Culture of learning assessment according to students and teachers of a Mexican Public University

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Abstract

Introduction: The culture of assessment for learning is one where the evaluation strategies employed seek to promote and improve student learning. **Objective:** to know the extent to which the culture of evaluation in a Mexican public university is oriented towards evaluation strategies for learning. **Method:** Two surveys were applied to 1,849 students and 545 teachers during 2022-1, considering random non-probability samples. **Results:** The teachers reported that the evaluation strategy that they dominate the most is the development of objective examinations, and to a lesser extent self-evaluation and co-evaluation; for its part, about half of students assessed that the use of these is of poor quality to regular, however, they claim to be satisfied with the use of formative assessment strategies by their teachers. **Discussion:** Convergences and divergences (teachers/students) were observed regarding the use, quality, and mastery of these evaluation strategies.

Keywords: assessment; learning; formative assessment; university; teachers

Cultura de evaluación para el aprendizaje según estudiantes y docentes de una Universidad Pública Mexicana

Resumen

Introducción: la cultura de la evaluación para el aprendizaje es aquella donde las estrategias evaluativas empleadas buscan promover y mejorar el aprendizaje del estudiantado. **Objetivo:** conocer la medida en que la cultura de la evaluación en una universidad pública mexicana está orientada hacia estrategias de evaluación para el aprendizaje. **Método:** se aplicaron dos encuestas a 1,849 estudiantes y 545 docentes durante 2022-1, considerando muestras aleatorias no probabilísticas. **Resultados:** los docentes reportaron que la estrategia de evaluación que mejor dominan es la elaboración de exámenes objetivos, y en menor medida la autoevaluación y coevaluación; por su parte, cerca de la mitad de estudiantes valoraron que el uso de éstas es de calidad deficiente a regular, sin embargo afirman estar satisfechos con el empleo de las estrategias de evaluación formativas de sus docentes. **Discusión:** se observaron convergencias y divergencias (docentes/estudiantes) en torno al uso, calidad y dominio de estas estrategias evaluativas.

Palabras claves: evaluación; aprendizaje; evaluación formativa; universidad; docentes

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Introduction

In the last decade, most educational models in higher education have a pedagogical orientation towards the constructivist approach (Moreno-Olivos, 2007; Tünnermann, 2011). Within this perspective, educational assessment has taken a differentiation between assessment *of* and *for* learning (Sánchez, 2022). Assessment *for* learning is characterized by having a summative purpose, i.e., to determine the extent to which the expected learning objectives have been achieved. Assessment *for* learning, on the other hand, seeks that the evaluative strategies used are themselves an engine to promote and improve student learning, through the reflection of their strengths and areas for improvement, also known as formative evaluation (Black & Wiliam, 2004; Sánchez, 2022; Wiliam, 2011). Some examples of this form of assessment would be self-assessment and co-assessment, assessment of prior learning, and giving effective feedback while assessing, among others (Hattie & Timperley, 2007; Sadler, 1989).

Based on these two purposes that assessment (summative and formative) can serve, two forms of evaluation culture emerge in an educational institution (Berlanga & Juárez-Hernandez, 2020). As such, assessment culture is a term that has been used at the macro level, i.e., to talk about the characteristics of the organizational dynamics of an institution around assessment (e.g., Fuller, 2013; Valenzuela et al. 2011). However, Martínez (2010) stated that, in the university classroom (micro level) a culture of evaluation is also gestated among teachers and students, which may or may not be aligned with the institutional culture, and which is specifically focused on the assessment of learning and the use given to it. Different authors have conceptualized this learning assessment culture and the elements that comprise it. For example, for Bolseguí and Fuguet (2006), it comprises the rules (explicit and implicit), habits, routines, beliefs, structures, symbols, methods, and techniques, which are shared by the educational community regarding assessment processes. Reategui (2015) sees it as a combination between the institution and the values, beliefs, meanings, and practices teachers and students share toward evaluation.

For this study, we chose to use the conceptualization of Allal (2016) and Martínez (2010), given the limited availability of information collected in the two instruments used, which comprises three main elements: the beliefs of teachers and students about the purposes that classroom assessment should pursue, the assessment practices employed by the teacher and in which the students are involved, and the learning assessment tools that the teacher uses to support these practices. In higher education, according to Contreras (2010), Corti et al. (2011), Fuller (2013), Moreno (2009), and Price et al. (2011), student assessment has been mostly characterized by a culture of learning assessment. That is, evaluative practices are more focused on the traditional approach, which is characterized by a priority use of exams for summative purposes, and assessment is seen as synonymous with grading. It is worth mentioning that this differentiation between assessment of and for learning has been taken up by other authors, both in the Anglo-Saxon and Spanish-speaking literature (e.g., Gibbs & Simpson, 2006; Moreno, 2016; Rodríguez & Salinas, 2020; Schuwirth & Van der Vleuten, 2011; Padilla & Gil, 2008) and data since 1989, with the work of Martinez and Lipson (1989).

Several studies have explored the evaluation of learning in the university environment, from the opinion of teachers and students, in which the use of traditional and constructivist evaluation strategies is usually investigated. Regarding the perceptions of university students, the study by Mendoza (2019) explored the satisfaction of students at a Peruvian university regarding evaluation practices and the use of evaluation results. The results show that 46.3% of the students considered that teachers had insufficient capacities to carry out formative evaluations, and to carry out an effective feedback to promote learning (44.4%). In addition, only 15% of students considered that teachers took previous knowledge into account in a satisfactory manner. In another study, Gil-Flores (2012) explored students' conceptions of

teachers' evaluative practices in nine Spanish universities. The results indicated that, according to the students, learning assessment: was placed only at the end of the learning process; focused mainly on the mastery of theoretical content; little feedback was received from teaching staff; the particularities of the students were not taken into account when assessing; assessments were not designed according to the applicability of knowledge and skills in scenarios of a future professional context; and there was no student participation in the definition of criteria or the selection of different strategies to be evaluated.

In terms of studies on the opinion of teachers, Halinen et al. (2013) explored the beliefs and use of assessment strategies of lecturers at a Finnish university. It was found that teachers preferred the use of written exams due to the ease of marking and students' familiarity with this type of assessment. These results coincide with those reported by Moreno-Olivos (2007), who found that the application of exams is the evaluation tool most used by teachers at a Mexican university, since, by school regulations, it is an evaluation requirement that they must use for accountability of student learning. In this regard, Panadero et al. (2018) found that, according to the analysis of the curricula of nine Spanish universities, most university faculties prioritize the massive use of multiple-choice or short answer exams, while strategies such as self-assessment and co-assessment are rarely used methods.

In short, the studies reviewed, both from the perception of both students and teachers shows that assessment *of* learning continues to have a greater presence in university classrooms where the use of these tools is more summative than formative, as they are prioritized.

Knowing the perception of university students about the evaluation processes and strategies carried out by their teachers is relevant, given that they influence various aspects of their academic life, such as:

- study and learning habits (Gibbs, 2006; Santos, 1999; Thomson & Falchikov, 1998);
- attitudes of fear or rejection towards evaluations (Birenbaum, 2007; Thomson & Falchikov, 1998; Tiwari et al., 2005); and

- values, as well as the usefulness of evaluation to provide feedback on their learning (Amaro de Chacín et al., 2008).

The general purpose of this study was to determine the extent to which the evaluation culture in a Mexican public university is oriented toward the use of assessment strategies *for* learning. This is through the exploration of the students' perception of the assessment *for* learning strategies used by their professors, in correspondence with what the teaching staff thinks about the assessment *for* learning strategies they claim to master and use. This information will allow university authorities to identify whether the characteristics of classroom assessment are aligned with the university educational model oriented to the constructivist approach, in which the use of assessment for formative purposes is promoted (see UABC, 2018).

Method

Design
The methodological approach of this study was quantitative, with an exploratory, descriptive, and non-experimental design. In this sense, we sought to describe some dimensions of the culture of evaluation for learning from the perspective of students and teachers at a public state university in northwestern Mexico (Autonomous University of Baja California, UABC).

Participants
UABC is a public university in the State of Baja California (Mexico) founded in the mid-twentieth century (1957) and focused on offering higher education, research, and extension services. Currently, it has more than 100 undergraduate programs and more than 50 graduate programs (master's and doctoral), as well as research institutes in multiple areas of knowledge. The total enrollment of undergraduate students during the 2022-1 term was 64,199 students, while the faculty population (full-time, part-time, and per subject) was 5,572 teachers during the same period1 (see Table 1).

Table 1
Population and Sample of UABC Students and Faculty, 2022-1 Term

Participants	N	n	%
Students	64,199	1,849	2.9
Teachers	5,572	545	9.8

Note: Made by the authors

For this study, from the study subjects, two types of samples were selected with the same design: a nonprobabilistic sample of undergraduate students and a nonprobabilistic self-selection sample of UABC teachers. In the case of students, the sample reached 1,849 subjects (2.9% of the population), who were invited to participate by answering a teaching performance assessment questionnaire (Henríquez, et al., 2018; Henríquez & Arámburo, 2021) face-to-face in the classroom. The inclusion criterion was only their attendance on the days of the application of the instrument and the availability of the teacher on duty to interrupt their class for a period of 20-25 minutes. In the case of teachers, the sample consisted of 545 subjects (9.8% of the population), to whom the questionnaire on the assessment culture of university teachers (Contreras, 2022) was applied virtually and with voluntary participation, through the open Google Forms platform. In this case, the criterion of inclusion was their interest and willingness to respond to the instrument, the link was sent via institutional e-mail.

Instruments

- *Teacher performance assessment questionnaire (students).*

Within the Faculty of Administrative and Social Sciences (FCAyS) of the UABC, a teaching performance assessment process is executed from the students' opinions. To carry out this process, an instrument called the *Teaching Performance Assessment Questionnaire* is used, which is composed of four dimensions (Henríquez, et al., 2018; Henríquez & Arámburo, 2021):

1. *Teaching planning:* refers to organizational elements of the course, for example, the delivery and compliance with the lesson plan; the explanation in the lesson plan of aspects such as the purpose of the course, the competencies to be developed, the teaching methods and strategies, the evidence of performance and learning evaluation methods, among others. This dimension consisted of 2 dichotomous nominal items and 10 items measured with a four-point Likert scale (*Did not explain, The explanation was confusing, It was partially explained clearly, and It was explained clearly*). The reliability index obtained through the Alpha coefficient was .906.

2. *Content mastery:* refers to the degree of expertise in the handling of the contents by the teacher, considering aspects such as the clarity and sequence with which they teach them; the connection with other subjects; the association with situations, experiences, or everyday problems; the theoretical mastery of the contents, among others. This dimension was composed of 16 items measured with a four-point Likert scale (*Never, Sometimes, Almost always, and Always*). The reliability index obtained through the Alpha coefficient was .947.

3. *Teaching strategies:* refer to the didactic strategies used by teachers in their teaching practice, in relation to the learning objectives they promote (memorizing and reinforcing content retention, associating previous knowledge with added content, promoting collaborative group learning, among others) and with respect to teaching activities or techniques (oral presentation of content, use of visual aids,

promotion of situated learning, use of group discussions and dialogues, among others). This dimension was composed of five items measured with a four-point Likert scale (*Never, Sometimes, Almost always, and Always*) and 14 items with the same scale and points, but different categories (*None, Poor, Fair, and Excellent*). The reliability index obtained through the Alpha coefficient was .945.

4. *Assessment of learning:* referred to the strategies and instruments used by the teacher to evaluate the students' learning and their attitudes towards the assessment resources used by the teacher. This dimension consisted of five items measured with a five-point Likert scale (*Does not do, Dissatisfied, Somewhat satisfied, Satisfied, and Very satisfied*), 11 items with a four-point Likert scale (None, Poor, Fair and Excellent) and nine items measured with the same scale and points, but different categories (*Strongly disagree, Disagree, Agree and Strongly agree*). The reliability index obtained through the Alpha coefficient was .953.

It should be noted that the main objective of this instrument is to collect information on the performance of teachers based on the opinion of students, with a view to providing feedback, favoring continuing education, and making decisions to improve the performance of the faculty's teachers. Based on the objectives of this document and to achieve its full compliance, only the information collected on the dimension of Learning assessment was used, which considers three sub-dimensions: 1) learning assessment strategies, 2) *learning assessment* instruments, and 3) attitudes towards learning assessment strategies and instruments.

• *Questionnaire on the assessment culture of university teachers.*

To collect information from the teachers' point of view, the *Questionnaire on the assessment culture of university teachers*, developed by Contreras (2022), was used. This instrument consists of three dimensions:

1. *Beliefs about learning assessment:* this dimension was composed of two scales; the first one is main uses of learning assessment assigned by the teacher in the classroom, made up of eight items measured on a dichotomous nominal scale (*I do not master it, I master it a little, I master it, and I master it a lot*) and whose reliability index (Alpha coefficient) was .43; the second one is teachers' self-perception of their level of mastery of learning assessment, made up of five items measured with the same scale and points, whose reliability index (Alpha coefficient) was .81.

2. *Teachers' attitudes towards learning assessment:* this dimension was composed of three scales, which are uses of different learning assessment strategies, made up of 16 items measured with a four-point Likert scale (*Never, Seldom, Almost always and Always*) and whose reliability index (Alpha coefficient) was .79; ideas and preconceptions they have about learning assessment in the classroom, of 14 items measured with a four-point Likert scale (*Strongly Disagree, Disagree, Agree and Strongly Agree)*, with a reliability index (Alpha coefficient) of .83; and feelings towards the evaluation of learning in the classroom, composed of 11 items measured with the same scale and points, whose reliability index (Alpha coefficient) was .73

3. *Ethical values in the assessment of classroom learning:* this dimension was composed of two scales, which are importance that teachers give to the ethical-technical values of classroom evaluations, composed of six items measured with a four-point Likert scale (*Not at all important, Somewhat important, Important and Very important*), with a reliability index (Alpha coefficient) of .83; and objectivity with which they carry out the assessment of learning in the classroom, composed of three items measured with the same scale and points, but different categories (*Never, Sometimes, Almost always and Always*), whose reliability index (Alpha coefficient) was .53

In this case, it should be noted that, according to the objectives of this study, only information

related to two dimensions was used for this report: beliefs about learning assessment (scale of self perception about the level of mastery of learning assessment) and teaching attitudes towards learning assessment (scale of use of different learning assessment strategies).

Procedure

Regarding the *questionnaire for the evaluation of teaching performance* from the students' point of view, the application procedure was approved by the direction of the FCAyS of the UABC and supervised by the faculty's teaching evaluation coordination. As mentioned above, this process is part of an internal FCAyS evaluation strategy that is executed each school year. During the 2022-1 term, the application was carried out in April during class time, in each randomly selected classroom, requesting permission from the teacher on duty and informing the students in advance of the objectives, procedures, and confidential handling of information to be collected.

The Questionnaire on the assessment culture of university teachers was applied online in January 2022 through the Google Forms platform. It was distributed with the support of the General Coordination of Professional Training of the UABC, through which faculty directors and career coordinators were asked to forward, via institutional mail, the access link of the instrument to their respective teaching staff. The questionnaire was available for 15 days to be answered voluntarily by UABC teachers.

Data Analysis

Once the information was collected, we proceeded to configure the file with the variables of both instruments, empty the responses, and purify the databases (suppressing missing values or cases), in order to run the statistical analyses using the *IBM Statistical Package for Social Science* (SPSS), version 26. To fulfill the research objectives, basic descriptive data (frequency distributions, indices of central tendency, and dispersion) were obtained for the variables of interest of both instruments, with the purpose of describing the culture of evaluation for learning, both from the perspective of students and teachers. In the case

of students, the key variables were F*requency of use of learning assessment strategies, Degree of satisfaction with the use of learning assessment instruments, and Attitudes towards learning assessment strategies and instruments used by their teachers.* For teachers, the variables analyzed were *Self-perception of the level of mastery of learning assessment, and Use of constructivist and student-centered learning assessment strategies. At the same time*, to make the results presented in this document more rigorous, non-parametric inferential analyses (chi-square, X^2) were performed to analyze the degree of statistical significance between the observed differences and those theoretically expected for the variables analyzed for students and teachers.

Results

Student Results

Table 2 shows the frequency distributions of students' degree of satisfaction with the implementation of various evaluation strategies by their teachers. For this variable, a three-point ordinal scale was used (Does not: does not implement the strategy; Low: dissatisfied, not very satisfied; High: satisfied, very satisfied). In general, high levels of satisfaction are observed in the majority of students regarding the implementation of all these strategies by their teachers: the percentages of high satisfaction are concentrated around 80% of the UABC student body. Statistical analyses were carried out to contrast the observed and theoretically expected frequencies (chi-square, X2) in all categories: statistically significant values (sig.=.000; 95% confidence) were observed for all cases. To complement the previous results, paired comparisons of proportions between the extreme categories (Does not and High) were carried out by means of the Z test (Kolmogorov-Smirnov), which yielded significant differences (sig.=.000) between the observed frequencies in all learning assessment strategies.

Table 3 shows the students' perception of the degree of quality of the use of evaluation

strategies by teachers, for which a three-point ordinal scale was used (*Deficient, Fair, Excellent*) and 11 types of evaluation strategies were proposed. For each of these evaluation strategies, about half of the sample of students felt that their teachers mastered them with a degree of excellence. Research papers (58.2%), self-assessment (56.1%), questionnaires (55.9%), and multiple-choice tests (55.9%) stand out with the highest percentages of quality of use. On the contrary, the instruments with levels of quality of use perceived as regular/deficient were oral exams (63.1%), individual essays (52.2%), and group essays (52.3%). The above frequencies were contrasted by means of the X2 statistical test, through which statistically significant values were found (sig.= .000; 95% confidence)

for all cases. As a complement to these results, paired comparisons of proportions between the extreme categories (*Deficient and Excellent*) were performed by means of the Z test (Kolmogórov-Smirnov), which yielded significant differences (sig.=.000) between the frequencies observed in all learning assessment strategies.

Regarding students' attitudes about the evaluation strategies employed by their teachers, a four-point ordinal scale was used (*Strongly Disagree, Disagree, Agree, and Strongly Agree*). For practical purposes, the response categories were transformed into dichotomous (see Table 4). At a general level, it was observed that a considerable proportion of students have positive attitudes toward the evaluative strategies used by teachers. However, the majority also

Table 2

Grado de satisfacción de los estudiantes en torno al uso de estrategias de evaluación del docente

Evaluation strategies	Does not		Low		High		X^2	Paired comparisons
	n	%	n	%	n	%	Sig.	Sig.
Individual counseling and support	157	8.5	223	12.1	1458	79.4	,000	,000
Feedback to tasks and other activities	64	3.5	232	12.6	1541	83.9	,000	,000
Feedback to partial evaluations	101	5.5	276	15.0	1459	79.5	,000	,000
Adjustments regarding evaluations	77	4.2	255	13.9	1505	81.9	,000	,000
Diagnosis of previous knowledge	105	5.7	261	14.2	1473	80.1	,000	,000

Note: Made by authors

Table 3

Students' Perceptions of Teacher Quality in the Use of Learning Assessment Strategies

Evaluation strategies	Deficient		Fair		Excellent		X^2	Comparisons semi-detached
	n	%	n	%	n	%	Sig.	Sig.
Oral examinations	436	23.9	715	39.2	673	36.9	,000	,000
Multiple choice exams	252	13.8	556	30.3	1024	55.9	,000	,000
Individual trials	285	15.6	670	36.6	876	47.8	,000	,000
Group trials	328	18.0	626	34.3	873	47.7	,000	,000
Questionnaires	222	12.1	585	31.9	1024	55.9	,000	,000
Reading reports	242	13.2	657	35.9	933	50.9	,000	,000
Research work	176	9.6	590	32.2	1069	58.2	,000	,000
Exhibitions	253	13.8	606	33.1	973	53.1	,000	,000
Portfolio	239	13.1	603	33.0	988	53.9	,000	,000
Self-assessment	239	13.1	564	30.8	1026	56.1	,000	,000
Co-assessment	258	14.1	589	32.2	982	53.7	,000	,000

Note: Made by authors

considered that their teachers should include other evaluation strategies to those used (71.4%) and they should improve these strategies for the benefit of all students (85.2%). In this case, statistical analyses were also performed to contrast the observed and theoretically expected frequencies (chi-square, X2) in all categories: in the same way, statistically significant values (sig.=.000; 95% confidence) were observed for all cases. Likewise, in order to complement the previous results, analyses were performed to compare the proportions of each category (effect size estimator, ETE) by means of Cohen's H indicator. In all cases, the values obtained are between <0.2 and >0.5, denoting an intermediate degree of effect size (Khalilzadeh & Tasci, 2017).

Results of Teachers

Table 5 shows the frequency distributions of teachers' degree of mastery of different classroom evaluation strategies. A four-point ordinal scale was used (*I do not master it, I master it a little, I master it, I strongly master it*). As can be seen, the evaluation strategy that the highest proportion of teachers said *they had mastered/strongly mastered* was the preparation of open and multiple choice exams (91.1%). On the other hand, the activity that the smallest proportion of teachers claimed to have mastered was the use of self-assessment and co-assessment strategies (58.7%). The frequencies of this variable were contrasted by means of the X^2 statistical test, which found statistically significant values (sig.= .000; 95% confidence) for all cases.

Table 4

Degree of Agreement of Students according to Their Attitudes toward the Learning Assessment Strategies Used by Teachers

Attitudes	Strongly Disagree and Disagree		Strongly Agree and Agree		X^2	Cohen's H
	n	%	n	%.	Sig.	
I like the assessment strategies used by the teacher.	222	12.3	1582	,000	,000	,377
I believe that I learn better through the assessments that the teacher uses.	319	17.7	1483	,000	,000	,323
The teacher promotes ways to support the learning parallel to the mid-term exams.	281	15.6	1520	,000	,000	,344
The teacher is interested in the improvement of the student learning, beyond the student's obtained qualification.	240	13.3	1565	,000	,000	,367
The teacher is concerned with establishing ways of evaluation related to the problems of the real life.	217	12.0	1586	,000	,000	,380
The teacher is concerned with differentiating between higher and lower achievers adapting their teaching strategies to the needs of their students and forms of evaluation.	392	21.8	1410	,000	,000	,282
I believe that the teacher should include other learning assessment strategies in benefit of all students.	516	28.6	1286	,000	,000	,214
I believe that the teacher should improve the learning assessment strategies that employs, for the benefit of all students.	266	14.8	1532	,000	,000	,352

Fuente: elaboración propia

Finally, with respect to the frequency of use of various evaluation strategies, a four-point ordinal scale was used (*Never, Sometimes, Usually, Always*). As can be seen in Table 6, the majority of teachers state that they frequently (*Usually/ Always*) use formative assessment strategies. Authentic evaluations that require the application of knowledge in real situations (93.0%) and group feedback (89.5%). The low percentages of frequency of use (*sometimes/ never*) of self-assessment strategies (47.2%) and, in particular, of co-assessment among students (68.0%) are noteworthy. Statistical analyses were also performed to contrast the observed and theoretically expected frequencies (chi-square, X^2) in all categories: likewise, statistically significant values (sig.=.000; 95% confidence) were observed for all cases.

Discussion

As mentioned at the beginning, the purpose of this study was to explore the culture of assessment for learning from the point of view of students and teachers at a public university in northwestern Mexico. To this end, we analyzed the concordance between the perceptions of both

educational actors in relation to the following aspects: the mastery and frequency of use of several types of evaluations by the teaching staff, as well as the students' perception of the quality of the use of different evaluative strategies employed by teachers in the classroom and their attitudes towards these strategies used.

Regarding the results of the teaching staff, it was found that, in terms of their self-perception of their mastery of various constructivist evaluation strategies, 6 out of 10 teachers said they had mastered self-assessment and co assessment (58.7%). However, almost half of the sample of students, rated as *Deficient to Fair the quality of the use of self-assessment* (43.9%) and co-assessment (46.3%) employed by teachers. These findings are similar to those found by Mendoza (2019), whose university students considered that their teachers possessed insufficient skills to carry out formative-type evaluations.

On the other hand, the assessment strategy that most of the teaching sample (91.1%) affirms to have mastered/mastered a lot, was the elaboration of open and multiple-choice exams. The above coincides with what was found by other studies (Moreno-Olivos, 2007; Halinen et al. 2013; Panadero et al. 2018) whose results indicated that exams are the assessment mechanism with which university teachers are

Table 5

Degree of Teachers' Mastery of Different Evaluation Strategies

Evaluation strategies	I do not master it		I master it a little		I master it		I strongly master it		X^2
	n	%	n	%	n.	%	n	%	Sig.
Preparation of open and multiple-choice exams		1.7	39	7.2	329	60.4	168	30.7	,000
Elaboration of other types of evaluations: rubrics, scales, checklists	21	3.9	118	21.7	305	56.0	101	18.4	,000
Execution of self-assessment and co-assessment activities among students	54	9.9	171	31.4	259	47.5	61	11.2	,000
Detailed feedback on strengths and areas of opportunity for each student	23	4.2	111	20.4	301	55.2	110	20.2	,000

Note: Made by authors

Tabla 6
Frequency of Use of Evaluation Strategies by Teachers

Evaluation strategies	Never		Sometimes		Usually		Always		X^2
	n	%	n	%	n	%	n	%	Sig.
At the beginning of the course, I assess prior knowledge	29	5.3	155	28.4	189	34.7	172	31.6	,000
During an activity, I evaluate the difficulties and progress of the students	3	0.6	96	17.6	246	45.1	200	36.7	,000
I provide group feedback on the main learning weaknesses	6	1.1	51	9.4	188	34.5	300	55.0	,000
I encourage students to self-assess	55	10.1	202	37.1	172	31.6	116	21.2	,000
I encourage students to assess other peers (co-assessment).	156	28.6	215	39.4	119	21.8	55	10.2	,000
Evaluation strategies and methods learning objectives seek to ensure that the students apply their knowledge in real situations.	5	0.9	33	6.1	189	34.7	318	58.3	,000
I adapt the strategies or methods of evaluation in the particular cases of the students who require it.	20	3.7	111	20.4	203	37.2	211	38.7	,000

Note: Made by authors

most familiar. However, four out of 10 UABC students considered the quality in which their teachers use multiple-choice exams as regular/deficient (44.2%). This shows that, while the majority of teachers perceive that their ability to develop these resources is high, almost half of the students think that the quality of use by their teachers is fair/poor.

In turn, regarding the level of frequency with which UABC teachers affirmed that they employ various constructivist and student-centered evaluation strategies, 93% of teachers affirmed that they always/usually carry out forms of evaluation where students can apply knowledge in real situations. This finding contrasts with that found by Gil-Flores (2012), where students stated that the teacher's evaluations were not designed in terms of their applicability in professional life contexts.

As for the learning evaluation strategies less frequently applied by teachers, were self-assessment (52.9%) and, in particular, co-assessment (31.9%). However, it is striking that more than half of the students perceive that these evaluation strategies are applied with an excellent degree of quality by the teaching staff: 56.1% of the students think this way with respect to self-assessment, and 53.7% with respect to co-assessment. These inconsistencies could be due to the fact that the samples of students and teachers in the present study, being non-probabilistic (and in the case of teachers, self-selection), were not aligned to the same campuses and faculties, so other variables related to the area of knowledge to which both types of participants belong could interfere.

Limitations

This study had three main limitations. First, the instruments used were not designed to compare the responses between students and teachers; that is, the same instrument was not designed

where the same dimensions and indicators could be explored according to the perception of both educational actors. This is because both instruments were framed in different UABC projects. However, it was of interest to compare the results, given the communalities in the constructs that both instruments evaluated. Second, for this same reason, the sample of students may not correspond to the same campuses and degree programs as the sample of teachers who responded to the questionnaire. Even so, the intention of this exercise was to explore the general perception that exists among both educational actors regarding the use of assessment strategies *for* learning in the university classroom. And third, within the instrument for teachers, two scales were presented with an alpha reliability coefficient that was too low (main uses of the learning assessment assigned by the teacher in the classroom, with a value of .43; and objectivity with which they carry out the learning assessment in the classroom, with a value of .53), which limits its interpretative purpose. Nevertheless, it should be remembered that these scales were not considered in this document.

Conclusion

In closing, this work invites future studies to integrate the exploration of the culture of assessment *for* learning among students and university teachers, under the same instrument design, which allows the evaluation of the same dimensions, sub-dimensions, and indicators for both actors. Also, to apply these instruments to population samples that allow the representativeness of teachers and students from different areas of knowledge; to analyze if there are differences in the appropriation of a culture of assessment for learning according to the disciplinary group to which the different careers belong.

Finally, it is important to mention that higher education requires both the assessment *of* and *for* learning, since they constitute two necessary functions; both are important for the purpose they pursue, but their balanced use in the classroom is essential. To this end, it is necessary for university teachers to contribute to the generation of an adequate assessment culture in universities, where the weight of the traditional approach is balanced with the incorporation and diversification of evaluation strategies that motivate students to reflect, motivate, and regulate their own learning. This is the only way to create a culture of evaluation among students, where evaluations are not perceived as a bureaucratic, punitive activity oriented only to control and accountability.

References

Allal, L. (2016). The Co-Regulation of Student Learning in an Assessment for Learning Culture. *The Enabling Power of Assessment*, 259–273. doi:10.1007/978-3-319-39211-0_15

Amaro de Chacín, R., Cadenas, M., y Altuve, J. (2008). Diagnóstico de los factores asociados a la práctica pedagógica desde la perspectiva del docente y los estudiantes. *Revista de Pedagogía*, *29*(85), 215-244. http://www.redalyc.org/articulo.oa?id=65911809002

Berlanga, M. L., y Juárez-Hernández, L. G. (2020). Paradigmas de evaluación: del tradicional al socioformativo. *Diálogos sobre educación*, *11*(21), 1-14. https://doi.org/10.32870/dse.v0i21.646

Birenbaum, M. (2007). Assessment and instruction preferences and their relationship with test anxiety and learning strategies. *Higher Education*, *53*(6), 749-768. https://doi.org/10.1007/s10734-005-4843-4

Black, P. & Wiliam, D. (2004). The Formative Purpose: Assessment Must First Promote Learning. *Yearbook of the National Society for the Study of Education*, *103*, 20-50. http://dx.doi.org/10.1111/j.1744-7984.2004.tb00047.x

Bolseguí, M. y Fuguet, A. (2006). Cultura de la evaluación: una aproximación conceptual. Investigación y postgrado, 21(1), 77-98. https://www.redalyc.org/pdf/658/65821104.pdf

Contreras, G. (2010). Diagnóstico de dificultades de la evaluación del aprendizaje en la universidad: un caso particular en Chile. *Educación y Educadores*, *13*. https://

www.redalyc.org/articulo.oa?id=83416998004

Contreras, S. (2022). *Características y variables asociadas a la cultura de la evaluación del aprendizaje, en docentes universitarios: el caso de la Universidad Autónoma de Baja California* [Tesis de doctorado, Universidad Autónoma de Baja California]. http://iide.ens.uabc.mx/documentos/divulgacion/tesis/DCE/2019/Sofia_Contreras_Roldan.pdf

Corti, A. M., Oliva, L., y Gatica, M. L. (Diciembre 7-9, 2011). Cultura de la calidad, evaluación y acreditación. XI Colóquio Internacional Sobre Gestao Universiária na América do Sul. Florianópolis. https://repositorio.ufsc.br/handle/123456789/25990

Fuller, M. (2013). An Empirical Study of Cultures of Assessment in Higher Education. *Education Leadership Review*, *14*(1), 20-27. https://files.eric.ed.gov/fulltext/EJ1105259.pdf

Gibbs, G. (2006). How assessment frames student learning. In Bryan, C. & Clegg, K. (Eds.) *Innovative Assessment in Higher Education: A Handbook for Academic Practitioners* [1rst ed.]. Routledge. https://cetl.ppu.edu/sites/default/files/publications/Innovative%20Assessment%20in%20Higher%20Education.pdf

Gil-Flores (2012). La evaluación del aprendizaje en la universidad, según la experiencia de los estudiantes. *Estudios sobre Educación*, *22*, 133-153.

Halinen, K., Ruohoniemi, M., Katajavuori, N., & Virtanen, V. (2014). Life science teachers' discourse on assessment: a valuable insight into the variable conceptions of assessment in higher education. *Journal of Biological Education*, *48*(1), 16-22. https://doi.org/10.1080/00219266.2013.799082

Hattie, J. & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.

Henríquez, P., Arámburo, V., y Boroel, B. (2018). Análisis de las estrategias de enseñanza según áreas de conocimiento en el nivel educativo superior: Percepciones de estudiantes de la Facultad de Ciencias Administrativas y Sociales (FCAYS), Universidad Autónoma de Baja California (UABC), México. Compendio Investigativo de Academic Journals Celaya 2018, tomo 14, 2320-2325. https://static1.squarespace.com/static/55564587e4b0d1d3fb1eda6b/t/6009d7d8cf9fb56607ab6e41/1611257830213/Compendio+Investigativo+de+Academia+Journals+Celaya+2018+-+Tomo+14.pdf

Henríquez, P., Boroel, B., y Arámburo, V. (2020). Percepciones docentes en torno a la evaluación del aprendizaje en el nivel educativo superior: el caso de la UABC (México) y la UCM (España). *Revista Actualidades Investigativas en Educación*, *20*(1), 1-23. https://revistas.ucr.ac.cr/index.php/aie/article/view/40122

Henríquez, P., y Arámburo, V. (2021). Evaluación del desempeño docente por áreas de conocimiento: El caso de la Facultad de Ciencias Administrativas y Sociales de la Universidad Autónoma de Baja California, México. *Actualidades Investigativas en Educación,* *21*(3), 631-652.

Khalilzadeh, J. & Tasci, A.D. (2017). Large sample size, significance level, and the effect size: Solutions to perils of using big data for academic research. Tourism Management, 62, 89-96. Disponible en: https://doi.org/10.1016/j.tourman.2017.03.026

Lambert, E., y Holgado, M. A. (2001). La creación de cultura de evaluación institucional. *Revista Anales de Pedagogía*, *19*. http://revistas.um.es/analespedagogia/article/download/284971/206641

Martínez, N. (2010). Una aproximación a la cultura de la evaluación. *Diálogos*, *6*(4), 7-20. https://core.ac.uk/download/pdf/47265032.pdf

Martinez, M. E., & Lipson, J. I. (1989). Assessment for learning. *Educ Leader*, 47, 73–75.

Mendoza, M. L. (2019). C*ultura evaluativa y satisfacción percibida en los estudiantes de la Facultad de Educación de la Universidad Nacional Mayor de San Marcos* [Tesis de maestría, Universidad Nacional Mayor de San Marcos]. Cybertesis Repositorio de Tesis Digitales. https://cybertesis.unmsm.edu.pe/handle/20.500.12672/10984

Moreno, T. (2009). La evaluación del aprendizaje en la universidad: tensiones, contradicciones y desafíos. *Revista Mexicana de Investigación Educativa*, *14*(41), 563-591. https://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-66662009000200010

Moreno-Olivos, T. (2007). La evaluación del aprendizaje en educación superior. El caso de la carrera de Derecho. *REencuentro. Análisis de Problemas Universitarios*, (48), 61-67. https://www.redalyc.org/articulo.oa?id=34004809

Moreno, T. (2016). *Evaluación del y para el aprendizaje: reinventar la evaluación en el aula.* Universidad Autónoma de Morelos (UAM).

Padilla, M.T. y Gil, J. (2008). La evaluación orientada al aprendizaje en Educación Superior: condiciones y estrategias para su aplicación en la docencia universitaria. *Revista Española de Pedagogía*, *6*(241), 467-486.

https://dialnet.unirioja.es/servlet/articulo?codi-go=2709011

Panadero, E., Fraile, J., Fernández J., Castilla, D., & Ruiz, M. A. (2018). Spanish university assessment practices: examination tradition with diversity by faculty, Assessment & Evaluation in Higher Education. https://doi:10.1080/02602938.2018.1512553

Price, M., Carroll, J., O'Donovan, B., & Rust, C. (2011). If I was going there I wouldn't start from here: a critical commentary on current assessment practice. *Assessment & Evaluation in Higher Education*, *36*(4), 479-492, http://dx.doi.org/10.1080/02602930903512883

Ricoy, M. C. y Fernández-Rodríguez, J. (2013). La percepción que tienen los estudiantes universitarios sobre la evaluación: Un estudio de caso. *Educación XX1*, *16*(2), 321-342. http://www.redalyc.org/articulo.oa?id=70626451006

Reategui, B. I. R. (2015). Cultura evaluativa del aprendizaje en una universidad privada de Lima en el 2012 [Tesis de maestría, Universidad San Ignacio de Loyola, Perú]. https://repositorio.usil.edu.pe/entities/publication/5d53e2a9-b2b6-4be0-874b-9272e77aca61

Rodríguez, H. M., y Salinas, M. L. (2020). La Evaluación para el Aprendizaje en la Educación Superior: Retos de la Alfabetización del Profesorado. *Revista Iberoamericana De Evaluación Educativa*, *13*(1), 111–137. https://doi.org/10.15366/riee2020.13.1.005

Rodríguez-Espinosa, H., Restrepo-Betancur, L. F. y Luna-Cabrera, G. C. (2016). Percepción del estudiantado sobre evaluación del aprendizaje en la educación superior. *Revista Electrónica Educare*, *20*(3), 1-17. https://www.redalyc.org/pdf/1941/194146862018.pdf

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, *18*, 119-144.

Sánchez, M. (2022). Evaluación del, para y como aprendizaje. En M. Sánchez y A. Martínez (Eds.) Evaluación y aprendizaje en educación universitaria: estrategias e instrumentos (Cap. 1, pp. 17-35). UNAM.

Santos, M. A. (1999). 20 paradojas de la evaluación del alumnado en la universidad española. *Revista electróni-ca interuniversitaria de formación del profesorado*, *2*(1), 369-392. http://redined.mecd.gob.es/xmlui/handle/11162/147563

Rodríguez-Espinosa, H., Restrepo-Betancur, L. F. y Luna-Cabrera, G. C. (2016). Percepción del estudiantado sobre evaluación del aprendizaje en la educación superior. *Revista Electrónica Educare*, *20*(3), 1-17. https://www.redalyc.org/pdf/1941/194146862018.pdf

Schuwirth, L. W. T., & Van der Vleuten, C. P. M. (2011). Programmatic assessment: From assessment of learning to assessment for learning. Medical Teacher, 33(6), 478–485. https://www.researchgate.net/publication/51162010_Programmatic_assessment_From_assessment_of_learning_to_assessment_for_learning

Thomson, K., & Falchikov, N. (1998). Full on until the sun comes out: the effects of assessment on student approaches to studying. *Assessment and Evaluation in Higher Education*. https://srhe.tandfonline.com/doi/abs/10.1080/0260293980230405

Tiwari, A., Lam, D., Yuen, K. H., Chan, R., Fung, T., & Chan, S. (2005). Student learning in clinical nursing education: Perceptions of the relationship between assessment and learning. Nurse Education Today, 25(4), 299-308. http://dx.doi.org/10.1016/j.nedt.2005.01.013

Tünnermann, C. (2011). El constructivismo y el aprendizaje de los estudiantes. *Universidades*, *48*, 21-32. http://www.redalyc.org/articulo.oa?id=37319199005

UABC (2018). Modelo educativo de la UABC [Cuadernos de Planeación y Desarrollo Institucional]. http://web.uabc.mx/formacionbasica/documentos/ModeloEducativodelaUABC2018.pdf

Valenzuela, J. R., Ramírez, M. S., y Alfaro, J. A. (2011). Cultura de evaluación en instituciones educativas: Comprensión de indicadores, competencias y valores subyacentes. *Perfiles educativos*, *33*(131), 42-63. https://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-26982011000100004

Wiliam, D. (2011). What is assessment for learning? *Studies in Education Evaluation*, *37*(1), 2-13. http://dx.doi.org/10.1016/j.stueduc.2011.03.001