

Technical report on productivity: Tecnológico Nacional de México, Campus la Chontalpa, for the generation of an improvement model

Informe técnico en materia de productividad: Tecnológico Nacional de México, Campus la Chontalpa, para la generación de un modelo de mejoramiento

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Abstract

Productivity is a priority for any organization, since it is the basis for an organization to maintain itself in current times, where companies are facing extreme and drastic changes that are presented given the pandemic by the Covid- 19 virus, this transition has affected the whole world, as well as it has provided new business opportunities and openness for organizational adaptability. In this research, a technical report is carried out in higher education institutions of the public sector, taking as a reference the Instituto Tecnológico Nacional de México -Campus la Chontalpa, this report was integrated through the application of a systemic approach, considering the use of the Integral Technical Tool for Productivity Evaluation (TIEP) that integrates within its application 10 priority elements to maintain productivity and consequently the organizational quality.

Productivity, Institute of higher education, Comprehensive approach

Resumen

La productividad es prioritario para toda organización, ya que es, la base para que una organización se mantenga en los tiempos actuales, donde las empresas se encuentran ante cambios extremos y drásticos que se presentan dada la pandemia por el virus Covid- 19 , esta transición a afectado a todo el mundo, al igual que ha brindado nuevas oportunidades de negocios y apertura para la adaptabilidad organizacional. En esta investigación se lleva a cabo la realización de un informe técnico en las instituciones de educación superior del sector público, tomando como referencia al Instituto Tecnológico Nacional de México – Campus la Chontalpa, este informe se integró mediante la aplicación de un enfoque sistémico, considerando el uso de la herramienta Técnica Integral de Evaluación de la Productividad (TIEP) que integra dentro de su aplicación 10 elementos prioritarios para mantener la productividad y por consecuencia la calidad organizacional.

Productividad, Instituto de educación superior, Enfoque integral

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Introduction

The Instituto Tecnológico de la Chontalpa is an institution of higher education that is oriented to the population of the Chontalpa region, aimed at meeting the labour demands of the productive sector, as well as the permanent contribution to the sustained and harmonious development of society and the individual, maintaining a commitment to the socio-economic welfare of the region.

The present work shows the study that will allow designing the action plan for the improvement of productivity and optimization of processes, analysing bibliographic references and technical documents referred to the measurement of productivity and competitiveness, since the information was extracted directly from the actors involved in the process.

Currently in the globalized environment in which we live, if we refer to productivity, an organization is not competitive if it does not comply with quality, production, low costs, efficiency, effectiveness, innovation, continuous improvement, technology, among other factors that every day make this a point that requires care in strategic plans ranging from short to long term.

The objective of measuring productivity in an organization demonstrates from certain aspects, the lifetime of it, adding the understanding and control of the products it offers, knowing with what amount of resources were processed and how much they were used. Emphasizing the phrase that highlights the importance of measurement: "What is not defined cannot be measured. What is not measured cannot be improved. What is not improved, always degrades."

Description of the method

Productivity shows us the optimal way in which resources have been used. In order to achieve it, it is convenient to measure it, to identify with the results obtained the actions to be applied or to implement corrective actions to increase productivity.

In order to carry out the productivity diagnosis of the Tecnológico Nacional de México, Campus La Chontalpa, we began by getting to know the conditions of the institution, observing, investigating, asking questions, with the purpose of knowing the dimensions of the context.

The collection of information was carried out through direct observation of the activities of the Institution, complementing it in an integral manner with the TIEP instrument (Integral Technique for the Evaluation of Productivity), in which the data obtained from the interviews conducted with a range of 5 actors corresponding to management level personnel of the Institution were recorded.

Integral Productivity Evaluation Technique (TIEP) is a tool that identifies the incidence of the variables of the context on the elementary elements that every organization must have to determine the productive and competitive growth of the organizations, the elements are essential for the knowledge of the company and are based on general as well as specific aspects.

- Knowledge of the processes.
- Conceptual approach of the company.
- Social scope of the organization.
- Management participation.
- Organizational creativity and innovation.
- Knowledge of customers.
- Technological development.
- Macroeconomic knowledge.
- Integral development of human resources.

The TIEP instrument provides us with a qualitative and quantitative analysis to evaluate the 10 fundamental elements and the impact of the variables of the context; Environmental, Social, Cultural, Political, Technological, Economic, on them, with this it will be possible to generate a concrete measurement that could influence the productivity of the institute.

The evaluation of the TIEP measurement instrument is determined by the researcher's criteria, assigning a value to the variables with respect to the incidence they have on each element. The results obtained from each application are averaged to produce a graph for each stakeholder interviewed. With the results obtained from the statistical sampling and the observations made, actions are determined to correct the deficiencies identified and optimize productivity. The above for the design of a proposal for an improvement model to increase organizational productivity.

Analysis based on the method

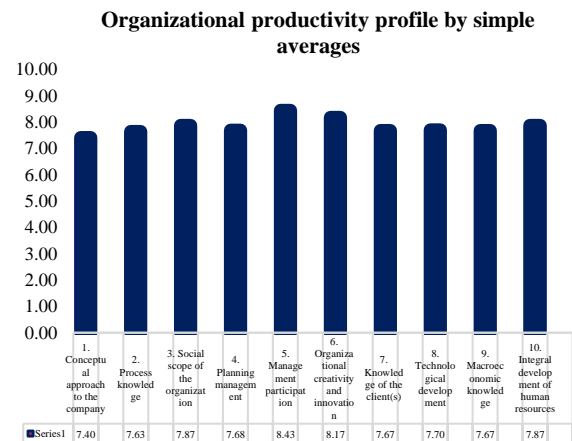
The Tecnológico Nacional de México, Chontalpa Campus, is an institution of higher education that has demonstrated its concern for adapting to the trends that arise day by day, advancing at the pace of the demands of the environment and the technological community. Due to the promotion and strengthening of internal evaluation processes and frequent institutional self-evaluation actions, it has made significant progress in achieving the quality of the services it offers to the community where it operates. Among some of its expectations is the achievement of excellence in the provision of academic services, being the main client the students enrolled in the Institution,

Taking as a fundamental principle the above described, it is considered convenient that the analyzed departments have factors that mainly affect this premise, so the organizational structure of the Academic Sub-Directorate of the Tecnológico Nacional de México, Campus La Chontalpa is considered as the ideal area to perform the measurement of productivity.

Five departments belonging to the Academic area were selected, which are:

- Academic Sub-Directorate.
- Division of Professional Studies.
- Academic Development.
- Economic-Administrative Sciences.
- Basic Sciences.

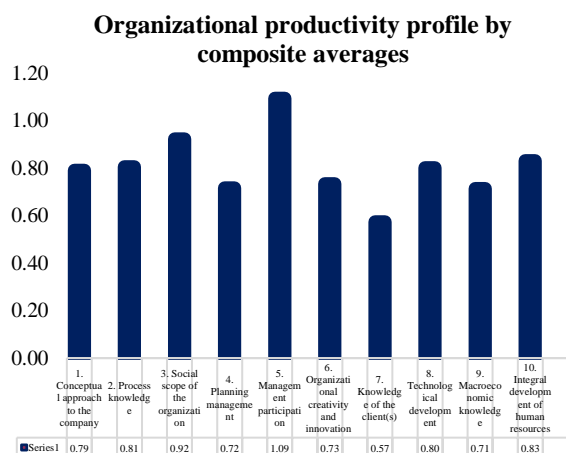
Results



Graphic 1 Productivity profile of the organization by simple averages corresponding to the National Technology of Mexico, Campus la Chontalpa
Source: Author's elaboration, 2021

In Graphic 1 Productivity profile of the organization by simple averages corresponding to the Tecnológico Nacional de México, Campus Chontalpa, it is observed that the unified results denote a stability between the departments and the elements, which determines a great organizational stability, where the conformation of the departments are a whole, however it is also found the impact of the variables of the context on each of the elements towards the departments, this greatly influences the results obtained and as can be seen in the graph it can be observed that the variables; Economic, political, environmental and technological variables have the greatest impact, while cultural and social variables are points of benefit for the institution due to the high commitment it has with society.

The element with the lowest score is the conceptual approach of the company, which is due to the partial ignorance of this, due to the lack of communication of the parties, attitudes and aptitudes of the personnel, the lack of development of human resources in specific areas that could provide a better performance and concretize in the integration of all parts to generate a comprehensive approach.



Graphic 2 Productivity profile of the organization by composite averages corresponding to the National Technology of Mexico, Campus la Chontalpa
Source: Author's elaboration, 2021.

In Graphic 2 Organizational productivity profile by composite averages corresponding to the Tecnológico Nacional de México, Chontalpa Campus, the areas of opportunity of the institution are more clearly identified, denoting a low result in the knowledge of the clients, as previously mentioned, the relationship and knowledge of the internal clients, which is why the development of an awareness program and recreational activities among the workers would improve the participation and relationship among them.

The organizational innovation that is implemented through the development of strategies and implementation of methodologies that help improve processes, adhering to continuous improvement, where despite the existence of a great professional commitment in the performance of their activities, it is not complemented by integrating all the parties involved, fulfilling their work but without the necessary interaction.

Similarly, the economic variable is of great importance as an area of opportunity since the transparency of all movements would generate greater confidence and understanding of the processes carried out in the organization, which would generate clear and concise understanding of the activities and decisions that the Chontalpa Campus takes inside and outside.

Proposal

As a conclusion, it is determined that the Tecnológico Nacional de México, Chontalpa Campus, maintains a stable level in the face of the diverse incidences of the variables of the context on the evaluated elements, in spite of this, it is also perceived that the results obtained can be affected in their totality.

The Chontalpa campus has a great commitment with the development of new professionals in the industry, as well as the continuous improvement of its facilities and periodic training of its teaching and administrative staff, all this with a view to the future and to be one of the most prestigious campuses in the country, improving productivity and competitiveness at the state level.

Therefore, the following recommendations are made:

Implement staff awareness programs to improve the relationship between administrative, teaching and management staff, to improve processes and clearly identify the processes and activities carried out by each member of the institute.

Integration of an environmental management system; which plays an important role in the institution since the campus is located in a geographical area where it could generate an integral benefit for society and the environment, added to this design environmental programs to help the surrounding communities that have any need, and can be remedied by the development of projects by students of the institute. And also to measure the performance of these activities with indicators that determine the scope and fulfilment of the established environmental objectives professional development of human resources; this refers to improving the personal skills of each of its members to improve their performance in their jobs with a view to growth and increase productivity levels in research. Technological and virtual training; at this point it is recommended to improve and implement new technological equipment to improve the academic development of students, with the intention of increasing their competitiveness in the working world, since technological advances today require updates and training, as well as the integration of new software to increase the academic performance of students and teachers.

Productivity improvement model

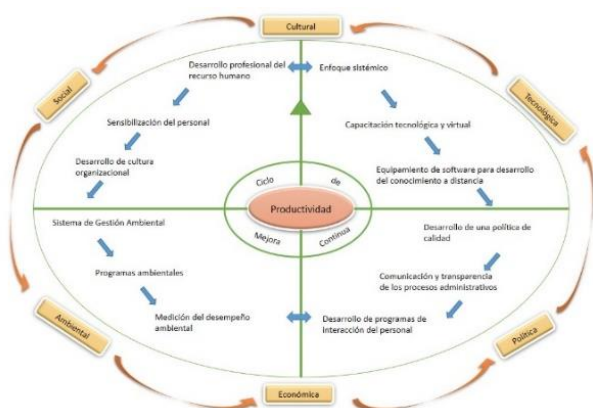


Figure 1 Productivity improvement model

Source: Author's elaboration, 2021

In the proposed model it is possible to visualize some improvements that the institution at the time of implementation would be applied as a system with an integral approach, where they will work for the good of all areas of the institution.

Productivity is placed in the center, since it is the goal of every organization, to be productive, as well as the implementation of tools such as the continuous improvement cycle, which will benefit through programmed analysis to analyze the different problems or improvements that can be applied in the institution.

The following aspects are taken into consideration for improvement and implementation in the institute:

- Technological and virtual training.
- Software equipment for the development of distance learning.
- Development of a quality policy.
- Communication and transparency of administrative processes.
- Development of personnel interaction programs.
- Measurement of environmental performance.
- Environmental programs.
- Environmental management system.

- Development of organizational culture.
- Sensitization of personnel.
- Professional development of human resources.

These proposals were determined based on the productive analysis of the organization and will be carried out in the order indicated by the model from right to left, starting the implementation of a systemic organizational approach.

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Conclusions

As a conclusion it was determined that the Instituto Tecnológico Nacional de México-Campus de la Chontalpa, is maintained at a considerable level before the demand of other institutes of higher education of the public sector, on the other hand it is demonstrated that the variables of the context tend to influence the elements that influence at the moment of obtaining the results.

It is recommended that the institution implement the model presented, as well as the follow-up of the plan for the improvement of its processes, since this will benefit the personnel as a whole as well as the organizational performance.

By implementing the model, there will be a continuous and periodic follow-up of the evaluations, taking the present research as a starting point, this does not stop the processes of the personnel or the organization, which is why it is convenient to implement the improvements and continue with the natural work.

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