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INSIGHTS FROM HIGHER EDUCATION STUDENTS ON TEACHING PERFORMANCE DURING COVID-19 PANDEMIC

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Abstract: The Covid-19 pandemic has brought about profound changes in all aspects of our lives, including higher education. It is crucial to assess the consequences of these changes to identify patterns of adaptability in the student community. This evaluation process involves a comparative analysis of the teaching evaluations conducted each semester at the Institutes affiliated with Tecnológico Nacional de México, specifically focusing on Cuautla campus. The analysis spans from January-June 2018 to August-December 2021, taking into account the instrument's indicators. The findings reveal a decline in scores across all evaluated dimensions during the January-June 2020 semester, followed by a notable recovery in subsequent periods. These results lead to the conclusion that both teachers and students within the institution have demonstrated a remarkable willingness and ability to adapt to extreme circumstances. **Keywords:** Professor evaluation, indicators, students' perspective, health contingency

INTRODUCTION

Prior to the pandemic, higher education institutions were already grappling with substantial challenges. However, the global confinement measures imposed in response to the Covid-19 outbreak revolutionized the very nature of teaching, thrusting educators and learners into the virtual realm, often without consideration for their access to necessary resources. The United Nations Organization (UN, 2022) highlights that this situation "affected 91% of students worldwide," severely hampering progress towards the goals outlined in Sustainable Development Goal 4: Quality Education. Specifically, it undermined the mission of ensuring equal access to high-quality higher education, which in turn hampers opportunities for employment, decent work, and entrepreneurship. The scale and impact of this disruption cannot

be understated, as it has reverberated across the educational landscape, calling for a reevaluation of educational strategies and policies.

In an effort to mitigate the impact of the unprecedented crisis, Higher Education Institutions (HEIs) found themselves compelled to shoulder new responsibilities and make swift decisions to ensure their continued functioning. To achieve this, HEIs had to enhance communication channels with their community, employing diverse resources to ensure uninterrupted educational activities. This included the adoption of various platforms, devices, and equipment, as well as facilitating access to digital libraries and reference sources. Additionally, tutorials were developed to expedite the technological literacy of the entire community, enabling a smooth transition to remote learning environments. These measures were crucial in maintaining educational continuity and empowering students, faculty, and staff to navigate the challenges posed by the contingency.

The year 2020 brought about a momentous shift, as the immediate need for digital transformation compelled institutions to embrace technology as an integral part of their processes. By 2021, distance education and virtual platforms had become more familiar, and as we progress into 2022, there has been a gradual resumption of some in-person activities. In light of these developments, it becomes crucial to conduct an analysis of the enduring impact of the pandemic on the institution's academic management. This analysis aims to identify the aspects that were strengthened or weakened as a result and to address the challenges that lie ahead. Central to this examination is the perception of students regarding how teachers navigated the health contingency while carrying out their activities and how it influenced the teaching-

learning process. By scrutinizing these factors, valuable insights can be gleaned to inform future strategies and enhance the resilience of the institution's academic ecosystem.

To provide contextual background, an examination is undertaken to review the concepts associated with teacher evaluation and its inherent significance.

PROFESSOR EVALUATION

Evaluation systems are necessary in every institution to enhance their processes and achieve quality standards. Institutions must tailor their evaluation systems to meet strategic objectives through analyzing their context and relevant internal conditions (Carranza et al., 2021).

According to the Royal Spanish Academy, the term "evaluar" originates from the French word "évaluer" and means "to determine the value of something" (RAE, 2022). Practically everything can be evaluated. Evaluation is an integral part of teaching, and during times of change, such as those brought about by the pandemic, it becomes indispensable for diagnosing the development of the teaching and learning process. Conducting evaluations in the educational process provides valuable insights for all participants, supporting decision-making and addressing problems to create a better academic and working environment.

In the educational process, various aspects can be evaluated, including students' level of learning, teachers' performance, and the institution as a whole. To ensure the validity and reliability of these evaluations, they must be carried out comprehensively, considering all indicators that shed light on causes and effects. This enables the design of improvement projects that can address identified issues (Delgado et al., 2021).

Regarding the evaluation of teaching performance, it is a systematic exercise closely

associated with students' opinions. It is vital for enhancing the quality of the teaching and learning process, strengthening teachers' professional development, and achieving organizational goals. This involves defining the dimensions of the teaching profile within the institutional context. Therefore, each institution of higher education defines its evaluation criteria and the type of opinion surveys to be administered to students to assess the performance and effectiveness of its teachers (Villa et al., 2021).

TEACHING EVALUATION AT TECN

TecNM, a technological higher education institution, boasts a nationwide presence with 254 campuses across all 32 states of the Mexican Republic. Since 1992, teacher performance has been evaluated through student opinion questionnaires (DGEST, 2006). The institution recognizes the significant role of teachers in the educational process, as they fulfill diverse functions such as guiding, facilitating, and advising learning. They create the conditions for students to construct knowledge and, upon becoming professionals, meet societal demands, thus contributing to the country's development.

To accomplish these objectives, teachers must possess a range of competencies, including humanistic qualities, competence, commitment, creativity, innovation, and a keen critical sense. These attributes promote the holistic development of students through teaching activities, research, academic management, tutoring, collaboration, and personal growth.

The evaluation of teaching effectiveness is crucial to identify areas of improvement, make informed academic and administrative decisions, and provide valuable feedback to teachers. It drives professional growth and fosters commitment to achieving institutional

goals (TecNM, 2016). The teacher evaluation process at TecNM involves three stages: 1) evaluation by students, 2) self-evaluation, and 3) evaluation by the head of the academic department.

This study analyzes the results obtained from the instrument used for students to evaluate their teachers in each subject. It considers semesters prior to the health contingency and up to the most recent semester, aiming to determine if the perception of students regarding their teachers' performance underwent changes with the pandemic and the resulting shift in instructional strategies. The study also identifies the indicators that were most affected, with the ultimate goal of identifying areas of opportunity and implementing necessary measures to drive continuous improvement within the institution.

METHODOLOGY

Due to the pandemic, the confinement measures implemented had an abrupt impact on the teaching and learning process at Cuautla Campus of TecNM, as in many HEIs institutions. Academic activities shifted to online platforms in March 2020, allowing each teacher to adapt their methods based on their personal resources, knowledge, and skills, in coordination with the students. TecNM provided tutorials and platforms to facilitate the transition to the new online environment. During the inter semester period of June-July 2020, the institution designed its platform and conducted intensive training to standardize the process. Since then, asynchronous activities have been hosted on the Moodle platform, while each teacher decides how to communicate synchronously with their students.

These past two years have been a period of significant change, particularly for new students in 2020 and 2021, who have not

had the opportunity to physically meet their teachers and classmates. They had to adapt to the working methods of their previous higher secondary institutions before adjusting to the technological institute. These continuous changes and learning experiences have inevitably impacted all participants in the process.

To assess the level of impact resulting from these changes, a comparative analysis was conducted using quantitative data from the teacher evaluations administered to students across all TecNM campuses. The analysis considered the semesters from January-June 2018 to August-December 2021.

RESULTS

The professor evaluation instrument utilized, incorporates ten dimensions that align with nine teaching competencies, along with an additional dimension focused on the level of student satisfaction. This comprehensive tool consists of 48 items, graded on a scale from 1 to 5, with 5 representing the highest rating. Each dimension encompasses a varying number of statements, ranging from 3 to 8. The instrument is regularly administered in the month preceding the end of each semester and is intended to be completed by the entire student population enrolled during that period. However, achieving a 100% response rate is not always feasible.

Table number 1 provides an overview of the relationship between the total student population and the responses obtained for the purpose of analysis. This table offers insights into the extent of student participation and engagement with the evaluation process, which is valuable for interpreting the subsequent findings.

On the other hand, the evaluated teaching staff was integrated, in each of the semesters, as indicated in Table 2.

Upon analyzing the data obtained from the

Students	J-J 18	A-D 18	J-J 19	A-D 19	J-J 20	A-D 20	J-J 21	A-D 21
Inscribed	5579	6482	5806	7043	6392	7109	6342	6617
Evaluated	5059	5871	5180	6373	5830	5780	5559	5155
Percentage	90.67	90.57	89.21	90.48	91.20	81.30	87.65	77.90

Table 1. Target population and responses obtained. Information gotten from the SII Comprehensive Information System (<http://sii.cuautla.tecnm.mx/>)

	J-J 18	A-D 18	J-J 19	A-D 19	J-J 20	A-D 20	J-J 21	A-D 21
Teachers	104	98	101	109	116	121	116	118

Table 2. Teaching staff to be evaluated. Information gotten from the SII Comprehensive Information System (<http://sii.cuautla.tecnm.mx/>)

instrument, the initial indicator focuses on the subject mastery and encompasses various aspects. These include the effectiveness of content explanations, the connection between subject matter and other relevant topics, attentiveness to student inquiries, provision of examples or exercises related to professional practice, and the establishment of links between the subject content and real-world applications. Fig. 1 illustrates the scores obtained in this indicator for each semester, shedding light on the performance trends over time.

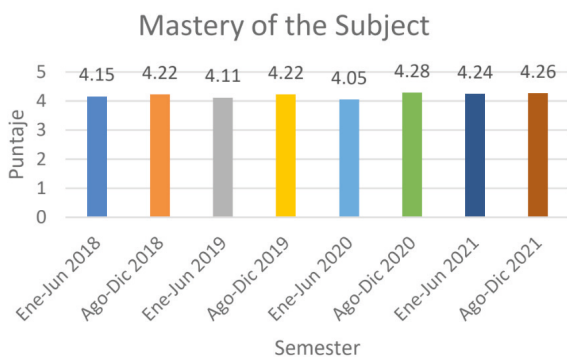


Fig 1. Subject domain

Upon careful examination of the data, a clear pattern emerges, revealing a consistent downward trend in grades during the January-June semester across multiple years. The lowest recorded point is observed in the year 2020, where the average grade reached its nadir at 4.05. This decline signifies a challenging period during that particular semester, potentially influenced by various external factors such as the COVID-19 pandemic and its associated disruptions.

However, despite this downward trajectory, there is a noteworthy glimmer of hope as subsequent periods showcase a remarkable recovery. The grades rebound and demonstrate an upward trajectory, indicating a positive shift in performance and a collective effort to overcome the obstacles faced during the challenging times. This recovery reflects

the resilience and adaptability of both students and educators within the educational institution.

The fluctuation in grades between these contrasting periods highlights the significance of considering the broader context and its impact on academic performance. It prompts further exploration into the underlying factors contributing to the observed variations, allowing for a more comprehensive understanding of the dynamics at play within the educational environment.

Shifting to the next dimension, it pertains to course planning and encompasses several factors such as adherence to established agreements, the implementation of effective learning strategies, and the comprehensive coverage of the subject program. Fig 2 provides a visual representation of the results obtained for this dimension.

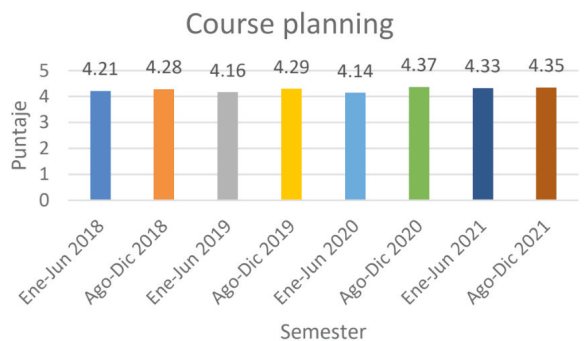


Fig 2. Course planning

The responses related to this specific indicator exhibit a similar pattern to the previous dimension, further highlighting a consistent trend in the data. Notably, the highest score is observed during the August-December 2020 semester, while the lowest score is recorded in the January-June period of the same year.

This consistency in the observed behavior across indicators suggests a correlation between the performance in different aspects of teaching. It indicates that the fluctuations in grades and evaluations are not isolated

incidents but rather part of a broader pattern influencing the overall teaching effectiveness during specific periods.

The higher score achieved in the August-December 2020 semester could be attributed to various factors such as enhanced adaptability to remote teaching methods, increased familiarity with online platforms, or the implementation of improved pedagogical strategies. Conversely, the lower score registered in the January-June semester of the same year might be indicative of challenges and adjustments required during the transition to online learning.

These fluctuations underscore the dynamic nature of education and the need for continuous evaluation and adaptation. Analyzing the reasons behind these variations provides valuable insights into the effectiveness of teaching strategies, enabling educators to identify areas for improvement and make informed decisions regarding instructional practices.

By carefully studying the responses to this indicator, educational institutions can gain a deeper understanding of the factors that influence teaching quality, thereby facilitating targeted interventions and strategies to enhance the overall teaching and learning experience for students.

In turn, the learning environments are analyzed by considering: carrying out activities in places other than the classroom (which was not possible in the confinement), use of ICT interaction tools (contrary to the previous one, essential in these two years), exercises of oral and written expression, relation of the contents of the subject with the industry and society at a local, regional, national and international level; inclusion of examples and cases related to real life. The results are shown in Fig 3.

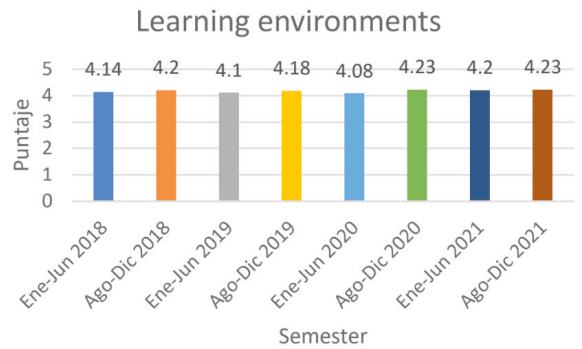


Fig 3. Learning environments

The item strategies, methods and techniques are another aspect to be evaluated. It reviews everything related to the adaptation of the activities according to the different learning styles of the students, the promotion of self-learning, reflection and research, the carrying out of participatory activities, accepting proposals from the group, organization and structure of classes and the use of various strategies, methods, media and materials. The results are shown graphically in Fig. 4.

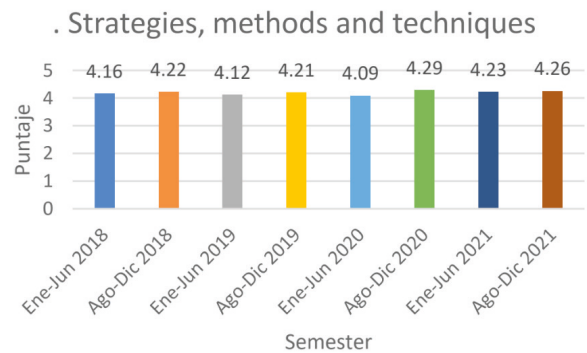


Fig 4. Strategies, methods and techniques

It can be said that these aspects were the ones that required the most adjustment and adaptation work by teachers and students, however, the behavior of the responses is similar to the previous ones.

Motivation, the results of which are shown in Fig 5, evaluates aspects such as the commitment and enthusiasm shown in carrying out the activities, the development of an environment of respect

and trust, considering the needs, interests and expectations of the group, fostering curiosity and the desire to learn, to recognize the successes and achievements of the students and, with all this, to awaken interest in the subject.

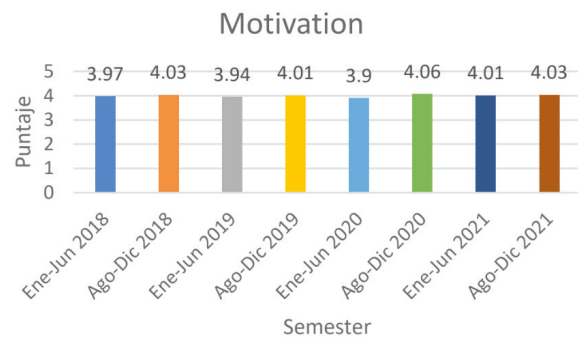


Fig 5. Motivation

Comparing the results of this indicator with the previous ones, it can be seen that the score achieved is the lowest of all and, although the figure corresponds to the first semester of 2020, it must be recognized that it is a subject on which more work is needed as a professor.

The instrument contemplates, in the same way, reviewing the way in which the teacher evaluates student learning, considering the way in which knowledge and skills are identified, if information is provided to adequately carry out the evaluations, if it takes into account another type of activities carried out, the delivery of qualifications within the established period, the fact of granting an opportunity to improve the results, the opening for the correction of errors of appreciation and evaluation and the qualification in an impartial manner (Fig 6).

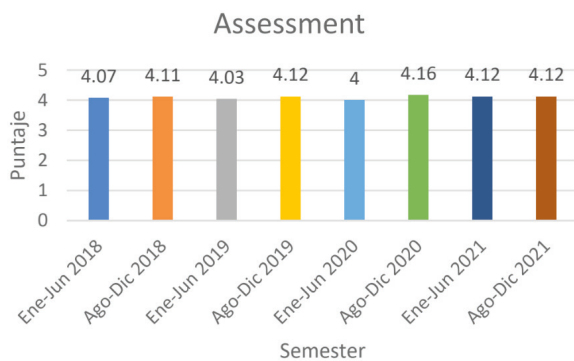


Fig 6. Assessment

The behavior of the results presents the same trend as in the other points, with the difference that there is no change in the score in the last two semesters. It can be considered that online work does not allow for diversification in the way of evaluating or the lack of knowledge on the part of teachers about some other evaluation mechanisms to be used virtually.

If there is congruence, development of a climate of openness and understanding and listening and considering the opinions of the students; These are the aspects that are analyzed in the Communication indicator. The results, shown in Fig 7, are the second highest after Course Planning.

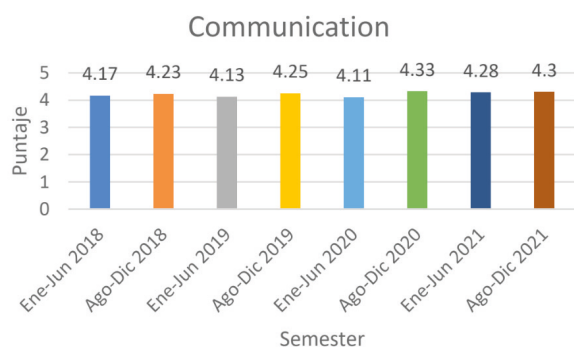


Fig 7. Communication

Seeking to evaluate if the teacher is responsible and equitable in the activities of the course, questions about punctuality and attendance to classes, the promotion of actions that contribute to the conservation of

the environment considering the cleanliness and order in the facilities and the willingness to provide academic help. The results are found in Fig 8 and allow establishing a direct relationship between the planning and management of the course, which may be the reason for such similar results in both aspects.

subjects to this form of work, the figure shows the responsible work carried out by teachers in response to the unforeseen situation lived and that was made visible to the students.

The last dimension that the questionnaire evaluates is General Satisfaction and includes direct opinions about the teacher and about the level of performance and learning achieved by the student through the teacher's work.

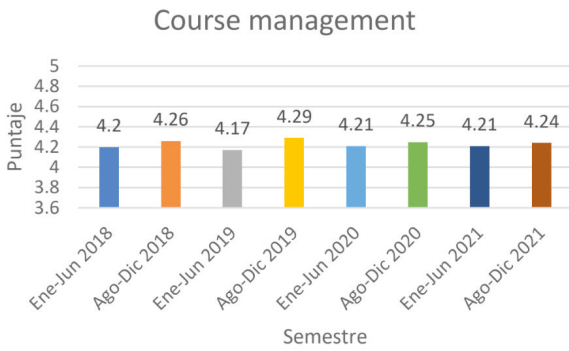


Fig 8. Course management

One of the aspects with the greatest impact in these two years of contingency was the use of Information and Communication Technologies. The instrument has considered integrating its use in the learning process, emphasizing the safe, legal and ethical use of digital information (Fig 9).

Fig 10. Overall satisfaction

Fig 10 shows that the dimension presents little variation in general terms, with the same behavior as the other 9 indicators and with less variation between periods. Fig 11 shows the general average.

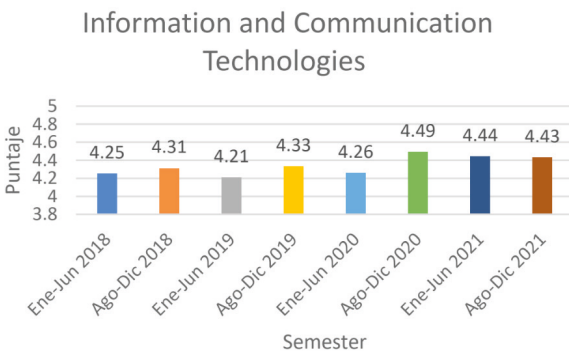


Fig 9. Information and Communication Technologies

As is shown in Fig 9, August-December 2020 period is the one with the highest score and the indicator presents the highest score of all the indicators. If it is considered that not all teachers had, before the contingency, the same digital skills and being forced to take all the

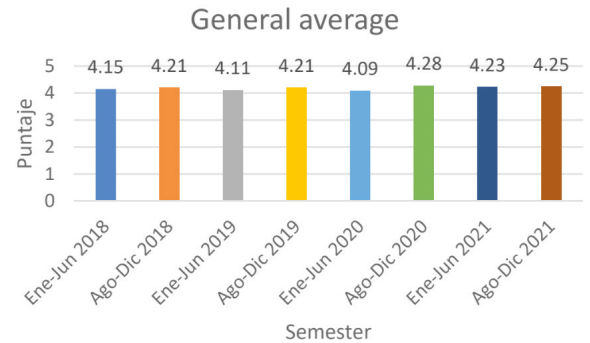


Fig 11. General average

These figures show the commitment and dedication of the teachers of Cuautla campus, as well as, the ability to adapt to adverse and complicated situations such as those generated by the Sanitary Contingency. However, it is necessary to continue working and motivating teachers and students.

CONCLUSION

In conclusion, the analysis of the average ratings reveals a consistently high level of evaluation, ranging between 4.09 and 4.28, which according to the instrument's criteria, signifies an excellent performance. It is noteworthy that the lowest-rated period corresponds to January-June 2020, while the highest-rated period is observed in August-December of the same year.

The decline in ratings during the January-June 2020 semester can be attributed to the unprecedented health contingency brought about by the pandemic. The suddenness of the situation and the resulting lack of control over educational activities likely contributed to this dip in performance. However, it is essential to highlight the positive impact of the institution's implementation of the Moodle Platform in the subsequent semester (August-December 2020), which played a pivotal role in normalizing educational activities.

The introduction of the Moodle Platform provided a means of structuring and organizing the teaching and learning processes, fostering a more seamless transition to online education.

This technological resource likely facilitated better communication, interaction, and access to educational resources, leading to improved teaching outcomes and subsequently higher ratings.

While the challenges posed by the health contingency were significant, the institution's ability to adapt and leverage technological solutions demonstrates its commitment to maintaining a high standard of education. It is important to acknowledge the efforts made by both teachers and students in navigating the changing educational landscape, overcoming obstacles, and continuing to engage in the teaching-learning process.

Moving forward, it is imperative for the institution to build upon these experiences and leverage the lessons learned from the pandemic to further enhance its educational practices. By identifying areas of improvement, investing in professional development, and fostering a supportive environment for teaching and learning, the institution can continue to deliver excellent education and adapt to future challenges effectively.

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