






Formative assessment strategies. Basic education teachers' perception

Estrategias de evaluación formativa. Percepción del profesorado de educación básica

-  **Maite Zubillaga-Olague** is a research professor in Training at Universidad Autónoma de Madrid (España) (maite.zubillaga@uam.es) (<https://orcid.org/0000-0003-0924-1583>)
-  **Dra. Laura Cañadas** is a permanent lecturer at Universidad Autónoma de Madrid (España) (laura.cannadas@uam.es) (<https://orcid.org/0000-0003-4179-9018>)
-  **Dr. Jesús Manso** is a full time professor at Universidad Autónoma de Madrid (España) (jesus.manso@uam.es) (<https://orcid.org/0000-0003-1557-3242>)

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Abstract

Formative assessment is a key component of the teaching-learning process, as it allows us to adjust teaching practice according to the needs of students and to promote meaningful learning. Its research takes on special relevance due to the strong pedagogical influence it exerts on the optimization of educational quality. For this reason, it is necessary to know the teachers' perception of the degree of application of certain strategies. Thus, this research seeks: (i) to know the perception of basic education teachers on the frequency with which they develop different strategies linked to formative assessment in the classroom; and (ii) to analyze whether there are differences in the frequency of use of these strategies according to gender, educational stage in which they teach, years of teaching experience, training received in assessment, number of training activities carried out and knowledge of the term formative assessment. A cross-sectional, comparative, quantitative research was carried out with 713 basic education teachers. The items on the use of strategies linked to formative assessment from the #EvalFormEPESO questionnaire were used. Differences between the variables studied were analyzed using Student's t-tests and ANOVA. The results show that the use of the strategies analyzed is above the mean values of the scale. Moreover, statistically significant differences appear depending on the variables studied, which show that these are influential in the degree of use of these strategies. The conclusion is that there is a need to strengthen teacher training and promote inclusive practices for a coherent and equitable application of formative assessment in basic education.

Keywords: formative assessment, strategies, primary school, secondary education, basic education, teachers.

Resumen

La evaluación formativa es un componente clave del proceso de enseñanza-aprendizaje, ya que permite ajustar la práctica docente en función de las necesidades del alumnado y fomentar aprendizajes significativos. Su investigación adquiere especial relevancia por la fuerte influencia pedagógica que ejerce en la optimización de la calidad educativa. Por ello, es necesario conocer la percepción que tiene el profesorado sobre el grado de aplicación de determinadas estrategias. Así, esta investigación busca: (i) conocer la percepción del profesorado de educación básica sobre la frecuencia con la que desarrollan diferentes estrategias vinculadas a la evaluación formativa en el aula; y (ii) analizar si existen diferencias en la frecuencia de uso de estas estrategias en función del género, etapa educativa, en la que desarrollan su docencia, años de experiencia docente, formación recibida en evaluación, número de actividades formativas realizadas y conocimiento del término evaluación formativa. Se desarrolló una investigación cuantitativa, comparativa y de corte transversal con 713 docentes de educación básica. Se usaron los ítems sobre el empleo de estrategias vinculadas a la evaluación formativa del cuestionario #EvalFormEPESO. Las diferencias existentes entre las variables estudiadas se analizaron con las pruebas T- de Student y ANOVA. Los resultados muestran que el empleo de las estrategias analizadas está por encima de los valores medios de la escala. Además, aparecen diferencias estadísticamente significativas en función de las variables estudiadas lo que muestra que estas son influyentes en el grado de empleo de dichas estrategias. Se concluye en la necesidad de fortalecer la formación docente y fomentar prácticas integradoras para una aplicación coherente y equitativa de la evaluación formativa en educación básica.

Palabras clave: evaluación formativa, estrategias, educación primaria, educación secundaria, educación básica, profesorado.

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1. Introduction

The Spanish educational system has faced several changes in recent years, among which is the rupture with traditional assessment processes focused on student grades (Sanmartí, 2023; Santos-Calero et al., 2024; Santos-Guerra, 2003). Thus, alternatives are sought on assessment as a tool for improving the teaching-learning process that allows students to learn more and teachers to optimize their teaching (Álvarez-Méndez, 2011; Anijovich, 2017; Berisha et al., 2024; Santos-Guerra, 2003). Numerous studies have shown the benefits of integrating formative assessment processes in the classroom, highlighting their ability to promote the comprehensive development of students (Casanova, 2021; Sanmartí, 2023). The use of formative assessment processes should be carried out through systematic and rigorous practices that facilitate the achievement of these benefits (Álvarez-Méndez, 2011; Cai et al., 2022). Thus, five key strategies have been proposed in the literature to implement formative assessment processes (William and Leahy, 2015): (1) sharing and understanding the learning objectives and assessment criteria with students; (2) conducting class discussions, questions and tasks that allow evidence learning; (3) giving feedback to students that allows them advance in their learning; (4) involve students in the assessment of their own learning; and (5) involve students in the process of assessing the learning of their peers. The first three are the ones that according to previous research teachers use most frequently (Chazi-Nacimba et al., 2024; Kaur, 2022; Kruiper et al., 2022), although their use in education is still scarce or not carried out correctly (Álvarez-Méndez, 2011; Andersson and Palm, 2018; Chazi-Nacimba et al., 2024; Dayal, 2021; Enu, 2021; Jawad, 2020; Yan et al., 2022).

Regarding the first strategy, although teachers tend to communicate and make explicit what they are going to work on and what are the expected achievements (Chazi-Nacimba et al., 2024; Grob et al., 2019; Zubillaga-Olague & Cañadas, 2021), they generally focus on numbering the objectives to be achieved without ensuring whether they have been understood by the students (Van der Linden et al., 2023). In the case of teachers of Secondary Education (ESO), this strategy is even related with sharing with students the percentage given to the

different tasks to be performed (Sanmartí, 2023). An even less common practice is the involvement of students in the construction of objectives and assessment criteria (Cañadas, 2023; Sanmartí, 2023). Regarding the second strategy, the formative activities and questions developed should be aligned with the objectives and assessment criteria (Kaur, 2022) and encourage critical thinking and student participation (Van der Linden et al., 2023). However, when this strategy is used, teachers generally formulate questions with traditional approaches (Casanova, 2021; Goertzen et al., 2023; Sanmartí, 2023; Yan et al., 2022). Finally, regarding the third of the strategies, feedback, teachers should provide feedback on student performance, providing specific details on what to do next to help them identify the steps needed to improve (Anijovich, 2017; Kruiper et al., 2022; Moreno, 2023).

However, these practices normally present as check marks (e.g., crosses, ticks) or comments (e.g., good job, well done, keep it up), with few teachers indicating aspects to improve and how to do so. This fact gets worse as the educational level increases due to the relevance acquired by the assessment of the degree of acquisition of academic content, investing most of the time in its assessment and leaving aside feedback (Krupier et al., 2022; Moreno, 2023). This is complemented by the obligation to establish grades, which means that although these come with a brief comment, they are not given importance since the grade acquires greater value for students and their families (Grob et al., 2019; Sanmartí, 2023). In Primary Education (PE), although there is an attempt to use qualitative grades to mitigate the impact of this process, few teachers report knowing practices that allow them to provide effective feedback (Casanova, 2021).

The use of formative assessment processes may not only vary according to the stage of teaching. Other elements such as gender, academic year, years of teaching experience and the training activities may be influencing how these strategies are applied (Alkharusi, 2011; Cañadas & Santos-Pastor, 2021; Yan et al., 2022). In addition, the literature identifies several specific causes that condition the implementation of these processes in the classroom. These are related, on the one hand, to contextual factors such as external and center policies (e.g., educational reforms or the cultural burden associated with

exams as a method of assessment) or work-related conditions (e.g., lack of time, high ratio) (Dayal, 2021; Sanmartí, 2023; Zubillaga-Olague et al., 2025a; Zubillaga-Olague et al., 2025b) and, on the other hand, with those derived from personal factors such as lack of training and literacy in assessment, an aspect that influences the perceived self-efficacy to apply these processes (Santos-Calero et al., 2024; Yan et al., 2022; Zubillaga-Olague et al., 2025b).

Regarding the latter, personal factors, the training received by teachers should provide them with the knowledge, skills and abilities necessary to design appropriate formative assessment tasks, promote changes in their beliefs and adapt their teaching to the needs of students (Molina and López-Pastor, 2019). Teachers can receive training in assessment through the contents that are part of initial and in-service training. Cai et al. (2022) and Andersson and Palm (2018) consider that teachers are more likely to develop these practices when they know what is involved in the term formative assessment and the strategies linked to it. However, in many cases, initial training does not include specific subjects on assessment training. When this happens, the responsibility for acquiring this knowledge falls on teachers and schools through ongoing training (Andersson & Palm, 2018; Chazi-Nacimba et al., 2024; Enu, 2021). However, such training depends on the autonomy of the center and the willingness of teachers to take these activities, which does not guarantee that the necessary strategies are acquired to implement quality formative assessment in the classroom (Sanmartí, 2023). Therefore, it is necessary to know the most and least used assessment strategies, as well as the variables that may be influencing their implementation. To this end, the following research objectives are proposed: (i) to know the perception of elementary teachers on the frequency they develop different strategies linked to formative assessment in the classroom; and (ii) to analyze whether there are differences in the frequency of use of these strategies according to gender, educational stage in which they teach, years of teaching experience, training received in assessment, number of training activities carried out and knowledge of the term formative assessment.

2. Method

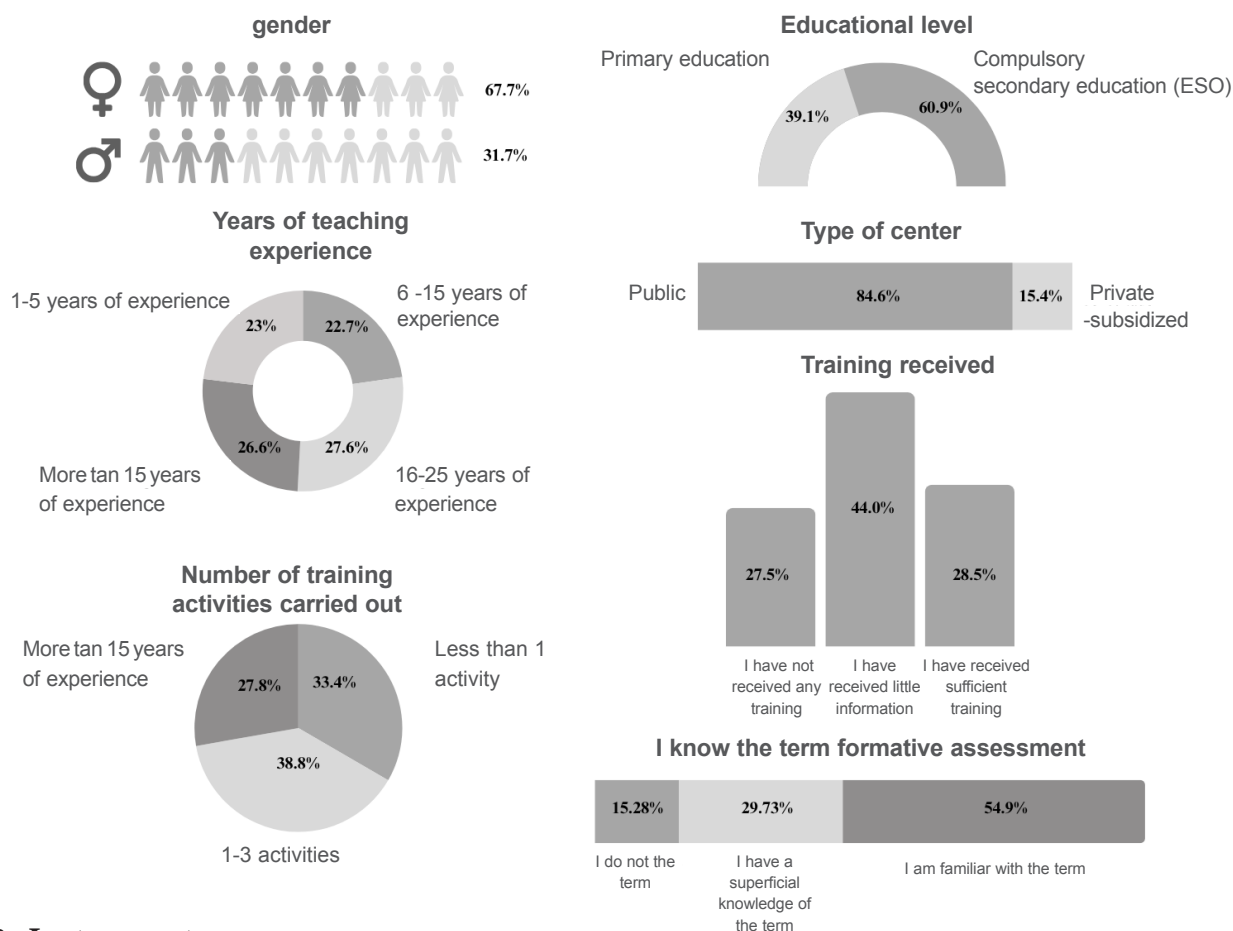
2.1 Study design

Quantitative, comparative, cross-sectional research was conducted.

2.2 Participants

A total of 713 Spanish PE (39.1%) and ESO (60.9%) teachers with a mean of 11.32 (SD \pm 11.00) years of teaching experience participated in this study. Incident, random and non-probabilistic sampling was used to select the participants. The characteristics of the participants can be seen in Figure 1. To configure the variables related to the knowledge of the term «formative evaluation» and training received, the responses to the questions «Do you know the term «formative evaluation?» and «Have you received training in formative evaluation?» were grouped. With respect to the first question, the responses were classified into three different categories, represented as follows: (1) I know the term well; (2) I know the term superficially, which grouped the responses «I know the term, although I have doubts about what it refers to» and «I have heard it, but I do not know very well what it refers to», due to its similarity, and (3) I do not know the term. Regarding the training, the responses were organized into three different categories: (1) I have not received training, which includes cases in which no training of any kind has been received; (2) I have received little training, which brings together the responses «yes, I have received some training» and «yes, I have received little training», which represents cases in which, although training has been received, it is considered insufficient, as distinguished from no training at all and, finally, (3) I have received sufficient training, which integrates the responses «yes, I have received enough training» «yes, I have received some training» and, «yes, I have received a lot of training». This classification is based on the premise that the responses «some», «enough» and «sufficient» reflect a perception of adequate training.

Figura 1. Relationship of the items to the five key strategies



2.3 Instruments

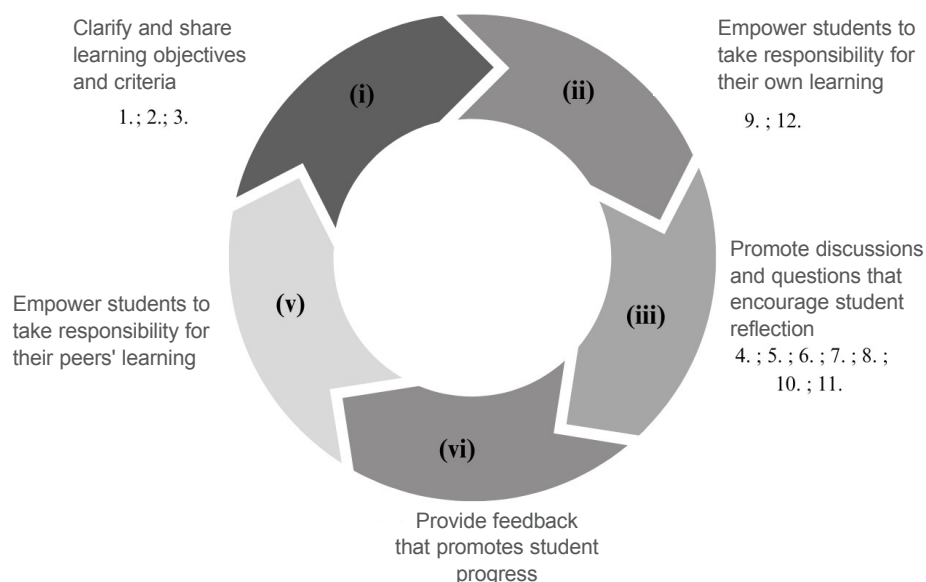
To collect information, an ad hoc questionnaire was used on “Formative Assessment Processes in Basic Education #EvalFormEPESO.” It is composed of 50 items divided into six dimensions with closed-ended Likert-type responses, offering six levels of response (1 - never to 6 - always). The scale underwent content validation by a panel of judges (6 experts in the field of formative assessment). In addition, the reliability of the questionnaire was

tested, obtaining an $\alpha = .873$ for the overall scale. For this research, the items corresponding to dimension five - Feedback, monitoring and improvement of the student teaching-learning process (Table 1) were taken into account exclusively because of their direct relationship with the first three strategies of formative evaluation processes presented in the literature (Wiliam and Leahy, 2015). Figure 2 illustrates the relationship of the items with the formative assessment strategies.

Table 1. Dimensions analyzed and items included for each dimension

Items analyzed	
1.	I share with my students the evaluation objectives at the beginning of the course.
2.	I offer my student the opportunity to negotiate elements of the subject evaluation system or assignments.
3.	I share with my students the evaluation criteria at the beginning or during the course.
4.	After each period or formative task I reflect with my students individually on their progress.
5.	I inform my students of what they have done well after conducting an assessment.
6.	I make sure that my students know which aspects (areas, contents, behaviors, etc.) they need to work on to improve their learning process.
7.	I offer my students observations and evaluations (orally or in writing and individually or collectively) on the tasks so that they can repeat them with the aim of improving them.
8.	I review my students' assignments daily and provide feedback (not accompanied by a grade) when they work on an assignment or activity.
9.	I help my students to find the correct answer through other questions or strategies that guide them to the solution when it is not adequate.
10.	I provide feedback to students to enable them to develop learning strategies to apply and improve in future assignments.
11.	I provide guidelines to help students evaluate their work and the work of others.
12.	I practice collective reflection dynamics with my students on the work done and its progress.

Figure 2. Relationship of the items to the five key strategies



2.4 Procedure

All Spanish educational centers that had this information available on their websites were included. After the questionnaire was validated, it was transcribed to the platform and sent via email to the educational centers. The email requested the participation of all teaching staff at the center to complete the questionnaire. In accordance with the ethical principles of research (2010), an information sheet and informed consent form were attached to the email. Furthermore, this research was approved by

the Ethics Committee of the Autonomous University of Madrid (CEI-126-2604)

2.5 Statistical analysis

Analyses were carried out using the SPSS statistical program (Windows, v.26.00). The level of statistical significance was set at $\leq .05$. All variables are presented as Mean (M) and Standard Deviation (SD). To address the second objective, the test for differences according to gender and educational stage was used. The ANOVA test was used to analyze

differences according to: (i) years of teaching experience; (ii) training received; (iii) number of training activities carried out and; (iv) knowledge of the term formative evaluation; applying the test to check for inter-group differences.

3. Results

Table 2 shows the descriptions of the evaluation strategies analyzed and the existing differences in these variables according to the teacher's gender. All the items show mean values higher than the

mean value of the scale, with the item «I make sure that my students know which aspects (areas, contents, behaviors, etc.) they need to work on to improve their learning process» (5.27 ± 0.95) being the most highly rated and «I offer students the opportunity to negotiate elements of the subject evaluation system or assignments» (3.07 ± 1.36) being the least rated. Regarding the gender variable, statistically significant differences appear in six of the 12 items (see items 6, 7, 8, 9, 10 and 11 in Table 2), with women reporting higher mean values in all cases.

Table 2. Evaluation strategies analyzed. Differences according to gender

N	Total	Gender		P
		Woman	Man	
		713	483	
	M±SD	M±SD	M±SD	
1. I share with my students the evaluation objectives at the beginning of the course.	4.96±1.26	4.97±1.25	4.95±1.26	.830
2. I offer my student the opportunity to negotiate elements of the subject evaluation system or assignments.	3.07±1.36	3.08±1.35	3.05±1.38	.787
3. I share with my students the evaluation criteria at the beginning or during the course.	5.04±1.35	5.00±1.39	5.12±1.29	.265
4. After each period or training task I reflect with my students individually on their progress.	4.35±1.34	4.36±1.35	4.31±1.32	.670
5. I inform my students of what they have done well after performing an assessment.	5.14±1.06	5.16±1.07	5.11±1.04	.517
6. I make sure that my students know which aspects (areas, contents, behaviors, etc.) they need to work on to improve their learning process.	5.27±0.95	5.35±0.90	5.08±1.03	.000**
7. I offer my students observations and evaluations (orally or in writing and individually or collectively) on the tasks so that they can repeat them with the aim of improving them.	5.09±1.05	5.18±0.99	4.88±.16	.000**
8. I review my students' assignments daily and provide feedback (not accompanied by a grade) when they work on an assignment or activity.	4.45±1.29	4.54±1.28	4.25±1.30	.005**
9. I help my students to find the correct answer through other questions or strategies that guide them to the solution when it is not adequate.	4.75±1.32	4.84±1.12	4.58±1.14	.003**
10. I provide feedback to students to help them develop learning strategies to apply and improve in future assignments.	4.80±1.08	4.87±1.05	4.67±1.24	.021*
11. I provide guidelines to help students evaluate their work and the work of others.	4.17±1.33	4.25±1.30	4.00±1.38	.022*
12. I practice collective reflection dynamics with my students on the work done and its progress.	4.07±1.39	4.13±1.38	3.92±1.41	.062

Note. Statistically significant differences in bold: (*p ≤ .05; **p ≤ .01).

Table 3. Assessment strategies analyzed. Differences according to educational stage and teaching experience

N	Stage of education			Teaching experience				P	
	Primary Education	ESO	P	1-5 años	6-15 años	16-25 años	Más de 25 años		
		434		164	162	197	190		
	M±DT	M±DT	M±DT	M±DT	M±DT	M±DT			
1.	I share with my students the evaluation objectives at the beginning of the course	years	6-15	.000**	4.71±1.39 ^a	5.01±1.28	5.10±1.15 ^a	5.01±1.21	.026*
2.	I offer my students the opportunity to negotiate elements of the subject evaluation system or assignments.	years	16-25	.230	3.10±1.41	3.01±1.37	3.11±1.38	3.07±1.29	.905
3.	I share with my students the evaluation criteria at the beginning or during the course.	years		.000**	4.95±1.39	5.13±1.33	5.07±1.35	5.03±1.35	.659
4.	After each period or formative task I reflect with my students individually on their progress.	From	4.35±1.36	.970	4.12±1.35 ^a	4.41±1.34	4.50±1.30 ^a	4.33±1.34	.050*
5.	I inform my students of what they have done well after conducting an assessment.	25	5.18±1.04	.291	4.98±1.19	5.16±1.00	5.27±0.88	5.13±1.12	.064
6.	I make sure that my students know which aspects (areas, contents, behaviors, etc.) they need to work on to improve their learning process.	years	P	.750	5.10±1.06 ^a	5.32±0.91	5.37±0.83 ^a	5.25±0.95	.043*
7.	I offer my students observations and evaluations (orally or writing and individually or collectively) on the tasks so that they can repeat them with the aim of improving them.	5.10±0.99	5.08±1.09	.732	4.91±1.18 ^a	5.21±0.95	5.24±0.91 ^a	4.97±1.14	.004**
8.	I review my students' assignments daily and provide feedback (not accompanied by a grade) when they work on an assignment or activity.	4.71±1.15	4.28±1.35	.000**	4.28±1.29	4.47±1.31	4.50±1.25	4.51±1.32	.309
9.	I help my students to find the correct answer through other questions or strategies that guide them to find the solution when it is not adequate.	4.80±1.09	4.72±1.17	.343	4.68±1.18	4.83±1.13	4.85±1.11	4.63±1.13	.175
10.	I provide feedback to students to help them develop learning strategies to apply and improve in future assignments.	4.84±0.98	4.78±1.14	.429	4.65±1.14 ^a	4.99±1.01 ^a	4.84±1.06	4.73±1.09	.026*
11.	I provide guidelines to help students evaluate their work and the work of others.	4.40±1.19	4.02±1.40	.000**	4.01±1.34	4.16±1.39	4.34±1.21	4.14±1.38	.121
12.	I practice collective reflection dynamics with my students on the work done and its progress.	4.31±1.29	3.91±1.44	.000**	3.76±1.46 ^a	4.06±1.44	4.33±1.25 ^a	4.06±1.40	.002**

^a 1st difference group.
^b 2nd difference group.
^c 3rd difference group

Note. In bold the statistically significant differences: (*p ≤ .05; **p ≤ .01).

Table 3 shows the differences according to the educational level at which the teachers teach and the years of teaching experience. In the case of educational level, there are statistically significant differences in five of the 12 items studied. In the case of items 1 and 3 (see Table 3), both linked to the first formative evaluation strategy (sharing objectives and evaluation criteria with the students), it is the ESO teachers who report higher mean values. In items 8, 11 and 12 (see Table 3), PE teachers report the highest mean values. In relation to teaching experience, there are statistically significant differences in six items. Specifically, in items 1, 4, 6, 7 (see Table 3) there are inter-group differences between teachers with 1-5 years of teaching experience and those with 16-25 years of experience, the latter showing the highest mean values. In item 10, statistically significant differences appear between teachers with 1-5 years of teaching experience and those with 6-15 years of experience, the latter showing the highest mean values. Finally, item 12 shows inter-group differences between teachers with less than five years of experience and those with 16-25 years of teaching experience, the latter showing higher mean values.

Table 4 shows the differences in the perception of use of the evaluation of strategies analyzed as a function of the training received, the training activities carried out by the teaching staff and the degree of knowledge of the term «formative evaluation». In relation to the differences according to the training received in the evaluation, these appear in four of the 12 items. In items 1 and 12 there are differences between the group that claims to have received sufficient training and the other two groups analyzed. In item 2 there are differences between the teachers who say they have not received training and the other two groups. In item 11, differences appear

between all the groups studied. In all cases, teachers who say they have received sufficient training show the highest mean values, followed by the group with little training and by the group who say they have not received training.

Regarding the differences according to the training activities carried out, these appear in five of the 12 items studied. Specifically, differences appear in items 1 and 2 between those who say they have done less than one training activity and those who say they have done more than three; in item 7 between teachers between 1 and 3 training activities and those who say they have done more than 3; in item 11 between the group with less than one training activity and the other two groups analyzed; and in item 12 between teachers with more than three training activities and the other two groups analyzed. In all cases, the teachers with more training activities are those who report higher mean values.

In the case of the degree of knowledge of the term «formative evaluation», statistically significant differences appear in four of the 12 items studied. Items 1 and 2 show differences between the group that claims to know the term well and the group that claims to know it superficially. In item 11, the group of teachers who say they do not know the term is the one that shows statistically significant differences with the other two groups analyzed. Finally, item 12 shows differences between the teachers who say they know the term well and the other two groups. In all cases, the group that claims to know the term «formative assessment» reports the highest mean values, followed by the teachers who claim to know the term superficially, except item 1, in which it is the teachers who claim not to know the term, followed by the teachers who claim to know it well.

Table 4. Evaluation of strategies analyzed. Differences according to the training received, the number of training of activities carried out and the knowledge of the term "formative assessment"

	Training received at the evaluation				Activities of the training activities carried out			Knowledge of the term: formative evaluation				
	I have not received it	I have received some	Yes, I have received it	p	Less than 1 y 3 activities	Between 1 y 3 activities	More than 3	p	No I do not know it	I know it term at in a way	I know it well the term	p
N	at the	314	203		238	277	198		109	212	392	
	M±DT	M±DT	M±DT		M±DT	M±DT	M±DT		M±DT	M±DT	M±DT	
1. I share with my students the evaluation objectives at the beginning of the course.	4.96±1.26	4.97±1.25	5.20±1.16 ^{ab}	.003**	4.76±1.36 ^a	4.99±1.22	5.18±1.16 ^a	.002**	4.92±1.29	4.76±1.36 ^a	5.09±1.19 ^a	.010*
2. I offer my student the opportunity to negotiate elements of the subject evaluation system or assignments.	3.07±1.36	3.08±1.35	3.31±1.38 ^b	.000**	2.84±1.34 ^a	3.08±1.29	3.34±1.43 ^a	.001**	2.89±1.44	2.91±1.27 ^a	3.21±1.38 ^a	.009**
3. I share with my students the evaluation criteria at the beginning or during the course.	5.04±1.35	5.08±1.29	5.16±1.23	.075	4.90±1.50	5.08±1.30	5.16±1.24	.111	5.01±1.42	4.95±1.42	5.10±1.39	.430
4. After each period or training task I reflect with my students individually on their progress.	4.35±1.34	4.25±1.38	4.53±1.22	.051	4.27±1.38	4.29±1.33	4.53±1.27	.085	4.31±1.27	4.31±1.32	4.38±1.36	.820
5. I inform my students of what they have done well after performing an assessment.	5.14±1.06	5.12±1.08	5.15±1.02	.842	5.17±1.05	5.10±1.11	5.17±0.97	.716	5.14±0.98	5.08±1.12	5.18±1.03	.567
6. I make sure that my students know which aspects (areas, contents, behaviors, etc.) they need to work on to improve their learning process.	5.29±0.95	5.20±0.99	5.33±0.88	.280	5.29±0.96	5.18±1.04	5.36±0.80	.099	5.24±0.94	5.20±1.02	5.31±0.93	.375
7. I offer my students observations and evaluations (orally or in writing and individually or collectively) on the tasks so that they can repeat them with the aim of improving them.	5.10±1.09	5.05±1.09	5.13±0.96	.683	5.10±1.08	4.98±1.12 ^a	5.23±0.91 ^a	.040*	5.05±1.11	5.04±1.11	5.13±1.02	.570
8. I review my students' assignments daily and provide feedback (not accompanied by a grade) when they work on an assignment or activity.	4.43±1.36	4.44±1.28	4.47±1.23	.953	4.39±1.33	4.47±1.30	4.48±1.24	.719	4.29±1.36	4.39±1.32	4.52±1.25	.212
9. I help my students to find the correct answer through other questions or strategies that guide them to the solution when it is not adequate.	4.74±1.16	4.68±1.19	4.85±0.99	.262	4.76±1.14	4.73±1.14	4.76±1.13	.909	4.74±1.14	4.74±1.13	4.76±1.14	.987
10. I provide feedback to students to help them develop learning strategies to apply and improve in future assignments.	4.77±1.13	4.78±1.86	4.87±1.03	.593	4.77±1.09	4.75±1.09	4.90±1.05	.293	4.76±1.15	4.73±1.13	4.85±1.04	.349
11. I provide guidelines to help students evaluate their work and the work of others.	3.85±1.45 ^{ab}	4.18±1.29 ^{ac}	4.47±1.19 ^{bc}	.000**	3.90±1.43 ^{ab}	4.22±1.30 ^a	4.42±1.20 ^b	.000**	3.66±1.45 ^{ab}	4.09±1.35 ^a	4.35±1.24 ^b	.000**
12. I practice collective reflection dynamics with my students on the work done and its progress.	3.76±1.46 ^a	4.02±1.44 ^b	4.44±1.15 ^{ab}	.000**	3.86±1.46 ^a	4.00±1.38 ^b	4.40±1.29 ^{ab}	.000**	3.70±1.52 ^a	3.89±1.40 ^b	4.27±1.32 ^{ab}	.000**

^a 1st difference group.
^b 2nd difference group.
^c 3rd difference group

Note. Statistically significant differences are in bold: (*p ≤ .05; **p ≤ .01).

4. Discussion

Regarding the first objective of this research, to know the perception of elementary teachers on the frequency they develop different strategies linked to formative evaluation in the classroom, the results show that the most frequently applied strategies are

those related to the feedback process, in line with the findings of Zubillaga-Olague et al. (2025b). In particular, it is important to provide students with clear information on the aspects they need to improve, along with specific guidelines that allow them to review their performance and advance in their learning. However, beyond the frequency of implemen-

tation of these strategies, it is necessary to analyze the purpose for which they are applied. In this framework, several authors (Adbullah-Alotaibi, 2019; Zubillaga-Olague et al., 2025a) warn that although the regulatory potential of assessment is recognized, there is still confusion in teaching practice between the use of feedback for training purposes and its application as a mechanism to certify, periodically, the achievement of what has been learned.

On the other hand, among the least valued strategies is the one that seeks to hand over responsibilities to students. This shows that although there is a high perception on the use of most strategies associated with formative assessment when it comes to strategies that require ceding decisions and tasks to students, there is still reluctance (Berisha et al., 2022; Chazi-Nacimba et al., 2024; Dayal, 2021). In this sense, Grob et al. (2029) determine that teachers face several difficulties in sharing responsibilities with their students, among which stand out the perception of a lack of training of students to reflect on their own learning, the need to guarantee a fair and objective evaluation, as well as the limitations of time and resources to implement this type of practices in a systematic way. These findings allow us to draw a clear picture of the assessment practices that currently prevail in the classroom, helping to identify both the aspects that teachers perceive as more consolidated, as well as those that still require attention.

Regarding the second objective, to analyze whether there are differences in the frequency of use of these strategies according to different factors, approximately 50% of the items analyzed show statistically significant differences. Regarding gender, it is women who stand out for making sure that students are aware of the aspects to be improved, offering students observations and evaluations of the tasks performed, and providing feedback that encourages self-regulation. This could be a consequence of the historical tradition related to female predominance in the teaching profession, which could reflect a correlation between gender, training and disposition towards more pedagogical practices (Alkharusi, 2011). They are also the ones who report asking, to a greater extent, questions that help students find the correct solution. However, asking many questions does not mean that they are of high quality; therefore, it would be necessary to deepen on their purpose (Casanova, 2021). Studies such as that of

Cahzi-Nacimba et al. (2021) have shown that the questions asked by teachers often tend to be limited to routine checks used to review and verify students' understanding, without delving into their ability to reflect or apply what they have learned (Kaur, 2022).

Regarding the educational level, the results show differentiated trends. According to Adbullah-Alotaibi (2019) and Yan et al. (2018), the characteristics of the educational stage, the training, and the level of maturity and motivation of the students may influence the willingness of teachers to develop formative assessment strategies. For example, with regard to sharing assessment objectives with students, this is a practice developed more frequently in ESO. This could be explained by the perception of greater cognitive maturity of students at this stage, which facilitates the understanding of the objectives and their impact on learning (Grob et al., 2019). It is also at this educational stage that the evaluation criteria are most assiduously shared with students, allowing them to know what is expected of them throughout the training period and to be able to self-regulate their learning (Kruiper et al., 2022). However, it would be important to analyze how this practice is developed in the classroom, since, on many occasions, only the value or percentage weight assigned to each task in the final grade is made explicit (Sanmartí, 2023). There are also differences according to this variable in the nature of the feedback provided. As in our study, in those of Goertzen et al. (2023) and Kaur (2022) it is in PE where the preference is for giving feedback without grades.

As these authors point out, this may seek to mitigate the pressure of grades and carry out a more formative evaluation. On the contrary, ESO teachers tend to accompany feedback with grades due to the greater pressure from the educational system, families and students, linked to the cultural burden related to assessment (Sanmartí, 2023) and to the relevance of academic performance as the educational level increases (Enu, 2021; Kruiper et al., 2021). It is also the PE teachers who say that they propose, to a greater extent, guidelines for students to implement collective reflection dynamics to evaluate the work done. This may be due to the fact that, at this stage, the use of collaborative work and group work is more common, which leads to adapting the evaluation to these processes (Kaur, 2022) or to the fact that students remain with the same teacher for long

periods of time, which may encourage these practices (Goertzen et al., 2023).

In relation to differences according to teaching experience, in agreement with our results, Jawad (2020) and Zubillaga-Olague et al. (2025a; 2025b) show that teachers with a long career tend to show greater perceived self-efficacy to promote formative assessment practices and, therefore, are more likely to apply it in their classrooms. In this study, teachers with 6 and 25 years of experience are the ones who report sharing learning objectives with students more frequently and reflecting with their students individually on the formative tasks performed, compared to those with almost no experience. Also, this group of teachers stands out for offering students observations and evaluations on the tasks performed, for making sure that students are aware of the aspects to be improved and for offering feedback that encourages self-regulation, thanks to the knowledge acquired about what works in specific contexts. Practice, accumulated experience and trial and error allow optimizing the implementation of these strategies, and can provide teachers with more knowledge of the students and more tools to give individualized feedback effectively. However, it would be important to analyze how these practices are developed in the classroom and the purpose of the feedback, since it is often focused more on the final result than on the process, which limits its potential for comprehensive development and continuous improvement (Enu, 2021; Goertzen et al., 2023; Yan et al., 2022). In addition, the type of feedback provided should also be considered since no specific indications on how to improve are usually given (Berisha et al., 2024; Kruiper et al., 2022). It is also this group of teachers that stands out for providing individualized feedback. This may be due to the fact that experience accumulated over the years provides them with pedagogical tools and strategies to adapt their methods to the characteristics of the students (Yan et al., 2022).

In terms of training, according to Berisha et al. (2024) and Enu (2021), one of the most common changes made by teachers after participating in professional development activities or programs on assessment is to start clarifying and communicating learning objectives to students at the beginning of each activity or session. Similarly, trained teachers are more aware of the feedback characteristics they

need to provide to their students and, in turn, have a wider range of resources and strategies that facilitate their application in the classroom (Andersson and Palm, 2018; Berisha et al., 2024). Finally, teachers with more training, more experience, and more knowledge of the term «formative assessment» stand out for activating metacognitive strategies more frequently. Greater teaching experience and more specific training in assessment can lead to greater confidence in the ability to manage groups and, therefore, more possibilities to apply strategies that involve the students (Grob et al., 2019). Whereas, less training in these processes may hinder the implementation of strategies that require shared reflection and the establishment of guidelines for self-regulation of learning (Andersson and Palm, 2018).

5. Conclusions

This study has shown that elementary teachers indicate a high frequency of using the formative evaluation strategies included in this research. However, there are still areas of improvement, especially in terms of sharing evaluation responsibilities with students. In addition, the variables analyzed in the study are shown to influence the frequency of use of these strategies in the classroom. Particularly, teachers with more experience, those who have received training, as well as those who actively participate in training activities and have a greater knowledge of the concept of formative assessment, perceive that they apply these strategies more frequently in their daily work. This study offers valuable insight into the aspects that require attention to advance the implementation of these strategies and the areas where training should be focused in these processes. The results can serve as a reference for designing more effective teacher training programs aligned with the real needs of teachers.

Among the strengths of this research is the large sample of teachers, as well as the innovation of the research itself, investigating aspects that have not been previously analyzed in depth in basic education contexts. On the other hand, it presents certain limitations inherent to quantitative research, as it is not possible to analyze the reasons that lead teachers to adopt certain practices or to identify the quality of the training received. Also, since the results are based on teachers' self-reported perceptions, the results

could be exposed to response bias. To achieve a deeper and more realistic understanding of the application of these strategies in the classroom and the impact of training on their development, future studies could consider incorporating research methodologies such as observation or interviews. Likewise, among future lines of research, it is necessary to expand research on this topic. On the one hand, analyzing the influence of other sociodemographic variables on the development of these strategies and; on the other hand, expanding the sample within the Spanish context and other international contexts, as well as including the perception of other educational agents such as students.

Author contributions

Maite Zubillaga-Olague: conceptualization, data curation, formal analysis, funding acquisition, research, methodology, visualization, original draft-writing, writing-revision and editing.

Laura Cañadas: research, supervision, validation, writing-revision and editing.

Jesús Manso: writing-revision and editing.

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