REPORTED EVIDENCE-BASED WRITING PRACTICES AND TEACHERS' BELIEFS IN CATALONIA, SPAIN: AN EXPLORATORY STUDY

MARILISA BIRELLO*, LLORENÇ COMAJOAN-COLOMÉ** AND NATXO SOROLLA***

** Universitat Autònoma de Barcelona*
*** Universitat de Vic-Universitat Central de Catalunya*
**** Universitat Rovira i Virgili*

Abstract
This paper investigates the reported frequency of the use of evidence-based writing practices (EBWPs) by teachers (N = 51) in primary and secondary school classrooms in a sample of schools in the Barcelona metropolitan area (Spain), and how teacher beliefs contribute to the reported use of EBWPs. The results showed that the teachers declared to implement most of the EBWPs from previous studies. The three most frequent declared practices were 1) give praise individually for writing, 2) teaching writing strategies for planning and writing skills, and 3) using text assessment as a guide to shape instructions. Regarding teachers' beliefs about teaching writing, the study focused on teachers' attitudes and teacher efficacy. The results on attitude showed that teachers had a positive attitude toward writing. Results regarding teacher efficacy showed that teachers felt quite efficacious, especially when they were required to determine the level of difficulty in written assignments. A factor analysis of the EBWPs showed that the two main factors for the frequency of reported use of EBWPS were strategy teaching for evidence-based writing and writing practices based on text assessment. PLS regression analyses showed that the reported frequency of use of EBWPs was highly predicted by the feeling of efficacy of teachers.

Keywords: teachers' beliefs; efficacy; teaching writing; evidence-based writing practices

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Corresponding author: Marilisa Birello, *Dept. de Didàctica de la Llengua i la Literatura i les Ciències Socials, Facultat de Ciències de l'Educació, Universitat Autònoma de Barcelona, Campus de Bellaterra, Edifici G5, 08193 Bellaterra (Barcelona), Spain*, email: *marilisa.birello@uab.cat*

1. CURRENT INTEREST IN RESEARCH CONCERNING THE TEACHING OF WRITING

The teaching of writing has become a major topic of research due to the relevance of writing in today's world. This is the reason international agencies, national and local governments, researchers, educators, and parents alike are concerned about the implementation of teaching practices that are conducive to optimal results. Previous research in the teaching of writing at the elementary and secondary levels has identified several variables that are highly influential in how writing is taught. This paper addresses two topics that have become particularly relevant, that of teachers' beliefs and evidence-based practices, and it does so in the multilingual context of Spain.

The context of the current study is Catalonia (Spain), where a multilingual curriculum has been implemented for more than 30 years. Schools in Catalonia implement an intercultural multilingual curriculum with Catalan as the main means of instruction, along with Spanish and English (Generalitat de Catalunya, 2019; Vila et al., 2016). The majority of the school and secondary school subjects are taught in Catalan as mandated by current legislation (*Law of language policy*, Generalitat de Catalunya, 1998; *Law of Education of Catalonia*, Generalitat de Catalunya, 2009) even though the abiding of the law has been questioned, especially in those areas where the sociolinguistic environment favors the use of Spanish and other languages over Catalan and where the impact of recent immigration (since the first decade of 2000s) have had an impact (Bretxa et al., 2017). According to current legislation, students at the end of compulsory education (age 16) must have proficiency in the two official languages of the area, namely Spanish and Catalan, along with a third language (English in most cases). Current data shows that proficiency in the two languages is similar but with slightly higher levels for Spanish (Vila et al., 2021). In Spain, access to the teaching profession at the infant and elementary levels is granted by studying a four-year university degree in infant and elementary teaching, respectively. The four years do not include a Master's program. Access to secondary teaching is granted via a four-year university degree plus a one-year Master's program in secondary education.

Researchers on (the teaching of) writing are often concerned about the low level of writing skills in the students in compulsory education and such concern is often a justification for research (e.g., Brindle et al., 2016; Sánchez-Rivero et al., 2021). This is no exception for the teaching of writing in Catalonia. Concerns regarding the low level of writing skills in the Catalan educational system is evidenced in three types of studies at different educational levels. First, in the latest national *Proves de competències bàsiques* ("Basic competences tests"), carried out each year to all students of 6th year of primary education (age 11–12) and 4th year of secondary education (age 15–16), the results of written competence showed that the average score was 70.1 for Catalan and 69.6 for Spanish (Consell Superior d'Avaluació del Sistema Educatiu, 2021) in primary education (N = 71,409 students) and 64.8 for Catalan and 71.6 for Spanish in secondary (N = 70,412). Second, several studies have provided evidence that first-year students in the university degrees of infant and elementary education have low scores when writing argumentative texts. For instance, Brion et al. (2017) reported on a study of 46 first-year education students who obtained 6.03 (Catalan) and 6.17 (Spanish) (out of 10) as the average scores of the written exercise. Finally, since 2017, students who want to be admitted to a university degree in infant and primary education in Catalonia need to pass a personal aptitude test that includes a logico-mathematic competence section and a communicative competence section, which includes a writing exercise. Even though separate scores for each section are not available, the results in the last three years have indicated that 51.6% (2021), 63.3% (2020), and 71.7% (2019) of the students did not pass the test (Cornadó, 2021; Vicens, 2021).

1.1 The teaching of writing and its connection to teachers' beliefs

Researchers have shown a growing interest in the study of teachers' beliefs, mainly due to the evidence that shows that teachers' beliefs have a powerful influence on declared teacher practices and students' outcomes (Clark & Peterson, 1986; Fives & Buehl, 2014; Pajares, 1992). The current article investigates teachers' beliefs—what teachers know, believe, and do (Borg, 2003)—as they relate to several variables that are central for the teaching of writing, such as teachers' theoretical

orientation, teachers' efficacy, teacher preparation, and the use of evidence-based practices.

Previous research on teaching writing has showed that teachers' theoretical orientation or the assumptions and beliefs they hold about learning and teaching are important for the teaching of literacy skills, as their reported teaching practices are related to their beliefs or theories (Graham et al., 2002). Brindle et al. (2016) and Poch et al. (2020) found that primary and secondary teachers in the United States were not concerned with correctness in writing, and moderately to slightly agreed that explicit instruction and natural learning were important to develop writing skills. These results were consistent with previous studies with first-through-third grade elementary teachers (Graham et al., 2002), which showed that explicit instruction and correctness may be distinct aspects in teachers' beliefs about writing instruction. Graham et al. (2002) also noted that natural learning and explicit instruction were compatible, and that teachers valued both theoretical orientations. In contrast, Taiwanese primary teachers in Hsiang et al.'s (2020) study were more positive about explicit instruction than natural learning. The teachers who valued explicit instruction were more likely to teach writing elements and provide extra writing assistance, whereas the teachers who valued a natural learning approach were more likely to assign different types of writing and provide extra writing assistance. In Poch et al.'s study (2020), secondary teachers researched explicit teaching, but they also reported to use natural approaches to teach writing.

One type of belief that has been found to play an important role in teaching in general and in writing in particular as a precursor for action is teachers' self-efficacy, defined as the "personal judgments that the knowledge and skills needed to perform the task can be mobilized successfully under varied and unpredictable circumstances" (Graham et al., 2001, p. 178). Teacher self-efficacy is a construct that can be divided into two dimensions: *personal teaching efficacy* or the teachers' confidence in the abilities they have and use to affect student learning and *general efficacy* or the teachers' beliefs regarding the external limits to their educational practice (e.g., environmental factors such as students' family background) (Graham et al., 2001). For instance, elementary grade teachers in the United States and in China were positive about teaching writing, their efficacy to teach writing, and their own writing (Brindle et al., 2016, Hsiang et al., 2020, Gilbert & Graham, 2010).

Hsiang et al. (2020) observed that teachers who were more self-efficacious were more inclined to provide extra writing assistance and facilitate text revision. In studies conducted in China, Flanders, Portugal, and Brazil, it was shown that primary school teachers felt they were capable (efficacious) writing teachers and enjoyed teaching writing (De Smedt et al., 2016; Hsiang et al., 2020; Veiga Simão et al., 2016). Furthermore, teachers who were more positive about their own writing were more likely to assign writing tasks (Hsiang et al., 2020). Rietdijk et al. (2018) found that few elementary teachers adhered to the efficacy beliefs on teaching writing, including those of teaching learning strategies. By contrast, most of the teachers felt confident about their ability to promote active learning.

Despite the growing interest in research on teachers' efficacy to teach writing, it has been little studied in the context under study in this article, a sample of schools in the metropolitan area of Barcelona (Spain). In the Spanish context, Pacheco et al., (2009) designed and validated a questionnaire that included self-efficacy as one of the main variables influencing the teaching of writing. Data from 137 infant and elementary education teachers in the province of León (Spain) focusing on the teaching of writing provided evidence that self-efficacy was one of the main factors, but it was not an independent factor (contrary to what was predicted by the authors), since its loading factors were similar to those of writing orientation. Sánchez-Rivero et al. (2021) investigated the teaching of writing in elementary and secondary education in the León province in Spain, and questionnaire data from 515 participants showed that teachers had a moderate level of personal efficacy and a low one in general efficacy. The levels were particularly low for secondary school teachers. A regression analysis showed that personal efficacy was one of the significant variables predicting the use of evidence-based writing practices in the classroom.

Finally, previous research on writing teaching has also examined how teachers feel about their preparation in pre-service (i.e., college or university) and in-service environments. The teachers' beliefs on preparation to teach writing are related to the instructional practices that they reportedly applied (Brindle et al., 2016; De Smedt et al., 2016; Gilbert & Graham, 2010). Most of the studies reported that primary and secondary teachers in different contexts considered their college preparation inadequate (Brindle et al., 2016; De Smedt et al., 2016; Gilbert &

Graham, 2010; Graham et al., 2013; Hsiang et al., 2020; Kiuhara et al., 2009; Ray et al., 2016). However, a few studies found that the surveyed teachers believed they received adequate pre-service and in-service preparation (Bañales et al., 2020; Veiga Simão et al., 2016). Teachers also reported that they received an adequate or extensive training to teach writing from in-service preparation after college (Graham et al., 2013; Kiuhara et al., 2009; Parr & Jesson, 2016; Veiga Simão et al., 2016). In the Spanish context, Sánchez-Rivero et al. (2021) reported that participating primary and secondary teachers declared that they felt they were very little prepared to teach writing, especially in the case of secondary school teachers.

1.2 The teaching of writing and evidence-based writing practices

The effort to identify and apply the most effective practices to teach writing—together with the attempt to go beyond the research-practice gap— has led educators to so-called evidence-based teaching practice (Diery et al., 2020; Georgiou et al., 2020; Pattier & Olmos Rueda, 2020; Suárez et al., 2018). Evidence-based practice in education has been influenced by other disciplines that developed earlier (i.e., medicine), but it has constituted its own field of research. In education, researchers have advocated for a pragmatic approach rather than a categorical approach, defined as "the productive use of the best empirical evidence available from educational research for teaching purposes. In this sense, empirical evidence should serve as a resource, corrective, guide, and orientation for professional decision-making in teacher education" (Diery et al., 2020, p. 2). The use (and overuse) of evidence-based practice has spurred a debate over several issues, including what is considered evidence, the implementation of evidence (how and why), and its connection to personal experience and external evidence (Biesta, 2010; Diery et al., 2020).

Research in the teaching of writing has been particularly fruitful in identifying evidence-based practices that are conducive to effective teaching (i.e., *evidence-based writing practices*, EBWP henceforth). For instance, Gilbert and Graham (2010), Graham et al. (2013), and Kiuhara et al. (2009) highlighted that teachers used a variety of evidence-based practices, but that they applied them infrequently. Graham

et al. (2013) found that the most frequent evidence-based practices used by middle school teachers were to establish goals for students' writing, praise or reinforce specific aspects of writing, and give written feedback on students' written composition. In a study with middle school teachers, Ray et al. (2016) observed that teachers used activities that implied writing without composing (e.g., short answer, note taking, worksheets) more frequently than writing through composing (e.g., explanation, description, summary) (see also Graham et al., 2013; Kiuhara et al., 2009 for similar results). Rietdijk et al. (2018) showed that teachers did not emphasize planning and revising. In studies with primary school teachers, the most common EBWPs were to praise or reinforce students for an act of writing and teaching planning strategies (Brindle et al., 2016). Interestingly, Brindle et al. (2016) found that the teachers who reported using evidence-based practices felt better prepared to teach writing, were more positive about their competences to teach writing, and stated stronger beliefs about the importance of writing.

Particularly relevant for the current study are two studies that investigated evidence-based practices in Spain. Pattier and Olmos Rueda's (2020) study on evidence-based educational practices in Spain investigated the impact of evidence-based practices promoted by international and national institutions in the implementation of practices based on evidence. The questionnaire results from 462 teachers (infant and elementary teaching) in the Barcelona and Madrid areas showed that the evidence-based practices promoted by international and national agencies did not constitute the basis of teaching and that participants found the reports to be of little use for their teaching.

Sánchez-Rivero et al. (2021) conducted a questionnaire study to investigate whether elementary and secondary school teachers in Spain implemented evidence-based practices in their classroom. To identify the evidence-based practices to teach writing, they designed a questionnaire based on the five available meta-analyses (Graham & Harris, 2018; Graham et al., 2015; Graham et al., 2012; Graham & Perin, 2007; Koster et al., 2015) and found that Spanish elementary and secondary teachers did not very frequently use evidence-based practices (it was even less frequent in the case of secondary school teaching). As mentioned earlier, the use of evidence-based practices was connected to several other variables, including self-efficacy, attitudes, and preparedness.

Considering the current relevance of the variables reviewed, the primary purpose of this study was to examine these variables in an environment where they have been little studied, namely that of Catalonia, Spain. As acknowledged by Sánchez-Rivero et al. (2021), even though the study of evidence-based practices and efficacy is a fertile topic of research at the international level, it has been little studied in the Spanish context, and even less so in a multilingual area like the one studied in the current study.

Research on the teaching of writing in Spain implementing both quantitative and qualitative methodologies is a consolidated field of research. Overall, earlier studies provided evidence for three teaching practice profiles in Spanish infant and elementary schools: 1) explicit instructional practices; i.e., teachers mainly focus on learning outcomes and are less concerned with autonomous writing and occasional learning; 2) situational practices; i.e., teachers focus more on emergent situations in the classroom than on learning outcomes; and 3) multidimensional practices; i.e., teachers focus on both explicit instructional practices and situational practices (González et al., 2009; Tolchinsky et al., 2010).

Intervention studies on self-regulation strategies with primary students have showed that students significantly improved their writing skills (e.g., Fidalgo et al., 2009; Fidalgo et al., 2011; Ripoll Salceda et al., 2013; Salas et al., 2020). Other studies centered on the effectiveness of instructional programs and techniques in different instructional programs to teach writing to secondary school students (e.g., Casado-Ledesma et al., 2021; Gárate et al., 2014). Qualitative studies have focused on the implementation of specific teaching strategies, particularly teaching units that integrate project work and metalinguistic awareness activities (for a review, see Camps & Fontich, 2020; Reig, 2020; Ribas Seix et al., 2020; Santolària Orrios, 2021).

Another strand of research on writing in Spain has focused on declared teacher practices and how they relate to the process of guiding writing, the topic of the current article. Seoane et al. (2020) studied the knowledge and beliefs about learning to write by early childhood and primary pre-service teachers in the Canary Islands (Spain) focusing on the participants' beliefs regarding learning six specific theories: psycholinguistic, behaviorist, maturation, nativist, socio-cultural, and constructivist. The results from a sample of 550 pre-service teachers

showed that the majority (319 of the participants) tended to follow the identified theories even though the most valued one was socio-cultural theory and the less valued was the behaviorist theory. Sánchez-Rivero et al. (2021) studied in-service primary and secondary school teachers' practices in the region of León (Spain) and highlighted that self-efficacy and attitudes were positively related to effective instructional practices and that the teachers' perception of training influenced their instructional practices in all levels, even though secondary school teachers showed a lower level of efficacy and preparation to teach writing than primary teachers.

In sum, despite the rich panorama of research on writing in Spain, there is still a research gap on the teaching of writing and its connection to efficacy, evidence-based practices, and teacher beliefs and how such variables are interconnected. Considering previous studies in Spain and elsewhere on teacher efficacy and evidence-based practices, this article examines the role of these variables and how they are connected in a group of teachers in the Barcelona Metropolitan area. More specifically, the following two research questions are investigated:

1. What is the reported frequency of use of evidence-based writing practices in primary and secondary school classrooms in a sample of schools in Catalonia (Barcelona Metropolitan area)?
2. How do teacher beliefs contribute to the reported use of evidence-based writing practices?

2. METHODOLOGY

The data from this study originate from a larger study, in which teachers from primary and secondary schools in the Barcelona metropolitan area participated in a project related to Self-Regulated Strategy Development, which included teachers' beliefs and practices regarding the teaching of writing (Casas et al., 2020; Salas et al., 2020). The choice of schools for the larger project was based on two requirements: participating schools had to be public, and they had to include both regular and high-complexity schools.

The number of teacher participants for the current study was 51. The number was higher in the larger project, but it was reduced due to participant dropout caused by lack of time to participate in the project and personal reasons. Most of the participating teachers were women (45).

They were primary school teachers in second and fourth grades (for students aged 8 and 10, respectively) and secondary school teachers in second year (for students aged 14) in the Barcelona (Spain) metropolitan area. Most of the participants were primary school teachers (76.5%), compared to 23.5% of secondary school participants. All the participants were born in Spain, and their average age was 44. The average number of years of teaching experience was 18. Regarding their training, all of them had a teaching degree and a few had completed a postgraduate program (10%). The data for the current study were collected in October 2016.

More than half of the participants (53%) taught in high complexity schools, i.e., primary or secondary schools that are classified by the Department of Education of the Catalan government as particularly vulnerable. This definition is based on several variables, including low level of instruction of students' parents, high unemployment ratios of students' parents, and high ratios of immigrant-origin students.

The data for the current study were collected via an online questionnaire containing 76 items and divided into four main sections. The questionnaire was an adapted translation into Catalan of the one used in English in Brindle et al. (2016). Section 1 included sociodemographic information (such as gender, age, number of years of teaching) and teacher familiarity with teaching units to teach writing that integrates project work and metalinguistic awareness activities (Camps & Fontich, 2020). Section 2 included 13 items translated into Catalan from the Writing Orientation Scale section in Brindle et al. (2016), which were items enquiring about teacher beliefs regarding how writing should be taught. All items were 6-point Likert agree-disagree scales. Section 3 included the 19 items about EBWPs to teach writing on a 6-point Likert frequency scale from Brindle et al. (2016). A distinction was made between teacher beliefs and teacher practices based on previous studies that followed the same distinction (e.g., Brindle et al., 2016; Sánchez-Rivero et al., 2021). In this regard, whereas data from questionnaires can only provide data on what teachers declare—as opposed to what they truly believe or do in a classroom—the difference lies in the fact that beliefs have been documented as precursors for practice and that beliefs operate on a more cognitive level than practices. Section 4 included 16 items (1-6 Likert scale) that provided data on a) teacher attitudes about writing and the teaching of writing and b) teacher efficacy.

They were all items from Brindle et al. (2016) translated into Catalan. Section 5 focused on the teachers' preparation for teaching and asked them about their perceptions regarding their pre-service (i.e., university) training and in-service training and included the (1-6 Likert scale) items from Brindle et al. (2016).

For data analysis, quantitative methods were implemented. First, frequency analyses were performed for the reported use of the 19 items on the use of EBWPs and the following variables: a) writing orientation scale, b) preparation to teach writing, c) teacher efficacy for writing, and d) teachers' attitudes towards writing. Second, the 19 items on the frequency of use of EBWPs, the dependent variable in the next model, were analyzed via factor analysis to reduce the dispersion of the EBWPs and find how the different declared practices were related. Finally, a partial least squares regression (PLS) analysis was employed to determine how the use of EBWPs was predicted by specific variables.

3. RESULTS

3.1 Reported frequency of use of evidence-based writing practices and related variables

The descriptive frequency data for the current study show that all declared practices were above a frequency of 3.4 (on a scale from 1 to 6), which indicates that teachers declared that most of the practices were implemented in classrooms quite frequently (Table 1). The practices that were reported to be implemented most frequently in the classroom (above a frequency of 5) were the following: *Praise or give positive reinforcement individually for some aspect of writing* (5.3), *Teach students strategies for planning* (5.2), *Teach basic writing skills* (5.1), and *Use classroom writing assessment data as a guide for shaping writing instruction in the classroom* (5.0). The least frequently used (below 4) were *Have students write to persuade* (3.7), and *Have students write using word processing* (3.4).

Following Brindle et al. (2016), teachers' beliefs and their connection to EBWPs in the classroom were examined as they manifested in three constructs: orientation toward writing instruction, efficacy for teaching

writing, and attitudes towards writing. In addition, we examined teacher preparation (pre- and in-service).

Table 1. Frequency of use of EBWPs (from 1 never to 6 always, ordered from most to least used in the classroom)

	EBWP	Mean	SD
1.	Praise or give positive reinforcement individually for some aspect of writing.	5.3	0.7
2.	Teach students strategies for planning.	5.2	0.8
3.	Teach basic writing skills.	5.1	0.8
4.	Use classroom writing assessment data as a guide for shaping writing instruction in the classroom.	5.0	1.0
5.	Ask students to carry out pre-writing activities (e.g., brainstorming, note taking, talk/discuss a topic, outlines, drafts).	5.0	1.1
6.	Provide written feedback on students' texts.	4.8	1.1
7.	Teach students how different discursive genres are structured.	4.8	1.1
8.	Establish specific goals or guidelines so that students apply them in their writing tasks.	4.7	1.1
9.	Teach students strategies for revising or editing their writing.	4.7	1.2
10.	Have students write a narrative.	4.6	0.9
11.	Have students write to inform.	4.6	0.9
12.	Teach students strategies to self-regulate the writing process.	4.5	1.1
13.	Have students assess their own writing performance.	4.4	1.4
14.	Teach students strategies for writing paragraphs.	4.3	1.4
15.	Have students establish goals for their writing.	4.2	1.4
16.	Have students study and imitate good models of writing.	4.1	1.3
17.	Have students work together to plan, draft, revise, and edit a text.	4.0	1.3
18.	Have students write to persuade.	3.7	1.3
19.	Have students write using word processing.	3.4	1.2

3.2 Writing Orientation Scale

The results showed that the most common beliefs about teaching writing (above 5.0) were as follows: *It is important to teach students strategies for planning and revising* (5.6), *It is necessary to plan the teaching of writing to insure the adequate development of all skills needed for writing* (5.3), and *Instead of regular grammar lessons, it is best to teach grammar when specific problems for it emerge in the process of writing* (5.1) (Table 2). The items for which there was little agreement (below 3.0) were the following: *Before children begin a writing task, students with low proficiency of Catalan should be reminded that they have to use a written "formal" register and not write the same way they speak* (2.8) and *Teachers should aim at producing writers who can write good compositions in one draft* (2.0) (Table 2).

Table 2. Writing orientation scale items (ordered from high to low, 1 lowest agreement, 6 highest agreement)

	Writing orientation scale items	Mean	SD
1.	It is important to teach students strategies for planning and revising.	5.6	0.6
2.	It is necessary to plan the teaching of writing to ensure the adequate development of all skills needed for writing.	5.3	0.8
3.	Instead of regular grammar lessons, it is best to teach grammar when specific problems for it emerge in the process of writing.	5.1	1.0
4.	The writing process itself is more important than the student's final text.	5.0	1.0
5.	With practice in writing (writing, responding to written messages), students will gradually learn the conventions of adult writing.	5.0	1.2
6.	Students need to work frequently in small groups to react and critique each other's writing.	4.8	1.2
7.	Students need to practice writing letters to learn how to form them correctly.	4.2	1.4
8.	A good way to begin writing instruction is to have children copy or imitate specific models of writing for each type of text (narrative, journalistic, argumentative, etc.).	3.9	1.5
9.	It is important that students memorize words in order to learn spelling.	3.8	1.4
10.	Before students begin a writing task, teachers should remind them to write without spelling mistakes.	3.6	1.5
11.	Being able to label words according to grammatical category (e.g., nouns, verbs) is useful to write well.	3.2	1.4
12.	Before children begin a writing task, students with low proficiency of Catalan should be reminded that they have to use a written "formal" register and not write the same way they speak.	2.8	1.4
13.	Teachers should aim at producing writers who can write good compositions in one draft.	2.0	1.4

3.3 Efficacy for teaching writing

The mean results regarding teacher efficacy for writing showed that all items scored 3.4 or above, indicating that teachers believed that they were quite efficacious in how they taught writing (Table 3). The items regarding efficacy for writing with the highest scores were: *If one of my students could not do a writing assignment, I would be able to determine whether the assignment was the appropriate level of difficulty* (4.7) and *When a student is having difficulty with a writing task, I would have no trouble adjusting it to his/her level* (4.7).

Table 3. Teacher efficacy (1 never, 6 always), ordered from high to low

	Teacher efficacy items	Mean	SD
1.	If one of my students could not do a writing assignment, I would be able to determine whether the assignment was the appropriate level of difficulty.	4.7	1.0
2.	When a student is having difficulty with a writing task, I would have no trouble adjusting it to his/her level.	4.7	1.2
3.	If I try really hard, I can help students with the most difficult writing problems.	4.4	1.0
4.	When a student's writing improves, it is usually because I have found more effective ways to teach that student.	4.0	1.0
5.	When a student's writing performance improves, it is because I have found more effective teaching approaches.	4.0	0.9
6.	I'm an effective teacher when I teach writing.	3.7	1.0
7.	If a student does not remember something I have taught him/her about writing, I would know how to help him/her to increase his/her retention in the next lesson.	3.7	1.1
8.	When a student's writing performance improves, it is because I exerted a little extra effort.	3.7	1.2
9.	If a student masters a new writing concept quickly, this is because I knew the necessary steps in teaching this concept.	3.4	1.2

3.4 Attitudes towards writing

Results on teachers' attitudes towards writing depicted that they generally had a positive attitude toward writing (Table 4). The highest scores (above 4.5 out of 6) were for the following items: *I like to teach writing* (5.2), *I like to learn about becoming a better writer* (4.7), and *I use writing to learn* (4.5).

Table 4. Teachers' attitudes towards writing (1 never, 6 always) ordered from high to low

	Teacher attitude items	Mean	SD
1.	I like to teach writing.	5.2	1.0
2.	I like to learn about becoming a better writer.	4.7	1.3
3.	I use writing to learn.	4.5	1.4
4.	I like to write.	4.2	1.5
5.	I am a good writer.	3.7	1.0
6.	I frequently write outside of school for purposes other than teaching.	3.6	1.6
7.	I write for relaxation, entertainment, or pleasure.	3.4	1.6

3.5 Teacher preparation

Regarding teachers' perceptions about their preparation to teach writing in and after university, most of the teachers rated themselves as prepared, since the average preparation was between 3.4 and 4.6 (Table 5). Participants felt that they were fairly prepared to teach reading, science,

and narrative texts, both in pre- and in-service. In contrast, they felt they were the least prepared to teach persuasive/opinion texts.

Table 5. Beliefs about preparedness to teach

	Preparedness items	Pre-service		In-service	
		Mean	**SD**	**Mean**	**SD**
1.	Reading	4.2	1.2	4.6	1.0
2.	Knowledge of environment (includes social sciences and nature)	4.0	1.4	4.3	1.2
3.	Writing narrative texts	3.7	1.3	4.3	1.1
4.	Math	3.6	1.4	4.0	1.3
5.	Writing	3.6	1.3	4.2	1.2
6.	All types of writing	3.6	1.1	4.1	1.0
7.	Writing to inform	3.6	1.3	4.2	1.1
8.	Writing of persuasive/opinion texts	3.4	1.3	3.9	1.3

3.6 Factor analysis of evidence-based writing practices

A factor analysis of the 19 items of the EBWPs, which reduced the variability of the variables to a few factors, produced two main factor solutions (Appendix A). The first factor accounted for a large number of variance of the 19 EBWP variables (49.6%). In this factor, all items pointed towards the same direction, and the ones which had the highest loadings (above 0.75) were: *Teach students strategies to self-regulate the writing process* (0.86), *Teach students strategies for writing paragraphs* (0.82), *Teach students strategies for revising or editing their writing* (0.81), *Establish specific goals or guidelines so that students apply them in their writing tasks* (0.77), *Teach students how different discursive genres are structured* (0.77), and *Have students establish goals for their writing* (0.76). We labelled this factor "strategy teaching for evidence-based writing" (shortened to "strategy teaching").

The second factor accounted for 9.1% of the variance, and it had loadings in two directions for the 19 EBWP survey items. The highest items in one direction (below -0.40) were: *Use classroom writing assessment data as a guide for shaping writing instruction in the classroom* (-0.60) and *Teach basic writing skills* (-0.40). The highest loadings (above 0.40) in the opposite direction were*: Have students write using word processing* (0.49), *Have students write to persuade* (0.45), *Have students write to inform* (0.42), and *Have students write a narrative* (0.40). Overall, this factor distinguished between those practices focusing on the use of text assessment as a guide for

writing instruction and the teaching of basic writing skills in opposition to having students write their own texts. We labelled this factor "writing practices based on text assessment (vs. student writing)" (shortened to "practices based on assessment").

3.7 Predicting evidence-based writing practice: regression analysis

PLS regression analyses were performed to examine how the independent variables could predict the dependent variable. The logic of the PLS regression is similar to factor analysis and regression analysis, as one dependent variable (EBWP) is explained by "components", or "latent variables", which categorize the effects of the different independent variables instead of being explained by the effect of particular variables.

The dependent variable was the mean of the 19 EBWP items. The 60 independent variables were of five types: a) Sociodemographic variables: gender, age, grade being taught (2nd and 4th grades in primary; 2nd year in secondary), academic training, experience (number of years teaching), familiarity with teaching units which integrate project work and metalinguistic awareness activities, and type of school (high complexity or regular), b) Writing orientation scale, c) Teacher preparation (pre- and in-service), d) Teacher efficacy toward writing, and e) Teacher attitudes toward writing.

The results of the PLS regression analyses showed that one main component accounted for 25.7% of the variance of the frequency of use of EBWPs (Appendix B). The loadings for the first component showed that EBWPs were highly predicted by the feeling of efficacy of teachers. More specifically, the more efficacious a teacher felt, the higher the frequency of the reported use of EBWPs. In addition, the frequency of use of EBWPs was related to how well the teachers felt prepared (in-service training) to teach all types of texts, and more specifically to teach narratives and informative texts. The impact of sociodemographic variables accounted for very little of the frequency of use of EBWPs. Conclusively, the results showed that EBWPs were mostly accounted by the teachers' feeling of efficacy.

In a further analysis, the same PLS regression technique was performed to examine the relationship between the 60 independent variables and the two main factors of the EBWPs (provided by the factor analysis): strategy teaching for evidence-based writing and writing

practices based on text assessment. PLS analyses were executed for the two factors, loading all items in the questionnaire as independent variables. The results showed that for *strategy teaching* (Factor 1), a main component accounted for 25.6% of the variance, with very similar results to the results for the global EBWPs: the teachers' feeling of efficacy, global preparation, and attitudes accounted for a significant part of strategy teaching. This implies that the more the teachers felt they had efficacy, preparation, and a positive attitude toward teaching writing, the more they declared that they implemented practices of strategy teaching. The results also showed that for *writing practices based on text assessment* (Factor 2), a main component accounted for 40.6% of the variance, with a different trend from Factor 1. More specifically, Factor 2 opposed those teachers who taught writing taking student assessment into consideration and those teachers who made students write. Whereas the most relevant variable for accounting for the use of writing as assessment was the teachers' perception of their planning of writing sessions, the most relevant for having students write their own texts was the teachers' perception of the preparation they had received, especially in pre-service training.

4. DISCUSSION

This study investigated the declared classroom practices of primary and secondary school teachers when they teach writing. The focus of the study was on the reported use of EBWPs by the teachers and how such practices were related to teachers' beliefs and their feeling of preparation.

The first research question focused on the reported frequency of use of EBWPs by teachers when teaching writing. The results indicated that the participants implemented most of the practices and that the most frequent evidence-based practices were praising for some aspects of writing, teaching writing strategies for planning, teaching basic writing skills, and using text assessment as a guide for shaping instruction. The three most frequently used practices in the current study coincide with the three most frequent in Brindle et al.'s (2016) study. In contrast, the practice of using text assessment as a guide for shaping instruction was not as frequently used in Brindle et al. (2016). The results on the re-

ported frequency of use of EBWPs in the current study are complementary to those of a larger study done in the Spanish context (Sánchez-Rivero et al., 2021). The main difference is that whereas the reported use of EBWPs in the current study was quite high (above 3.4, on a scale from 1 to 6), Sánchez-Rivero et al. (2021) indicated that the use of evidence-based instructional practices was not very frequent and that the most frequent were those related to the teaching of spelling and grammar. The questionnaire items and frequency scales in the two studies were different and thus, it is difficult to compare results of the two studies. The fact that there was a significant difference in the use of evidence-based practices between elementary and secondary teachers in Sánchez-Rivero et al.'s (2021)—with elementary teachers using more frequently evidence-based practices than secondary school teachers—and that there was a higher proportion of secondary school teachers in Sánchez-Rivero et al. than in our study may be a factor that contributes to differences in results. Furthermore, most of the participants in the current study were teachers in high complexity schools, which may have been an additional factor in the training of teachers as well as in their effort to implement practices that are less focused on the final product (spelling) and more focused on the process (e.g., planning, providing feedback).

In agreement with previous studies, the practices which were least frequently used in the current study were to make students write using a word processor (Graham et al., 2013; Sánchez-Rivero et al., 2021) and having students write for persuasion (Parr & Jessen, 2016) as well as having students work together for planning, drafting, revising, and editing a text (Graham et al., 2013). These results fully coincide with Brindle et al. (2016) as in their study all three practices were in the group of the least frequently used.

Regarding teachers' beliefs, the results of the current study showed that the participating teachers valued a process-oriented approach, since they agreed on several practices that are related to this approach, such as the importance of teaching planning strategies for writing, the need to plan the teaching of writing, teaching grammar embedded in writing, and the importance of the process over the final result of writing. These results are similar to those of Brindle et al. (2016), since in both studies, the same two items (teaching children strategies for planning and revis-

ing, and the need to plan the teaching of writing) were the most frequently used. Moreover, in both studies, the two least frequently used practices were the same (aiming at producing writers who can write good compositions in one draft, and reminding students to use standard language).

Regarding teachers' attitudes, the results showed that the participants had a mostly positive attitude toward writing, similar to those in Brindle et al. (2016), De Smedt et al. (2016), and Sánchez-Rivero et al. (2021). Overall, teachers in these studies expressed that they enjoyed writing and liked to teach writing. A noted difference is that participants in Brindle et al. (2016) believed that they were good writers and wrote for relaxation and pleasure more frequently than those in the current study. Additionally, in our study, teachers related students' successful writing performance to their own writing instruction, as in De Smedt et al. (2016).

Regarding beliefs about teacher efficacy, the teachers in the current study and in Brindle et al. (2016) possessed a high sense of efficacy. The two items that were mostly agreed upon were the same in the two studies: a) being able to accurately assess whether the assignment was the correct level of difficulty and b) having no trouble adjusting the level of difficulty of a writing assignment. In contrast, the participants in Sánchez-Rivero et al. (2021) had moderate self-efficacy and low general efficacy.

Finally, regarding preparedness to teach writing, the teachers in the current study felt that they were the most prepared to teach reading and science and the least prepared to teach math. With respect to specific types of writing, teachers felt more prepared to teach narrative than informative or persuasive texts. While comparing pre- and in-service training in general, similar to previous studies (Ray et al., 2016; Graham et al., 2013; Kiuhara et al., 2009), the results indicated that teachers felt more prepared by in-service than in pre-service training. Such results coincide with Brindle et al. (2016) with the exception that teachers in that study believed to be more prepared to teach math than social studies and science. The results on preparedness of the participants in Sánchez-Rivero et al.'s (2021) study showed that their perception was that they were little prepared for the teaching of writing.

To summarize, the comparison of results of the current study and those of Brindle et al. (2016) in the United States and Sánchez-Rivero

et al. (2021) in Spain show that there is a similarity with Brindle et al. (2016), which confirms that teachers' use of EBWPs and their beliefs in different social settings may coincide. In contrast, the results seem to diverge from those of Sánchez-Rivero et al. in that the use of EBWPs by the teachers in the current study was higher and felt more efficacious than in Sánchez-Rivero et al. Differences in the samples of the three studies do not allow for conclusive results but suggest that practices for the teaching of writing in different areas of the same country (in this case, Spain) can differ, probably due to differences in the school population, teacher training, and other socioeducational factors. In this respect, further research in different areas of Spain—with differences in their multilingual setting and demolinguistic characteristics—can add further evidence to the interrelationship between teacher beliefs, practices, and the specific implementation of evidence-based practices in school settings.

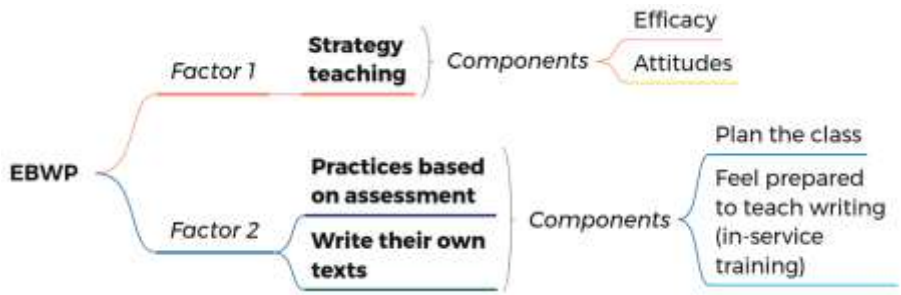
The second research question focused on the impact of teacher beliefs (writing orientation, attitudes, and efficacy) and preparedness on the reported use of EBWPs. The results showed that two factors accounted for the reported use of EBWPs: strategy teaching and writing practices based on text assessment. They also showed that teacher efficacy was the main predictor of EBWPs and that the sociodemographic variables did not have an impact in the use of EBWPs. The results in this study as well as those of Brindle et al. (2016) and Sánchez-Rivero et al. (2021) highlight the importance of teacher beliefs in their use of EBWPs and, most importantly, how beliefs related to ideas about how writing should be taught (writing orientation) and the teachers' feelings of efficacy (see also Hsiang et al., 2020; Rietdijk et al., 2018) can predict the implementation of evidence-based practices. The results from the study also indicate that sociodemographic characteristics are not particularly relevant for the implementation of EBWPs.

The main difference between this study and the previous literature is that the participants in the current study considered that assessment was an important factor in the teaching of writing. This result may be related to the emphasis given to assessment in Catalan schools, and more particularly to writing assessment. Furthermore, the fact that Catalan schools emphasize high competence in both Catalan and Spanish and that both languages are continually assessed for comparative purposes due to legal and pedagogical reasons may have also been a factor in the

teachers' perceived importance of assessment in teaching writing. The legal reasons have to do with the fact that the Catalan *Act on Linguistic Policy* (Generalitat de Catalunya, 1998) establishes that at the end of compulsory education (end of secondary school, age 16), all students in Catalonia must have proficiency of both Catalan and Spanish.

Conclusively, the results from this study indicated that the use of EBWPs is multidimensional, as they are not predetermined by one single characteristic. The results showed that there are three main sources that account for the reported frequency of use of EBWPs, the first one being the main one (Figure 1): a) frequency of use of strategy teaching to teach writing, b) use of assessment practices to teach writing, and c) have students write their own texts. Furthermore, the use of strategy teaching was found to be explained by the feeling of efficacy of teachers and their attitude toward writing. Finally, the teachers' preparation to teach writing (pre-service) was found to be a factor that greatly influenced the practice of having students write texts, and thus the use of EBWPs.

Figure 1. Factors that account for the reported use of EBWPs



The current study has a few limitations that must be acknowledged. First, the data on writing practices were self-reported and not observed, and hence, further studies need to investigate whether the self-reports can be confirmed in actual practices in the classrooms. Second, the number of participants in the study was small, which may have affected the robustness of the data analysis. Further studies should gather data from a larger sample of participants and attempt to replicate the results. Finally, the results of the current study showed that sociodemographic

variables did not have an impact in the use of EBWPs. Further research should investigate the environments in which such variables can have a larger impact or confirm that they do not have an impact primarily because other variables (e.g., teachers' beliefs) are more prevalent.

5. CONCLUSION

The results from this study, carried out in the multilingual area of Catalonia (Spain), contribute to the research in the teaching of writing providing additional evidence regarding the reported frequency of the use of EBWPs and the significant role of teacher efficacy. The results have confirmed that teachers declare to implement a large number of EBWPs and believe that they are prepared to teach writing. The results also confirm that pre-service training may not provide enough preparation to teach writing. These results are informative for teacher training in the future in Catalonia, as they suggest that more emphasis should be given to evidence-based practices and development of the feeling of efficacy in teachers. Furthermore, the important role of assessment, which has been documented in this study, indicates the need to train future and in-service teachers on the important role of assessment for the teaching of writing. However, the incorporation of assessment practices in the writing classroom needs to be balanced with the use of other teaching practices, as the results of the study also suggest that an overemphasis on assessment may be detrimental to the use of other writing practices. In sum, providing support for the development of writing at schools requires a multidimensional approach that incorporates teacher beliefs, strategies to support the teaching of writing, as well as the implementation of specific evidence-based practices.

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APPENDIX A. FACTOR ANALYSIS

Table A1. Factor analysis of the 19 items regarding EBWPs

	Questionnaire item	Factor	
		1	2
1.	Praise or give positive reinforcement individually for some aspect of writing.	.464	-.015
2.	Teach students strategies for planning.	.708	-.151
3.	Teach basic writing skills.	.690	-.406
4.	Provide written feedback on students' texts.	.749	-.128
5.	Establish specific goals or guidelines so that students apply them in their writing tasks.	.774	-.173
6.	Teach students strategies to self-regulate the writing process.	.869	-.248
7.	Have students study and imitate good models of writing.	.610	-.071
8.	Use classroom writing assessment data as a guide for shaping writing instruction in the classroom.	.633	-.609
9.	Teach students strategies for revising or editing their writing	.819	-.207
10.	Teach students strategies for writing paragraphs.	.827	.206
11.	Teach students how different discursive genres are structured.	.776	-.084
12.	Ask students to carry out pre-writing activities (e.g., brainstorming, note taking, talk/discuss a topic, outlines, drafts).	.611	-.124
13.	Have students establish goals for their writing.	.769	.157
14.	Have students work together to plan, draft, revise, and edit a text.	.611	.343
15.	Have students assess their own writing performance.	.748	-.102
16.	Have students write using word processing.	.615	.496
17.	Have students write a narrative.	.565	.403
18.	Have students write to inform.	.665	.424
19.	Have students write to persuade.	.743	.456

APPENDIX B. PLS REGRESSION ANALYSIS

Table B1. PLS regression results with the top variables predicting the use of EBWPs and their weight in the main component

	Variable	t1
1.	If a student does not remember something I have taught him/her about writing, I would know how to help him/her to increase his/her retention in the next lesson.	0.84
2.	I'm an effective teacher when I teach writing.	0.79
3.	I feel prepared to teach narrative texts (in-service).	0.78
4.	I feel prepared to teach all types of texts (in-service).	0.76
5.	I feel prepared to teach writing to inform (in-service).	0.76
6.	I feel prepared to teach writing (in-service).	0.72
7.	If a student masters a new writing concept quickly, this is because I knew the necessary steps in teaching this concept.	0.70
8.	If I try really hard, I can help students with the most difficult writing problems.	0.68
9.	I write for relaxation, entertainment, or pleasure.	0.64
10.	I like to write.	0.64

Table B2. Regression results with the top variables predicting factor 1 of use of EBWPs (strategy teaching) and their weight in the main component

	Variable	t1
1.	If a student does not remember something I have taught him/her about writing, I would know how to help him/her to increase his/her retention in the next lesson.	0.84
2.	I'm an effective teacher when I teach writing.	0.79
3.	I feel prepared to teach narrative texts (in-service).	0.78
4.	I feel prepared to teach all types of texts (in-service).	0.76
5.	I feel prepared to teach writing to inform (in-service).	0.76
6.	I feel prepared to teach writing (in-service).	0.72
7.	If a student masters a new writing concept quickly, this is because I knew the necessary steps in teaching this concept.	0.70
8.	If I try really hard, I can help students with the most difficult writing problems.	0.68
9.	I write for relaxation, entertainment, or pleasure.	0.64
10.	I like to write.	0.64

Table B3. PLS regressions results with top variables predicting factor 2 of use of EBWPs (practices based on assessment) and their weight in the main component

	Variable	t1
1.	Preparedness to teach informative texts/Pre-service preparedness	0.89
2.	Preparedness to teach writing/Pre-service preparedness	0.86
3.	Preparedness to teach narrative texts/Pre-service preparedness	0.85
4.	Preparedness to teach all types of texts/Pre-service preparedness	0.79
5.	Preparedness to teach all types of texts (pre-service)	0.73
6.	Preparedness to teach informative texts (pre-service)	0.73
7.	Preparedness to teach math/Pre-service preparedness	0.73
8.	Preparedness to teach narrative texts (pre-service)	0.71
9.	Preparedness to teach reading/pre-service preparedness	0.71
10.	Preparedness to teach persuasive/opinion texts (pre-service)	0.70