Evaluating teacher performance during the pandemic: opinion from Mexican university students

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Abstract

Introduction: The evaluation of the performance of university teachers from the opinion of their students is a recurring process, although during the pandemic there are few experiences. **Objective:** To evaluate the performance of university teachers from the opinion of their students, in the context of a pandemic. **Method:** Representative sample of 673 students from a Mexican public university, a teacher performance questionnaire adapted for virtual classes was used. **Results:** Most of the teachers adapted to an asynchronous virtual work dynamic, although a significant percentage (41.9%) continued to teach classes synchronously (videoconferences). Teachers in initial formative stages mainly promoted individual content learning, contrasting with those in advanced stages, who promoted situated learning. Students with unfavorable opinions regarding content mastery and assessment strategies mentioned the promotion of rote learning, to the detriment of more constructivist learning. The contrasts were statistically significant.

Keywords: teacher evaluation; teaching strategies; teaching objectives; learning evaluation strategies.

Evaluación del desempeño docente durante la pandemia: opinión de estudiantes universitarios mexicanos

Resumen

Introducción: la evaluación del desempeño de docentes universitarios desde la opinión de sus estudiantes es un proceso recurrente, aunque durante la pandemia hay pocas experiencias. **Objetivo:** evaluar el desempeño de docentes universitarios desde la opinión de sus estudiantes, en contexto de pandemia. **Método:** muestra representativa de 673 estudiantes de una universidad pública mexicana, se utilizó un cuestionario de desempeño docente adaptado para clases virtuales. **Resultados:** la mayoría de los docentes se adaptó a una dinámica de trabajo virtual asincrónica, aunque un porcentaje importante (41.9%) continuó impartiendo clases de manera sincrónica (videoconferencias). Los docentes de etapas formativas iniciales promovieron principalmente el aprendizaje individual de contenidos, contrastando con aquellos de etapas avanzadas, quienes fomentaron un aprendizaje situado. Estudiantes con opiniones desfavorables respecto al dominio de contenidos y a las estrategias de evaluación, mencionaron la promoción de un aprendizaje memorístico, en desmedro de aprendizajes más constructivistas. Los contrastes fueron estadísticamente significativos.

Palabras Clave: evaluación docente; estrategias de enseñanza; objetivos de enseñanza; estrategias de evaluación del aprendizaje.

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Introducción

The evaluation of teaching performance at the higher education level has been a subject of intense debate, both for theoretical-conceptual and technical-methodological reasons. On the one hand, at the theoretical level, the main aspects and dimensions that should be considered when analyzing teacher performance have been discussed: the way in which they organize and plans their classes, the level of mastery or expertise in the management of the contents they teach, the forms of interaction with the student body, the didactic competencies to teach and achieve the type of learning intended with their students, the strategies and functions they assign to the evaluation of learning, among others (UNESCO, 2006; García Cabrero et al., 2008; Cordero Arroyo et al., 2013). In addition, there has been much debate (Santos del Real, 2012; Martínez, 2016; Vázquez Cruz et al., 2014) about the purpose behind teacher evaluation. when the question about the reasons to evaluate teachers arises, the answers bifurcate into directions around a summative perspective (certification, job promotions, economic incentives) or a formative one (feedback, improvement proposals, identification of areas of opportunity).

On the other hand, at the methodological level, the discussion has focused on the instruments (closed questionnaires, interviews, and classroom observation, mainly) and subjects (students, colleagues, principals, external experts) most suitable for obtaining reliable, valid, sufficient, and relevant information on the basis of which to evaluate teacher performance (Cruz Ávila, 2007; Romero Díaz & Martínez Gimeno, 2017; Zamora Serrano, 2021). Beyond this discussion, the evaluation of teacher performance based on the opinion of their students through closed questionnaires remains an approach that is recurrent and institutionalized at the higher education level, as well as valid, reliable, and legitimate when approached with the appropriate theoretical and methodological requirements.

This paper presents the results of the teacher performance evaluation process according to the opinion of the students of the School of Administrative and Social Sciences (FCAYS) at Universidad Autónoma de Baja California (UABC) in Mexico. Its main objectives are to describe the students' opinion about their teachers' performance from four dimensions (teaching planning, content mastery, teaching strategies, and learning assessment); and to analyze the relationship between teachers' teaching objectives and students' academic variables (formative stage, opinion about content mastery and learning assessment strategies) in the context of virtual classes due to health contingency measures in the context of COVID-19. The evaluation of teaching performance from the point of view of university students was disrupted by the health contingency measures due to the spread of the COVID-19 virus during 2020-2021.

In fact, the education systems of all countries and at all levels had to work under the virtual distance modality during this period. This brought with it a set of challenges at both the technological and pedagogical levels: on the one hand, at the technological level, a complicated scenario arose in which teachers and students were forced to use a series of digital resources to access educational content and to establish communication channels. However, as highlighted by some authors (Vialart Vidal, 2020; Mendoza Castillo, 2020; Cencia Crispín et al., 2021; Villarroel et al., 2021; Moreno Tapia et al., 2021) difficulties arose both in terms of technological mastery (knowledge and management of digital resources) and in socioeconomic terms (access and possession of digital resources and network connection at home; suitable spaces for the completion of tasks and work).

On the other hand, at the pedagogical level, the challenges presented by the pandemic were not minor: teachers had to modify their didactic strategies to teach the contents of their subjects online, a modality that many did not master and to which they had to adapt along the way in a self-taught and forced manner (Castro, Paz & Cela, 2020; Valenzuela & Barrios, 2020; Vialart Vidal, 2020; Moreno Tapia et al, 2021; Mamani-Cori et al., 2022). In this sense, a concerning problem was observed related to the inability of university faculty to transform their teaching strategies

according to the needs of the pandemic context and to adapt to the requirements of didactic innovation demanded by distance education, mediated by digital resources. The elaboration of adequate instructional designs, the proposal of activities that include learning situations in virtual modality, the incorporation of innovative learning evaluation strategies based on distance modality, among other elements, came to light and revealed the need for training and preparation of the faculty in this regard.

In this context, it is important to analyze the teaching objectives of teachers under the virtual modality, considering the relationship between these objectives and the psychological theories of learning that have permeated this discussion for decades (Zapata-Ros, 2015). Thus, while traditionally some teachers have preferred teaching strategies aimed at promoting rote learning, based on a stimulus-response logic and subsequent provision of feedback, others have focused on the application of teaching strategies that promote meaningful and active learning oriented to the cognitive processing of content and the construction of meanings by students. Thus, based on the objectives of this study, the following question is posed: How was this strategic dynamic conducted in the context of virtual classes due to COVID-19 and how did university professors focus the teaching objectives in this context?

In view of the problems described above, this paper presents the results of the teaching performance evaluation process from the point of view of the students of the FCAYS at UABC during the 2021-2 period, in which virtual distance classes were implemented due to the health contingency measures brought about by COVID-19. The students' perspective on the performance of their professors in terms of class planning, content mastery, teaching strategies, and learning assessment was researched. The results show interesting trends in terms of the challenges mentioned in the previous paragraphs and make it possible to glimpse elements, both theoretical and methodological, that contribute to the discussion on the evaluation of teaching performance at the higher education level.

Method

Design

The methodological approach of this study is quantitative, with a descriptive, relational, and non-experimental design. The variables considered in relation to the students' opinion fall within four dimensions of teaching performance: teaching planning, content mastery, teaching strategies, and learning assessment (see Table 2). Of these variables, teaching objectives (dependent variable), as well as content mastery and learning assessment (independent variables) were considered for the inferential analyses performed (chi-square, ANOVA).

Participants

The study considered a representative sample of students from the FCAYS at UABC (Ensenada campus). This school is composed of eight undergraduate programs, covering three areas of knowledge: Law (legal sciences); Psychology, Communication Sciences, Sociology, and Education Sciences (social sciences); Computer Science, Business Administration and Accounting (administrative sciences).

During the 2021-2 period, the population was 4,551 students, according to official university data[1]. Using the algorithm proposed by Cuesta and Herrero (2010, cited in: Organista-Sandoval and Serrano-Santoyo, 2014), with a confidence level of 95% (Z = 1.96), a frequency/probability of the factor to be studied of 50% (P = 0.5) and a maximum error estimate of 0.05, the minimum sample size to be representative was calculated to be 354 students. In the case of this study, the sample reached 673 participants (14.8% of the student population), most of whom were in the program-specific stage (third to sixth semester: 52.6%) of their program of study (Table 1). Less than one-fifth (18.6%) of the participants were in the basic stage (semesters 1 and 2) of their degree programs.

[1] http://cgsege.uabc.mx/documents/10845/65446/Poblaci%-C3%B3n%20Estudiantil%202021-2

Table 1
Frequency and Percentage of Participants by Training Stage

Training stage	n	%
Basic	124	18,6
program specific	351	52,6
Final	192	28,8
Total	673	100,0

Note. Authors' own elaboration.

Instruments

In the FCAYS at UABC, a questionnaire for the evaluation of teaching performance is applied biannually to students to know their opinion about four dimensions (Henríquez et al., 2017; Henríquez et al., 2018; Henríquez & Arámburo, 2021): (i) teaching planning, which refers to aspects related to the organization of the course by the professor (delivery, explanation and fulfillment of course plan, duration of sessions, homework load, among others); (ii) content mastery, Which is associated with the professor's expertise in the contents taught (clarity, mastery, updating, association with other subjects, relation with real life situations, among others); iii) teaching strategies, a dimension that aims to explore the didactic strategies used by the professor in relation to teaching strategies around the contents and learning objectives behind his teaching practice (traditional strategies aimed at transmissive and rote teaching and learning objectives; constructivist strategies associated with meaningful and sociocultural teaching and learning objectives); and iv) learning assessment, which refers to the assessment instruments used by the teacher in his teaching practice and the students' attitudes towards learning assessment strategies, methods, and resources.

The purpose of this questionnaire is to provide valuable information from the perspective of FCAYS students on the performance of their professors in order to favor their continuous training and identify areas of opportunity to strengthen them through training programs. As a theoretical-conceptual foundation, this instrument is based on multidimensional models built, validated, and reported within a framework of international research regarding teaching evaluation from the students' perspective (Arreola, 2007; Bazán-Ramírez et al., 2021; Fink, 2008). In this way, the recommendations of López-Aguado and Gutiérrez-Provecho (2019), who emphasize the importance of considering the theoretical knowledge of the field of study as a first step in the process of constructing scales, are addressed. In this way, the selection of variables based on this theoretical orientation avoids the creation of future artificial factorial structures[2].

In its first version (Henríquez et al., 2017), the questionnaire was composed of 16 items through which it was intended to describe aspects related to face-to-face teaching by the faculty of the FCAYS. In this document, the results obtained from the adaptation of this instrument are presented, as a result of the health contingency measures caused by the spread of COVID-19 and the mandatory teaching of virtual classes during the period 2021-2.

In view of this, some items had to be modified and others incorporated to investigate the students' perspective on the performance of their professors in the same dimensions, but in virtual classrooms mediated by digital platforms and media. Table 2 shows the distribution of the dimensions, variables, measurement scales, number of items and reliability indexes through the Alpha coefficient for each dimension of the instrument:

[2] *As mentioned above, the instrument presented here was an adaptation of the original questionnaire to be applied in the context of health contingency measures due to COVID-19 and the mandatory distance learning. The original instrument was picked up at the end of pandemic confinement, and its psychometric analyses are in the process of being published.*

Table 2

Dimensions, Variables, Scales, and Reliability Coefficients of the Teaching Performance Questionnaire for Students of the FCAYS, UABC, 2021-2

Dimensions	Variables	Scale	Number of reagents	Reliability index
Planning of the teaching	Delivery and explanation of the program at the beginning of the semester	Nominal	8	.426
	Attention to what is established in the program	Ordinal		
	Duration of virtual sessions	Ordinal		
	Task load during virtual sessions	Ordinal		
	Work dynamics during virtual sessions	Nominal		
	Support media/platforms	Nominal		
	feedback after goals are achieved	Ordinal		
	Adequacy of resources used	Nominal		
Mastery of contents	Clarity	Ordinal	6	.858
	Management and updating	Ordinal		
	Connection with everyday situations (situated)	Ordinal		
	Connection with other subjects	Ordinal		
	Encouraging participation	Ordinal		
	Flexibility	Ordinal		
Strategies of Teaching	Work strategies based on content	Nominal	2	.310
	Learning objectives	Nominal		
Evaluation of learning	Learning assessment tools	Nominal	8	.811
	Attitudes towards evaluation strategies	Ordinal		

Note. Authors' own elaboration.

Thus, this new version of the teacher performance evaluation questionnaire in the context of pandemic consisted of 4 dimensions, 18 variables, and 24 items (in addition to the dimension of sociodemographic and academic information of the participants: age, degree, subject/course, semester in progress at the time of answering the questionnaire; and the dimension of feedback strategies, which were not considered in this report). As shown in the table above, two of the theoretical dimensions considered in the instrument (content mastery and learning assessment) yielded acceptable reliability indexes (>.80). The teaching planning dimension yielded a low index (<.60), while the teaching strategies dimension showed an index below acceptable (<.40). This can be explained, as argued by Barrios & Cosculluela (2013) and Oviedo & Campo-Aria (2005), due to the small number of items that make up this dimension. In this regard, it is asserted that the number of items directly affects the alpha value of a scale, as well as a greater number of individuals responding to an instrument.

Procedure

Given the health contingency conditions resulting from the spread of COVID-19, during the 2021-2 period, distance learning was mandatory through virtual classes, mediated by digital platforms and electronic media for the delivery of content and interaction between teachers and students. The above conditions forced the teaching performance evaluation questionnaire to be applied online to the student body of the FCAYS at UABC through access to the open platform of Google Forms during the month of October 2021. Thus, with the support of the coordinators of each program, the electronic link was sent to the group leaders of each semester within all educational programs. They were asked to share it with their peers and to tell them that the form would be available for 30 days to be answered. After one month, response collection ended, and the data processing files were configured.

Data Analysis

In accordance with the research objectives and the nature of the data collected, descriptive and inferential statistical analyses were carried out with the support of the SPSS statistical package for social sciences, version 25.0. On the one hand, basic descriptive statistics were obtained according to the type of variable: frequency distributions, central tendency indicators, and dispersion indexes. On the other hand, according to the scales with which some variables were measured, two types of inferential analyses were performed—parametric (contrast of means, ANOVA) and non-parametric (contrast of hypothesis of independence, chi-square)—on the opinion of FCAYS students about the teaching objectives of their professors and the academic variables (formative stage, opinion about content mastery and learning assessment strategies).

Results

Descriptive Analysis of Students' Opinions

As shown in Table 3, in order to investigate the work dynamics that professors favored in the during their classes during the health contingency measures (variable within the Teaching Planning dimension, see Table 2), two options were presented to students: i) asynchronous classes, which referred to activities planned in advance, objectives and tasks planned with pre-established dates, delivery of products on digital platforms, short virtual sessions to clarify doubts and content; and ii) synchronous classes, in which the professors continued to teach the subject as they normally d in person, without varying their strategies (classes at normal times, presentation of content by videoconference, and duration of classes similar to the face-to-face ones). Although the percentages of opinion between the two options were balanced, the majority of students (58.1%) stated that their professors favored asynchronous work dynamics. For this, they relied mainly on the Blackboard platform (92.3%), which allows the management of course content in different modalities (face-to-face, blended, virtual) and offers various means of communication (chat, messaging, videoconferencing) between professors and students. Notwithstanding the above, it is noteworthy that more than 40% of the participants stated that their professors continued with a synchronous work dynamic during virtual classes in the context of COVID.

Regarding the professors' mastery of the contents during the health contingency measures, six items (see Table 2) were used to determine the low (never, sometimes) or high (almost always, always) frequency with which the professors taught the contents in a clear manner, with a good command and updated knowledge, connecting them with situations or problems of daily life (situated), relating them to contents of other subjects, encouraging the active participation of students, showing flexibility when faced with situations that required special attention. As can be seen in Table 4, in all the items, the students' opinions showed high frequency percentages (over 80%) regarding the handling of contents by their professors, except for the connection established by the professors between their subject and other subjects of the curriculum. In this aspect,

about half of the students (47.1%) reported a low frequency in execution by the faculty. Statistical analyses were performed to contrast the observed and theoretically expected frequencies (chi-square, X^2) in all categories, yielding statistically significant values (sig. = .000; 95% confidence) for all cases, with the exception of the management of situated contents (associating them with real life situations) by the professors, where the differences between the frequencies were not significant (sig. = .133). In order to complement the previous results, analyses were run to compare the proportions of each category (effect size estimator, ETE) by means of Cohen's H indicator. In all cases, the values obtained were between <0.2 and >0.5, denoting an intermediate degree of effect size (Khalilzadeh & Tasci, 2017). The category referring to the relationship that professors establish between their subject and the contents of other subjects stands out, where the indicator yielded a value >0.2 (minimal effect).

At the same time, students' opinions were asked about the teaching objectives pursued by their professors through the teaching of subjects in the virtual modality (Table 5). Five response categories were proposed: i) to memorize and reinforce the retention of the contents of the subject (rote); ii) to associate the students' previous knowledge with the new contents of the subject (meaningful); iii) to promote individual learning through individual student tasks and work (individual); iv) to contextualize learning in real situations, related to the labor context or the local community (situated); and v) to promote collaborative learning through tasks and work in groups of students (group). In this case, the category with the highest percentage of response was situated learning (32.1%), followed by the promotion of individual learning (22.4%) by professors. The contrast test between the observed and expected frequencies (chi-square X^2) was run for each category related to teaching objectives, where the result showed a significant index (sig. = .000) with 95% confidence.

Table 3

Frequency Distributions Around the Working Dynamics and Media

Work dynamics in virtual classes	n	%	Means	n	%
Asynchronous classes	391	58,1	Blackboard	621	92,3
Synchronous classes	282	41,9	Videoconference	43	6,4
			Others	9	1.3
Total	673	100,0	Total	673	100,0

Note. Authors' own elaboration.

Table 4

Frequency Distributions Around the Content Mastery

Content management	Low		High		CChi-square	Cohen's h
	n	%	n	%	Sig.	
Clarity	107	15,9	566	84,1	.000	,341
Domain	56	8,3	616	91,7	.000	,417
Situated	120	17,9	553	82,1	.000	,322
Other subjects	317	47,1	356	52,9	.133	,029
Participation	117	17,4	556	82,6	.000	,326
Flexibility	105	15,6	568	84,4	.000	,344

Note. Authors' own elaboration.

Table 5
Frequency Distributions Around Teaching Objectives

Estrategias		n	%
Rote learning		88	13,1
Significant learning		107	15,9
Individual learning		151	22,4
Situated learning		216	32,1
Group learning		111	16,5
	Total	673	100,0
		Valor	**Sig.**
Chi-square		77.156	.000

Note. Authors' own elaboration.

On the other hand, we asked about the main learning assessment instruments used by the FCAYS faculty in the context of virtual classrooms due to the pandemic. In this regard, about half of the students (44.5%) stated that their professors used individual multiple-choice exams to evaluate them, followed by a fifth of the sample (20.9%) who mentioned individual essay exams as the main instrument used. The rest mentioned other assessment tools, such as research papers and reading reports.

With respect to the learning assessment strategies used by their professors, the general opinion of FCAYS students was positive (Table 6): more than half of the participants agreed that they liked these strategies (61.8%), and more than two thirds agreed that they learned in a better way, that their professors supported them as the instruments were applied, and that they applied strategies related to the principles of authentic assessment. Notwithstanding the above, it is noteworthy that nearly half of the students (44.9%) felt that their professors should include other learning assessment strategies in addition to those used. In this case, contrast analyses were also performed between the observed and theoretically expected frequencies (chi-square, x2) in all categories, yielding statistically significant indices for all cases (95% confidence).

Again, in order to complement the previous results, analyses were performed to compare the proportions of each category (effect size estimator) by means of Cohen's h indicator. In all cases, the values obtained are close to or below 0.2, which denotes a minimum effect size (Khalilzadeh & Tasci, 2017).

Inferential Analysis of Students' Opinions

Table 7 shows the results of a non-parametric statistical analysis (chi-square) based on the students' opinion on the teaching objectives according to their formative stage within their respective study plans. The purpose was to identify any occasional significant differences in the opinion of the students based on the latter variable, contrasting the hypothesis of independence between the two. While students in the basic stage identified individual learning as the teaching objective mostly promoted by their professors (27.4%), those in the program-specific and final formative stages mentioned situated learning as the teaching objective mainly promoted by their professors (33.9% and 33.3%, respectively). As can be seen, the results of the inferential analysis performed indicated significant differences, with an index of sig = .032 (95% confidence). However, the effect size (Cramer's V) yields a value equal to .112, which denotes a weak—although significant—association between the variables teaching objectives and students' formative stage.

Table 6

Distribuciones de frecuencia de opnión en torno a las estrategias de evaluación

Estrategias de evaluación	Disagreement		Agreement		Chi-square	Cohen's h
	n	%	n	%	Sig.	
I liked them	257	38,2	416	61,8	.000	,118
I learned better	214	31,8	459	68,2	.000	,182
Parallel support	208	30,9	465	69,1	.000	,191
Authentic	194	28,8	479	71,2	.000	,212
Diversity	255	37,9	418	62,1	.000	,121
Include other	302	44,9	371	55,1	.008	,051

Note. Authors' own elaboration.

Table 7

Contingency and Chi-Square Table of Teaching Objectives by Formative Stage

	Basic		Discipline		Terminal	
	n	%	n	%	n	%
Rote learning	20	16,1	49	14,0	18	9,4
Significant learning	27	21,8	52	14,8	26	13,5
Individual learning	34	27,4	71	20,2	46	24,0
Situated learning	32	25,8	119	33,9	64	33,3
Group learning	11	8,9	60	17,1	38	19,8
			Valor		Sig.	
Chi-square*.			16,781		.032	
Cramer's V			.112		.032	

**95% de confianza*

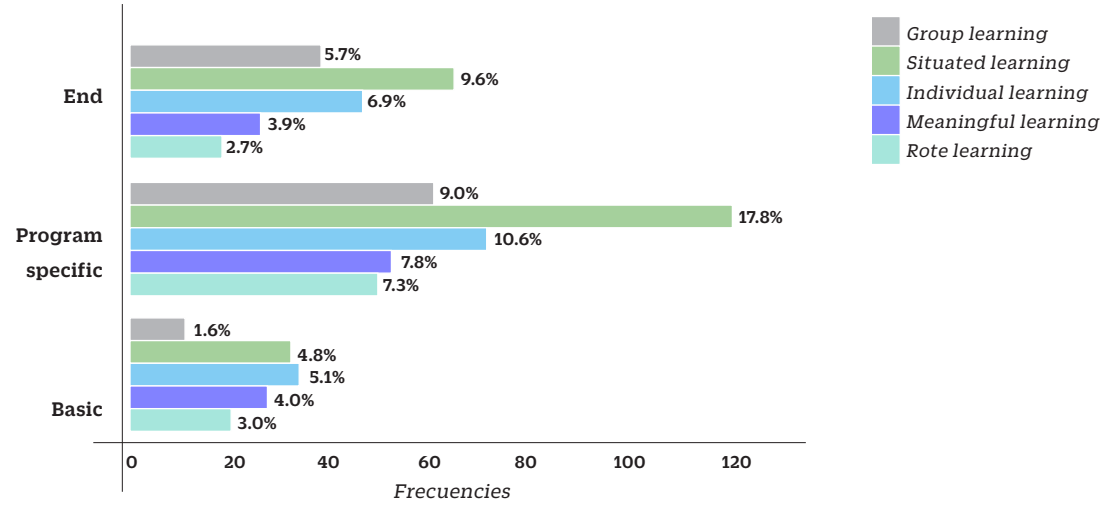
Note. Authors' own elaboration.

Figure 1 shows more clearly the significant differences in the students' opinions regarding the teaching objectives according to their formative stage. At a general level, among those participants in the first semesters of their study programs, individual learning predominated, while among the students in the intermediate (program-specific) and final (final) formative stage, situated learning predominated as the main teaching objective promoted by their professors.

On the other hand, the overall average of the students' opinion about their professors' mastery of the contents was obtained with the purpose of comparing it according to the teaching objectives. The set of items of this dimension (six in total) was measured with a four-step Likert scale: never (0), sometimes (1), almost always (2), and always (3). Based on this coding, the overall mean of the total scores was obtained. As can be seen in Table 8, the objective related to the promotion of rote learning was the only one which yielded a low frequency index (1.8) for content management. To analyze the significant differences in this variable according to the teaching objectives, a parametric analysis (ANOVA) of comparison of means was applied. The result of this analysis yielded a significance index of .000, from which statistically significant differences in content mastery were inferred from

Figure 1

Bar Chart of Teaching Objectives by Formative Stage



Note. Authors' own elaboration.

Table 8

ANOVA of the Content Mastery Index According to Teaching Objectives

Strategies	n	Mean	D.E.	Sum of squares	Sig.
Rote learning	88	1,8	0,8		
Significant learning	107	2,3	0,7		
Individual learning	151	2,3	0,6	40.4	.000
Situated learning	216	2,6	0,4		
Group learning	111	2,4	0,6		

*Note: *95% confidence; effect size indicator (squared) = 0.147 (sig. = .000).*

Note. Authors' own elaboration.

the teaching objectives. In addition, the effect size indicator (squared) yielded a value of .147, which is considered low (sig. = .000), in relation to the differences between the mean values of the content mastery index obtained for each teaching objective (Cárdenas Castro & Arancibia Martini, 2014).

Finally, a similar analysis was performed based on the students' opinion about the learning assessment strategies used by their professors. The overall mean was obtained for comparison according to the teaching objectives they pursued through their virtual classes in the context of pandemic. Likewise, the set of items (six in total) was measured by means of a four-step Likert scale: totally disagree (0), disagree (1), agree (2), and strongly agree (3). Based on this, the average of the total scores around the opinion on learning assessment strategies was obtained. As shown in Table 9, again, the teaching objective related to the promotion of rote learning was the one with the lowest mean in the students' opinion (2.4). A parametric analysis of comparison of means (ANOVA) was performed to analyze statistical

Table 9
ANOVA of Evaluation Strategies Index According to Teaching Objectives

Strategies	n	Mean	D.E.	Sum of squares	Sig.
Rote learning	88	2,4	0,9		
Significant learning	107	2,8	0,9		
Individual learning	151	2,9	0,9	15.3	.003
Situated learning	215	2,9	1,1		
Group learning	111	2,8	1,0		

*Note: *95% confidence; effect size indicator (squared) = 0.024 (sig. = .003).*
Note. Authors' own elaboration.

differences. The result showed a significance index of .003, from which statistically significant differences were inferred with respect to the rest of the teaching objectives. In this case, the effect size indicator (squared) yielded a value of .024, which is considered low (sig. = .003), in relation to the differences between the mean values of the opinion index about evaluation strategies obtained for each teaching objective (Cárdenas Castro & Arancibia Martini, 2014).

Discussion

The analyses carried out based on the application of the teacher performance evaluation questionnaire in the FCAYS at UABC during the 2021-2 period show that the teaching objectives variable is a determining factor in the opinion of the student body based on its intersection with some academic variables such as the formative stage, the mastery of contents, and the learning evaluation strategies used by the faculty. In fact, the results show that students who are in the initial stage of their studies stated that their professors' teaching objectives aim at promoting individual learning, contrasting significantly with those in the program-specific and end stages, who mentioned situated learning as the main purpose of teaching. In the same way, students who showed a negative opinion about the content mastery and learning assessment strategies used by their professor emphasized that the latter mainly promote rote learning to the detriment of other teaching objectives. On the other hand, a positive opinion was associated with constructivist teaching objectives such as the promotion of meaningful and situated learning.

The above findings acquire special relevance when considering the pandemic context that prevailed worldwide during the 2020-2021 period, affecting all educational levels, forcing remote work through digital resources to implement teaching and learning processes at all educational levels. Indeed, this forced virtualization inevitably disrupted didactic strategies regarding educational content and, therefore, both implicit and explicit objectives, as well as teaching and learning models at the higher education level in all areas of knowledge (Castro et al., 2020; Valenzuela & Barrios, 2020; Miguel Román, 2020; Cencia Crispín et al, 2021; Moreno Tapia et al., 2021; Mamani-Cori et al., 2022).

These didactic transformations greatly affected teachers with no mastery of strategies supported by digital media, making their incorporation to this accelerated change of model difficult. This was evident in the opinion of the students of the FCAYS at UABC during the 2021-2 period, since more than 40% stated that their professors continued teaching their classes using a synchronous dynamic during the context of COVID-19, which implied the continuation

of teaching styles similar to those used during face-to-face classes. In this regard, some authors (Valenzuela & Barrios, 2020; Moreno Tapia et al., 2021) highlight the need to systematically design and implement theoretical and practical training for university professors on the mastery of active, interactive, and varied methodologies within a framework of virtual educational processes to foster motivation, autonomous and collaborative learning, and metacognition in students.

The above is justified based on the results presented in this paper, in which it is evident that those students of the FCAYS at UABC who are in the initial formative stage of their programs had a negative opinion about the mastery of content and the learning assessment strategies used by their professors in the context of COVID-19, pointing out the promotion of mainly individual and rote learning strategies by their professors to the detriment of constructivist strategies. In turn, as asserted by Cencia Crispín et al. (2021), a recurrent error among many university professors is to implement online and virtual teaching-learning processes under didactic strategies similar to those used in face-to-face classroom contexts, ignoring their substantial differences. In this sense, it is concerning that professors continue to use the same strategies and instruments they use in face to face teaching in virtual education contexts (Villarroel et al., 2021). In turn, as highlighted by some authors (Vialart Vidal, 2020; Mendoza Castillo, 2020; Cencia Crispín et al., 2021; Villarroel et al., 2021), these modifications and transformations brought about by the virtualization of education mainly affected those subjects lacking technological knowledge, technological equipment or resources, and availability or access to networks from home. However, this is not only a matter of technological deficiencies. As Moreno Tapia et al. (2021) also point out, the health contingency measures negatively affected many students who did not have ideal spaces for concentration and attention to carry out their academic obligations, which, added to limitations in the availability of digital resources, posed serious obstacles in their learning processes and teaching effectiveness. Therefore, it is also necessary to consider a factor that goes beyond technology and is related to the socioeconomic conditions that affect virtual educational contexts mediated by digital resources. And given that the health contingency measures caused by the spread of COVID-19 forced the virtualization of teaching-learning processes at all educational levels, this element should not be overlooked when analyzing the determining factors that affected these processes in this context.

In turn, it should be noted that the present study was affected by some limitations of a methodological nature, namely the type of non-probabilistic sampling that does not allow generalizing the results to the entire population of students of the FCAYS at UABC; the low reliability indexes yielded by some dimensions of the instrument, on which some interpretations are drawn; and the limited number of participants, which prevented a cleaning of data related to response biases. However, with respect to these limitations, it should be remembered that the questionnaire used represents a circumstantial adaptation to evaluate teacher performance in the context of a pandemic. The original instrument was reapplied once the forced confinement was over and is in the stage of feedback, validation, and application for face-to-face teaching and learning processes.

In conclusion, the present study provides elements for the analysis of some aspects regarding teacher performance in a context of virtual learning due to the COVID 19 pandemic from a student perspective. The analysis showed that, according to the students' opinion, the teachers' teaching objectives are bifurcated into individual and rote on the one hand, or purposes of a more constructivist nature (meaningful, situated, group) on the other hand. The above was significantly related to certain academic variables of the students (formative stage, opinion about the mastery of contents, and the learning assessment strategies used by their professors). From here, the path lies ahead to continue exploring these trends. This is mainly based on the educational modalities in which classes are taught at the higher education level, considering that the context of compulsory virtual education has already been overcome and that currently the face-to-face education modality has returned in all countries and educational level.

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