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Integrated Management and Educational Quality in Mexico's Public Higher Education Institution

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***Abstract*: Educational management in higher education institutions in the state of Mexico, focusing on the role of the Technological Nacional de México (TECNM) as a provider of educational services. It addresses the didactic instrumentation, which includes regulated study plans that dictate teaching methods. This instrumentation has been influenced by traditional and critical educational currents. The importance of curricula as essential tools in secondary and higher education is fundamental considering their dynamics and need for constant revision to adapt to educational demands. It has mentioned that curricula revision began in Mexico at the end of the 1960s, although it often lacks a real analysis of national educational problems, replicating foreign models. In addition, the legal and regulatory framework of ISO 21001:2018 it has been implementing around the country, which seeks to legitimize quality in education within the Mexican educational system, emphasizing principles such as social responsibility, interculturality and respect for human dignity. It highlights the NEM (New Mexican School), which seeks to serve disadvantaged populations and promote equity in education. Finally, the document describes the need to implement a quality management system in educational organizations, based on the principles of total quality and the continuous improvement cycle (PHVA). It concludes that educational quality is essential to meet the expectations and needs of students and the community.**

***Keywords*: accreditation, higher education, management system, educational quality, strategic planning, process management, ISO 21001.**

1. Introduction

Educational institutions are not oblivious to the social demands for change. The processes of change or substantive improvements in education occur in classrooms as well as in schools. It is there where educational reforms and policies become a reality. However, changes do not occur mechanically; they require drivers, leaders who think about a different future and who are capable of leading educational communities towards that goal.

The process of integral educational management is an improvement for the students and the identification of their school performance where several factors are integrated such as physical health, mental health, and nutritional health.

Higher education faces the challenge of adapting to the constant changes in the demand for competitiveness and exposing through results, the quality of the process of re-enrollment and enrollment generating a reference support where students who require some support to increase their educational potential and maintain the level of quality that is reflected in the continuous improvement referenced to ISO 21001, the conditions for improvement have generated new demands on education systems that involve structural changes in educational policies and management structure of educational institutions.

Educational quality is an indicator that justifies the different plans and reforms of the educational system, establishing objectives that allow constant monitoring and control of actions within an organization. It arises from the development or evolution of administration as a discipline with the purpose of materializing the concept of quality, in terms of efficiency and effectiveness. It is to comply with the standards established in the field of higher education.

Integrating objectives for the evaluation system with orientation to a process that manages integral educational controls, in teachers and students, that verifies the scope of the processes integrating improvement measures. The contribution generated by quality audits is to support the IES administration by integrating mechanisms to encourage quality and provide findings in terms of best practices and experiences.

2. Methodology

A quantitative research methodology was done with a causal correlational approach. A cross-sectional design was collected data from the student society from the second semester of all the careers promoted by the Tecnológico de Estudios Superiores de Coacalco. Likewise, there is a sample of 4.5% of a total sample of three thousand students considered as a population census, which makes up the population of interested enrolled students, the survey is conducted to 137 students.

As for the design of the instrument, items focused on the physical, nutritional, and psychological assessment of the students who completed the questionnaire were included.

In this research, the objective is to identify the root cause of a possible low educational performance during their academic life during their professional career. It should be noted that the

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selection of students is since students in the second semester may have other activities external to the training activities during their academic life in order to validate the management of the variables of this study. Likewise, it is important to mention that the Technological School of Higher Studies of Coacalco has approximately 3,000 students enrolled in higher education.

The experimental design, which was briefly presented in the surveys conducted, is a population of students that will be focused on the study and compare the results to obtain a better decision with the help of statistical methods.

The units of the experiment are. hours of study that the student counts, if the student presents stress and healthy eating of the student, are the important phenomena that we will study in this work the questionnaire is introduced for a random sampling the experimental units to the questions the case study is observed.

The variability expressed among the experimental units will be classified and the measures of variability will be quantified. In later sections I will attempt to classify and quantify the measures of variability. In the following sections I will present and analyze specific quantities that are calculated on samples; the quantities provide insight into the nature of the sample with respect to the location of the data center and the variability of the data. An analysis of several such single-number measures provides a preamble that statistical information will be an important component of the statistical methods to be used. These measures, which help to classify the nature of the data set, fall into the category of descriptive statistics.

The pictorials and graphs that go into the characterization of the data set will be shown shortly. These statistical methods presented here will be used throughout this paper. To provide a clearer picture of what experimental design studies involve.

The realization of the questionnaire within the educational facilities of the technological is to seek a methodology to improve the quality that is presented with students, facilities and teachers, to have a reliability that education is of quality, respecting the regulatory frameworks that is presented in educational organizations one of them the secretary of education, and evaluate the requirements of students.

In addition to the study activities you perform, please indicate any other additional activity you perform.

A) Sports
B) Work
C) Other

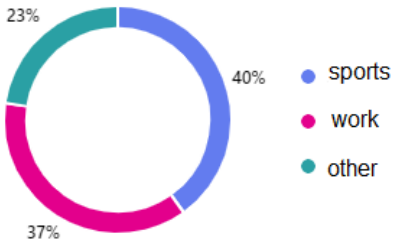

Fig. 1. Representative graph of responses obtained

Of the activities you perform, which do you consider to be stressful?

A) School
B) Sports
C) Work
D) Home
F) Other

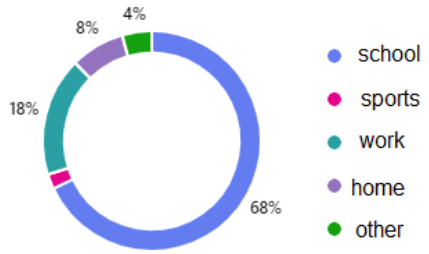

Fig. 2. Representative graph of responses obtained

What activity do you do that generates the most stress for you?

How many servings of complete meals plus snacks do you eat in a 16-hour period of activity?

Do you have the financial resources to have a balanced diet?

A) Yes
B) No

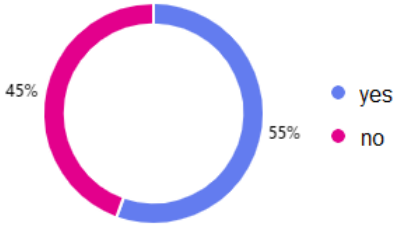

Fig. 3. Representative graph of responses obtained

Data provides knowledge about scientific phenomena. Product and process engineers learn more in their offline efforts to improve the process. They also gain valuable insight by gathering production data (on-line monitoring) on a regular basis, which allows them to determine what modifications need to be made to keep the process at the desired quality level. Sometimes a scientist just wants to get some sort of summary of a data set represented in the sample. In other words, he does not require inferential statistics. Instead, a set of statistics or descriptive statistics would be useful. Such numbers provide a sense of the location of the center of the data, the variability in the data, and the general nature of the distribution of observations in the sample. Even if specific statistical methods leading to statistical inference are not incorporated, much can be learned. Sometimes descriptive statistics are accompanied by graphs.

Having the results, a format for the comprehensive diagnosis where mental, physical and nutritional health are integrated is made.

During the development of this work, the objective of

proposing a prevention strategy to improve school achievement during the process of higher level professional education considering integral factors of physical, mental and nutritional health based on the 21001:2018 standard was achieved in the Technological of Higher Studies of Coacalco, and if implemented effectively, it would be one of the first organizations in the State of Mexico, allowing the institution to have an integral practice for the quality of young people in educational achievement.

Table 1
ISO 21001 Standard

ISO 21001 :2018	EXPLANATION
Focus on students, their needs and other beneficiaries	Meet the requirements of students and other beneficiaries and exceed their expectations.
Visionary leadership	Stakeholders in the creation, drafting and implementation of the mission, vision and objectives must be involved. The leader maintains unity of purpose and direction, creating conditions for the achievement of objectives.
Commitment of the people	The people involved must be competent, empowered and committed to delivering value.
Process approach	Management of activities according to interrelated processes.
Improvement	Focus on continuous improvement towards objectives and targets
Evidence-based decision making	Analysis and evaluation of data and information as a basis for decision making.
Relationship management	Relations with stakeholders (suppliers and partners) are managed.
Social responsibility	Social responsibility as a prerequisite for long-term success
Accessibility and equity	Inclusion, flexibility, transparency and accountability in managing students' individual and spatial needs, interests, abilities and backgrounds.
Ethical conduct in education	Ethical professional environment, with equitable treatment of stakeholders.
Security and data protection	Data control with care and confidentiality

3. Summary of Results

It is necessary to use the continuous improvement cycle method to evaluate the management system and to integrate more standards, which have four stages: Plan, Do, Check and Act (PHVA). This cycle is part of a theoretical construct by Walter A. Shewhart, later popularized by W. Edwards Deming. This sequence is based on the process of continuous improvement, it seeks to increase the levels of efficiency in the organization, so the less problems the management system will have. As it is a cycle, it is always rotating or returning to its starting point, in the acting, which is its last phase, there is the opportunity to correct and improve, all this to start again another cycle. In the following illustration you can see how this continuous improvement cycle is segmented, with its four stages defined in the Deming Cycle: plan, act, verify and do.

4. Conclusion

There is a proposal for improvement in the technological Tesco, for better student performance and achievement during the stay, based on ISO 21001 considering integral factors that will help the student to receive some attention and raise or maintain student performance, to carry out this research a survey was required to detect the needs of most of those enrolled in the technological from the second semester.

Once the results were available, a format for the integral diagnosis was created, where mental, physical, and nutritional health were integrated.

During the development of this work, the objective of proposing a prevention strategy to improve school performance during the process of higher level professional education considering integral factors of physical, mental and nutritional health based on the 21001:2018 standard in the Technological of Higher Studies of Coacalco was achieved, and if implemented effectively, it would be one of the first organizations in the State of Mexico, allowing the institution to have an integral practice for the quality of young people in educational achievement.

Among the findings, the unique needs were identified by conducting a comparative analysis which consisted of a series of questions. The percentage of which the needs of the students where the design of the management system for the Educational Unit was conducted was only based on the ISO 21001:2018 standard.

In the self-assessment of the educational organization, valuable information was obtained to know its importance to know their situation with respect to what the standard requires. It was that there is no process for the detection of students with critical situations of dropout or low performance; however, it is necessary to work on the

However, it is necessary to work on performance evaluation and therefore it is necessary to pay more attention to the results obtained by the students.

Additionally, it is necessary to consider improvement management, which is the most important part of the management system. If attention is paid there, the organization could move towards improvement and implement all actions that are necessary for the satisfaction of its students and stakeholders.

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