



The Management of Human Talent as a Key Factor in Quality Processes under IATF 16949 Standard in a Company in the State of Tlaxcala

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Abstract. This research seeks to support the importance of managing human talent during the adoption of quality standards for the automotive industry established in the international standard IATF 16949 conducting an analysis in medium-sized company located in the State of Tlaxcala. The objective is creating strategies for the adoption of work practices that benefit productivity and the creation of quality culture in people inside the Company. The research process includes the review of the main approaches to quality in the world, the evolution of quality in Mexico and the application of quality standards in the automotive industry in the State of Tlaxcala. One of the research techniques used was observation, defined by Bernal (2010) as a scientific technique and a rigorous process that allows know directly the object of study and that also allows to describe and analyze real situations about the studied ones; in this case it was used to evaluate the leadership practices, the production process and the personality of the employees. On the other hand, work climate surveys were used to know and evaluate the relationships among the personnel, the previous audits carried out under the IATF 16949 standard were analyzed in search of areas of opportunity through the comparison between them. Some of the results obtained were, the little commitment of the people from the management towards the objectives of quality, low comprehension of the processes of quality within the organization, organizational culture not consolidated, little sense of identity and loyalty within the organization and a poor internal organization.

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1. Introduction:

The quality has been having an important push since its emergence in the consecutive years of the first world war, mainly in Japan where ideas emerged to improve the productivity of companies to rise from the crisis caused by their defeat in the war. Companies currently must be efficient, competitive and offer quality products and/or services; since the conditions of the market, so much at national and international level demand to improve the quality; so that they can achieve it if they have to develop and modernize the productive and administrative capacities, which generates better conditions in which the company works.

The Mexican automotive industry, which is not only made up of assembly factories but includes a complex network of auto parts suppliers, has had an important expansion in the last two decades throughout Mexico, mainly in the northern, central and central regions. North of the country. From 1990 to 2015 the production of automobile parts and car doubled going to 1.4 % of GDP to 3.02 % (Banda Ortiz et. al., 2016). This growth of the automotive industry placed Mexico in 2014 for the first

time as the seventh producer of automobiles in the world and the first in Latin America (ProMexico, 2017). Within the harmony that must exist between all the systems and areas of the company for the scope of the certification, is the Human Talent Management in charge of fulfilling specific sections as the training to the personnel about the importance of the quality, the improvement of their selection processes to attract trained personnel that can be aligned with the standards, keep records in order of the staff, have a training program per position, implement a staff evaluation mechanism and follow up on the Job profiles.

According to data from the INEGI about the economic census of 2014, in Tlaxcala the parts for motor vehicles went from the 15th place they had in 2003 to the first place in 2013, the population is engaged in some of the levels of the automotive industry and in ten years it has obtained recognition by the population as an excellent opportunity to improve their quality of life.

This article is derived from the research developed by the authors as part of a research in order to obtain a



Master's Degree in Administrative Engineering, providing an analysis of the factors that favor the adoption of a quality management system in the medium-sized company in the automotive sector in the State of Tlaxcala.

2. Problem Definition:

In 2016, the Innovation Agenda of Tlaxcala considered that in Tlaxcala there were 31 companies dedicated to the auto parts sector, highlighting companies such as Johnson Controls (Adient), SBNMX, Arcomex, Wexler, Grammer, among others. The destination of production in Tlaxcala are assemblers located nearby states such as Volkswagen plant, BMW and Mercedes Benz.

According to the same document, the main products for original equipment manufactured in Tlaxcala are: injected plastic parts of medium and high range, such as panels and consoles, including paint or flock finish, finishes for levers, steering wheels and leather interiors and vinyl; seats, electrical harnesses and finally stamped and die-cut parts.

The IATF 16949 standard, together with the specific requirements of the clients that are applicable, and the requirements of the ISO 9001:2015 Standard, define the fundamental requirements of the quality management system for the organizations that manufacture production parts and spare parts in the automotive industry.

All organizations certified under the ISO / TS 16949: 2009 standard, would have to carry out the transition to the new standard before September 14, 2018. No audits would be carried out to be certified in ISO / TS 16949: 2009, beyond 1 October 2017. Certificates in ISO / TS 16949: 2009, would not be valid as of September 14, 2018. The planning of all aspects related to the human resources area will directly impact the transition of the methodology of the new norm and will support the resolution of the recommendations coming from the audits carried out.

The transition process for this and other quality standards must be planned, specifically everything that impacts the consciousness of workers for changes in working methods, leadership to be implemented to carry out the transition of quality systems and the commitment generated through the strategies of the human resources area for the adoption of the new concepts.

The planning of all the aspects related to the area of human resources will directly impact the transition of the methodology of the new standard and will support the resolution of the recommendations coming from the audits practiced.

3. Quality Management Systems and Human Resources:

The concept of system reflects a whole that is composed simultaneously of other subsystems that work together in a coordinated way to reach a common goal. Every organization itself represents a system made up

of subsystems that work efficiently to achieve the general objectives through methodologies, procedures, plans, and programs. (Gómez, 2011).

The ISO 9001: 2015 standard in the generalities section mentions us that "the adoption of a quality management system is a strategic decision for an organization that can help it improve its overall performance and provide a solid base for the initiatives of sustainable development".

Kaplan (2002) mentions that employee productivity is an indicator of the overall results of the organization and the impact that training efforts, innovation of internal processes and customer satisfaction have had.

Thus, quality management is no longer a method to avoid customer complaints dissatisfaction, the focus is to create systems and activities that allow organizations to do things right the first time and not wait for an error to correct it (Canela López, 2004).

Porret Gelabert (2010) mentions that the human factor is the most important of all the elements that make up an organization, it is the most difficult to control, since each person's thinking and perspective is very different; being the most valuable capital, only with a good management of people is it possible to improve the processes and the sustained profitability of the organizations.

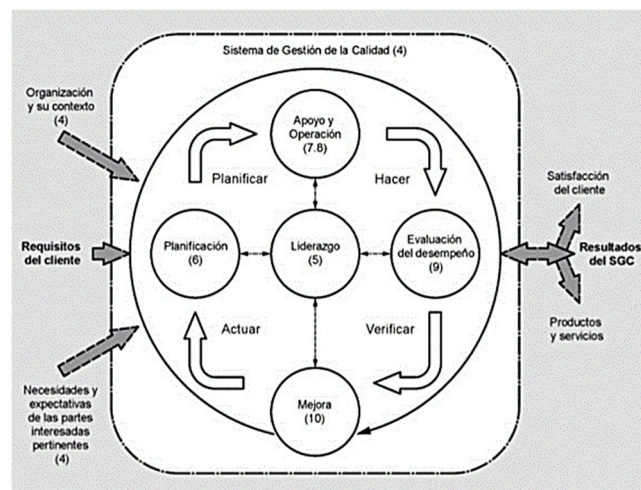


Figure 1. Relationship of the ISO 9001 Standard with the Continuous Improvement Cycle (PHVA).

Source: International Standard ISO 9001 version 2015. Quality management system -Requirements- p. 12

The previous concept makes integration of both perspectives emphasizing that people are the vehicle to achieve any positive change within an organization however, they require management through a figure or department to successfully carry out individual efforts and convert them into group results.



4. Methodology:

In accordance with the objective of the research, we seek to establish the relationship that exists between the processes that are carried out in the organization by the human resources subsystem, specifically in planning, leadership and the work environment so that the personnel Adopt a quality culture based on the IATF 16949 standard in companies in the automotive sector.

A mid-sized company dedicated to the injection of plastic parts for the automotive industry located in the Industrial City Xicohténcatl III was chosen in the municipality of Tlaxco, Tlaxcala, Mexico, which had a maximum of one year of having carried out its certification audit in the IATF 16949 standard and was in the process of transitioning from ISO / TS 16949.

For application of the research instrument, we work together with the Company for six months, where observation as a qualitative method was applied to determine further utilization a survey fully performed was presented to the employees, this tool serves as a link between the objectives of the research and the reality studied.

Table 1. Variable, indicators and targets of the first questionnaire.

Variable	Indicator	Objective
Organizational Climate	Management	Senior Management Commitment
	Communication	Effective communication
	Labor conditions	Tools and appropriate physical conditions
	Relationships	Relations between the staff
	Leadership	Leadership skills
	Training	Training
	Recognition	Employee satisfaction
	Motivation	Creation of Value in employees

Source: Own Development.

To this end, the modification of a questionnaire owned by the company, previously tested in past applications by an internal multidisciplinary team, was building on a Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Neither agree, nor disagree, 4 = Agree, 5 = Strongly Agree) and a second questionnaire that was designed to assess cultural aspects of the organization. The

first questionnaire contains 35 questions that evaluate eight major aspects focused to meet the prevailing organizational climate for the adoption of quality processes, the same that was applied to 50% of the workforce including trust and unionized staff.

The second consists of a questionnaire of seven items on the Likert scale (1 = Bad, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent) that aims to know the degree of maturity or knowledge of the workers in the organization about the mission, vision, values, quality policy, ISO 9001 and IATF 16949, the foregoing to measure the congruence and evaluation of the process of induction to the company carried out by the human resources for all the employees.

Table 2. Variables, indicators and objective of the second questionnaire.

Variable	Indicator	Objective
Induction to the company	Mission	Understanding and awareness of the organization and its context.
	View	
	Values	
	Quality politics	
	Quality objectives	
	ISO 9001	
	IATF 16949	

Own Development.

For the second instrument, 15 questionnaires were applied to corroborate its reliability, through the calculation of the Cronbach's Alpha for this pilot test or a coefficient of 89% was obtained.

Table 3. Cronbach's Alpha

Reliability statistics	
Cronbach's Alpha	No Elements
.890	7

Source: IBM SPSS Statistics Trial Version Compilation 1.0.0.1174, 64 Bit Edition.

Hernández, et. al. (2010) mentions that when the coefficient of Cronbach's Alpha is equal to 0.25 it is considered with low reliability, the regular 0.50 and from



0.75 or more is considered as acceptable, in the case that it is greater than 0.90 it is considered as high.

Table 4. Results of pilot test for calculation Cronbach's Alpha.

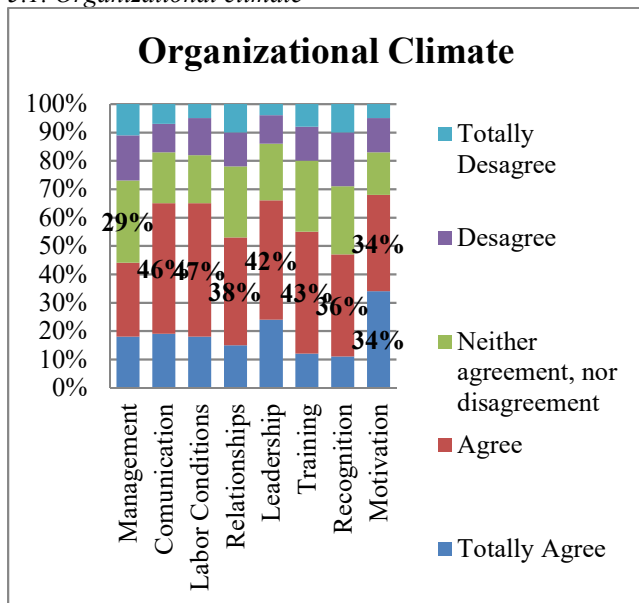
	Ind*	Ind*	Ind*	Ind*	Ind*	Ind*	Ind*
	1	2	3	4	5	6	7
Person 1	3	1	3	3	4	4	3
Person 2	1	1	4	3	4	4	4
Person 3	4	5	4	5	5	4	5
Person 4	3	1	4	3	4	4	3
Person 5	4	4	5	3	4	4	4
Person 6	5	5	5	4	4	5	4
Person 7	3	1	3	2	1	1	1
Person 8	3	1	3	3	4	4	3
Person 9	3	1	3	3	4	4	3
Person 10	3	3	3	3	3	3	3
Person 11	4	4	4	5	5	5	4
Person 12	3	5	4	5	3	4	3
Person 13	4	5	5	3	4	4	3
Person 14	5	5	5	5	4	5	5
Person 15	5	5	5	4	5	4	5

*Ind = Indicator.

5. Results and Discussion:

Once the information obtained from the application of the surveys has been obtained, the following behavior of the data for both variables can be argued.

5.1. Organizational climate

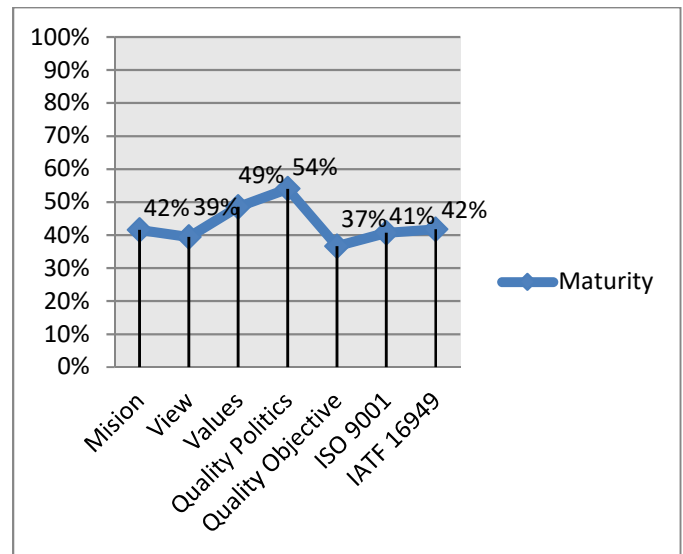


Graph 1. Results Organizational Climate

The objective is to analyze the internal conditions of the company to develop changes oriented to the acceptance of new work methods based on standardized work standards at the international level, in this case referring to the IATF 16949 standard.

5.2. Induction to the company: Awareness of the organization and its context

The objective of the analysis performed on this variable and its indicators is to know the awareness of the staff that integrates the organization on quality objectives, long-term vision, object of the organization, knowledge of quality management systems ISO 9001 and IATF 16949.



Graph 2. Results Variable Induction to the company. Own Development.

What we can observe of the results, is that the level of knowledge or maturity that the people that make up the organization present, is below 55% which indicates a lack of awareness and deficient induction to the objectives, methods, policies and organizational culture.

6. Recommendations:

The objective of this investigation is establish the relationship between the processes taking place in the organization by the human resources subsystem, specifically in planning, leadership and the working environment for staff to adopt a quality culture based on Norma IATF 16949 in companies of the automotive sector. People are not habitual to being evaluated, but it is essential that an awareness-raising process that includes evaluations be integrated.

Organizational Climate: This is a factor that is neglected over time due to the prevailing need of companies to obtain profits through the production and sales process, relegating the importance of the processes developed around human



resources to improve internal relations. It is necessary to define an effective tool that allows to evaluate periodically (twice a year) the satisfaction of the employees with respect to their training, the style of leadership given by their direct managers and the management, the working conditions and above all the motivation of the employees, a factor that has been taking relevance in quality processes to such a degree that the IATF 16949 standard includes a requirement for the measurement and control of employee motivation.

Induction to the company: in this section of awareness of the context of the organization, the main recommendation is to raise the level of knowledge for all employees (trusted and unionized) at the time of entering the organization and evaluate it constantly. As a requirement of the IATF 16949 standard, it is stipulated that employees must understand the organizational approach that includes the processes, objectives and quality policy of the organization. The level observed in the analysis is very low, it is recommended to establish an objective of knowledge that oscillates between 80-90% for all the staff and that has been evaluated constantly to be prepared for audits by third parties.

7. Conclusion:

The company's case study has grown over time, moving from a tiny workshop to a medium-sized company positioned as a second-tier supplier within the automotive industry supply chain in Tlaxcala, due to international regulations and to the requirements of the industry, it has responded by integrating a quality management system based on ISO 9001: 2015 + IATF 16949: 2016.

The behavior observed during the six-month period gives us an overview of the organizational culture, it is essential that management take the responsibilities suggested in the standard as a guide to the process of change and adoption of a culture of quality, leading by example for all employees of low organizational level.

In the same way, during the stay, modifications were made to the job profiles, aligning them with the requirements of the standard and non-conformities from audits by the certifying body. This in order to establish parameters to control the process of recruitment and selection of all personnel and align it with the training plan required to comply with the section of competencies required for the function of the positions.

A triptych was designed for all new staff that contains what was evaluated in the induction section to obtain better results from the people who join the organization about the general knowledge of the company.

The study was carried out in the organization for six months with the uncertainty of all employees but with the openness and willingness on the part of the human resources area and the director of the company due to the prevailing need to find a response to non-conformities. of its internal, external and re-certification audits in the standard; besides looking to raise the percentages of work climate obtained in previous years.

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