants.

The methodology is developed under a conceptual definition. It means that emotional intelligence is understood as an aptitude (Mayer and Salovey, 1997). This means that some answers are better than others.

The test measures the ability to identify, facilitate, understand and manage emotions.

Measuring instrument

The test to apply is MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test. The test application will be self-administered, which means that the participants will be gathered in groups to solve it.

In this meeting the objective of the study and the application of the instrument was explained. Additionally, doubts related to the instrument were answered.

The test is structured in two parts A and B; Part A is made up of demographic or location questions concerning the surveyed participant, such as: age, gender, position and department to which he is adscribed.

Part B is constituted by the structure of the MSCEIT and is where the case study of this work will be focused.

1. Total score.

2. Scores of the areas: experiential area, strategic area.

3. Skills scores: four branches of the Emotional Intelligence model of Mayer and Salovey. (Table 1).

4. Tasks scores.

Table 1. Emotional Intelligence Four Branches general view

<i>Branch Name</i>	<i>Related Capacities</i>
<i>Emotional Perception (EPIC)</i>	Ability to perceive emotions in oneself and in others, as well as in objects, art, narrations, music and other stimuli.
<i>Emotional Facilitation (EFIC)</i>	The ability to generate, use and feel emotions in a way necessary to communicate feelings or use them in other cognitive processes.
<i>Emotional Comprehension (ECIC)</i>	It is the ability to understand emotional information, how emotions are combined and how they evolve throughout interpersonal transitions, as well as the ability to appreciate emotional meanings.
<i>Emotional Management (EMIC)</i>	The ability to open up to feelings and to modulate them in oneself and in others, as well as to promote personal understanding and growth.

Scores of the four branches

Regarding the four main branches of the Mayer and Salovey model (Figure 2), the final score of the EIC is formed by the area, branch and task score.

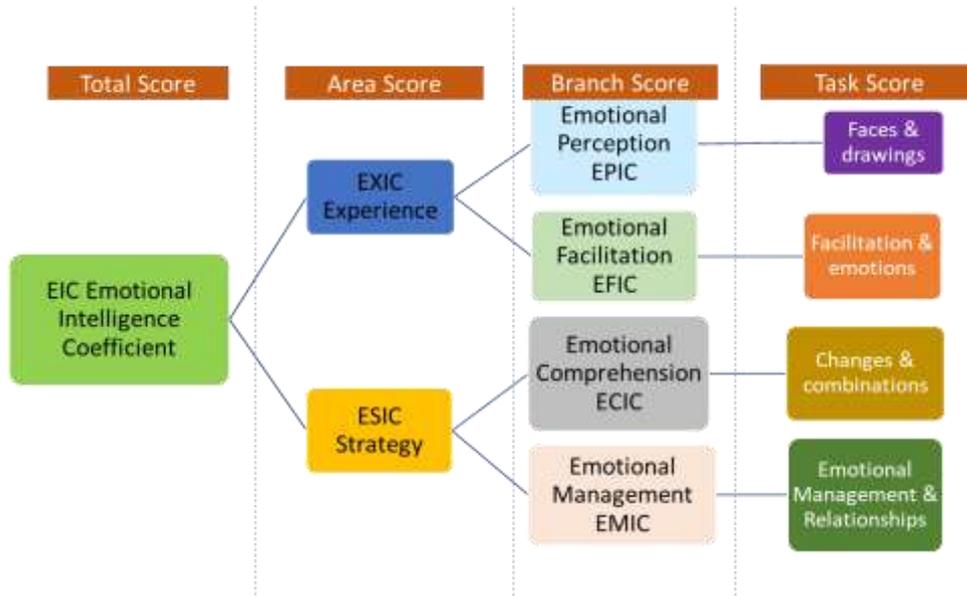


Figure 2. MSCEIT Measurement structure

Analysis of data

Total score

The total score of the MSCEIT is a summary that integrates the scores of the four skills. There are area, branch, task and additional scores. These four branches reflect the person's overall level of emotional intelligence.

The scores are grouped into different ranges. These ranges serve to help interpreting the results. The rating ranges are an estimate of the person's actual fitness. Ranges are ordered from lowest to highest fitness. These ranges are defined as follows:

- 1) Need to improve: It is possible that you have some difficulties in this area. Surely it would be useful to improve your skills and knowledge.
- 2) Aspect to develop: You can consider the possibility of improving in this area if it is an important aspect in your daily life.
- 3) Competent: You have sufficient skills to function in this area with some success.
- 4) Very competent: You have a good development in this area and it is a strong point for you.
- 5) Expert: You have the mastery of management in this area and it constitutes a point of excellence for you.

RESULTS AND DISCUSSION

Regarding the EIC (Emotional Intelligence Coefficient) it is observed that 64% of the middle managers were competent (CO), 36% being those that require aspects to develop (AD) within their Emotional Intelligence capabilities. This means that most middle managers have the ability and capacity to recognize, understand, improve and manage their emotions. The rest of the middle managers need to improve these skills to be at the level of the majority. It is desirable that both groups continue to develop their coefficient level over time to become very competent (VC) and finally experts (EX), (Table 2).

Table 2. MSCEIT Nomenclature used

Range	Concept	Abbreviation
0-70	Need to Improve	NI
70-90	Aspects to Develop	AD
90-110	Competent	CO



110-130	Very Competent	VC
130	Expert	EX

In the graph shown below (Figure 3), it is observed that 16 people out of the 25 that were evaluated, that is, 64% are within the Competent range (CO). The remaining 9 people, the equivalent of 36%, require aspects to develop (AD) within their Emotional Intelligence capabilities. Therefore, we can see that almost two thirds of the population of middle managers fall within the classification of Competence.

Emotional Intelligence Coefficient (EIC)

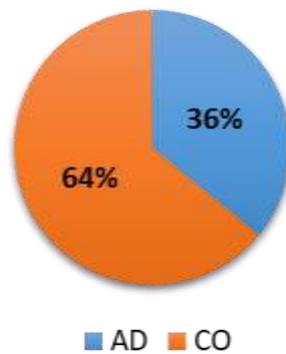


Figure 3. EIC Diagram Graph

In the same way, we observe in the scatter plot shown below (Figure 4), that 64% of the people evaluated are within the range of 90-110 points, that is, Competence (CO). The remaining 36% are in the range of 70-90, so they require aspects to develop (AD) within their Emotional Intelligence capabilities.

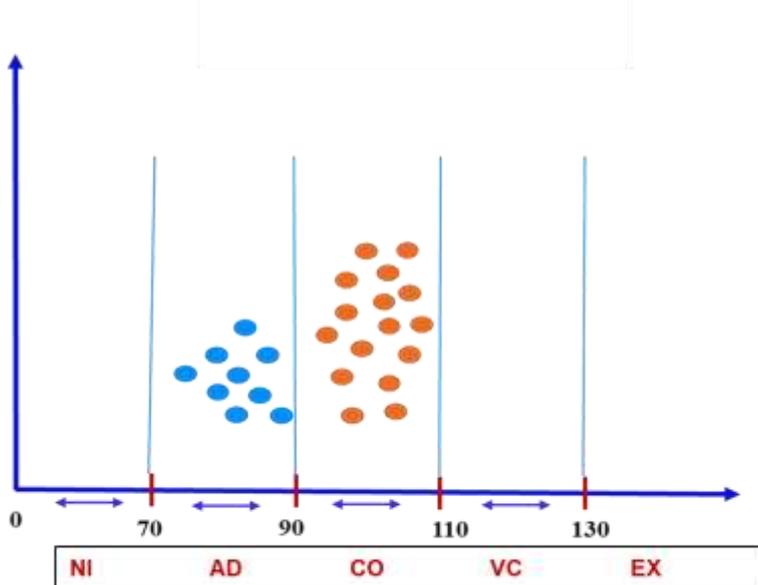


Figure 4. EIC Dispersion Graph



Scores of the four branches

In the table shown below (Table 3), we found that the Experience Area (EXIC), which contains the following two branches: EPIC and EFIC has the higher global percentages. There are more than 10% of the people who reaches the VC (very competent) level.

In the other hand, ESIC, which is the Strategic Area has lower percentages on their 2 branches: ECIC (Emotional Compression Intelligence Coefficient) and EMIC (Emotional Management Intelligence Coefficient). This means in general, that their emotional skills for perception and facilitation are better than their compression and management ones.

Table 3. Final Results per branch

Abbreviation	NI	AD	CO	VC	EX
EIC		36%	64%		
EXIC		28%	60%	12%	
ESIC		32%	60%	8%	
EPIC		24%	64%	8%	
EFIC		24%	56%	20%	
ECIC		24%	64%	8%	4%
EMIC		24%	72%	4%	

CONCLUSIONS

1. According to the analysis of data, the emotional intelligence coefficient (EIC) found in two thirds of the participants is in the range of competence (90-110) and the remaining third in the Aspects to Develop (70-90).
2. It is necessary to raise first the level of this third of people who are in AD to CO. Once all the leaders are at the CO level, it is suggested that strategies are developed to take them all together first to the level of very competent (VC) and later to the highest Experts level (EX).
3. The MSCEIT instrument measures the four branches of EI (perception, facilitation, understanding and emotional management). Within the test, the respondent chose the most appropriate option according to their personal perception. The respondent gave the answer that best described his behavior according to what was stated in each case.
4. Given that the MSCEIT instrument shows us a photograph of the person's perception level and not of real competence of emotional intelligence, it is necessary to carry out an assessment in which the observable behaviors and the level of real competition of the participant are evaluated.
5. Regarding the search for articles referring to the MSCEIT applied to companies in the automotive sector, it was observed that, of the 230 available, there is no record of the measurement of Emotional Intelligence for this sector.
6. From the point of view of the Company of the Automotive Sector of the city of Puebla, it is the first time that an EIC measurement has been carried out, for which it is concluded that as a first approach and as a starting point for future strategies, it was very positive.
7. This project is a watershed and the vision on the part of the Management of the company is that it is the beginning of a new stage in which the foundations will be laid to create a new Organizational Culture where the practice of EI is a fundamental part of the daily performance of this company's employees.

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