Analysis of a survey on the teaching of writing in compulsory education: Teachers' practices and variables*

Análisis de una encuesta sobre la enseñanza de la escritura en la educación obligatoria: prácticas y variables del profesorado

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Abstract:

In this article, we analyse the reported use of evidence-based practices for the teaching of writing by teachers in compulsory education. These practices were taken from a review of meta-analysis studies in the field of writing instruction. This study accounts for differences throughout compulsory education in the use of these instructional practices. We also analyse the effects of teachers' variables such as personal efficacy, general efficacy, attitudes and, preparation, on the instructional practices they use. Five-hundred and fifteen teachers of Spanish language and literature from different primary and high schools in Castilla y León participated in the study. Participants completed an online questionnaire about how often they use evidence-based practices taken from an exhaustive review of meta-analyses in the field of writing instruction. In addition, we took measures of teachers' personal and general efficacy, their attitudes towards writing

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and the teaching of writing, and their level of preparation to teach writing. The results show that teachers make little use of this type of instructional practice, especially in high school. High school teachers reported significantly lower levels of personal efficacy and preparation for the teaching of writing than teachers in primary grades. Teachers' personal efficacy level, their preparation for the teaching of writing, and their attitudes towards writing and its teaching influence their use of these instructional practices.

Keywords: teaching of writing, teacher, primary education, high school, evidence-based practices, teacher efficacy, attitudes towards writing, level of preparation.

Resumen:

Se analiza el uso que el profesorado de educación obligatoria afirma hacer en su enseñanza de la escritura de prácticas instruccionales efectivas derivadas de una revisión de meta-análisis en el ámbito de la instrucción en escritura, considerando sus diferencias a lo largo de la educación obligatoria y la influencia que tienen variables del docente, como su eficacia, sus actitudes y su preparación. Participaron 515 docentes de Lengua Castellana y Literatura de diferentes colegios e institutos de enseñanza secundaria de Castilla y León. Se aplicó de forma *on-line* un cuestionario sobre la frecuencia de uso de prácticas instruccionales cuya eficacia ha sido contrastada a nivel científico, derivadas de una exhaustiva revisión de estudios de meta-análisis de la instrucción en escritura. Se tomaron adicionalmente medidas sobre las creencias de eficacia personal y general del profesorado, las actitudes hacia la escritura y su enseñanza y el nivel de preparación percibido por los docentes para la enseñanza de la escritura. Los resultados muestran un uso infrecuente de dichas prácticas instruccionales, especialmente en la Educación Secundaria Obligatoria. Los docentes de la Educación Secundaria Obligatoria muestran niveles de eficacia personal y de preparación para la enseñanza de la escritura significativamente menores que el profesorado de Educación Primaria. El nivel de eficacia personal, el nivel de preparación para la enseñanza de la escritura y las actitudes hacia la escritura y su enseñanza influyen en el uso que los docentes afirman hacer de estas prácticas instruccionales.

Descriptores: enseñanza de la escritura, profesorado, educación primaria, educación secundaria obligatoria, prácticas efectivas, auto-eficacia docente, actitudes hacia la escritura, preparación percibida.

1. Introduction

Linguistic competence is recognised as a key competence for personal fulfilment, active citizenship, social inclusion, and employment (European Union, 2006). Linguistic competences include writing competence, command of which is fundamental in contemporary society for personal growth in various areas of life (Graham et al., 2015; Graham & Perin, 2007). In the field of education in particular, writing is a basic tool both for

learning in other subjects and for showing the learning students have acquired when evaluating their learning (Graham et al., 2015). In light of this, there is growing international concern about the large numbers of students who have not acquired adequate written competence by the end of their education (Kuhlemeier et al., 2013; National Center for Education Statistics, 2012; Office for Standards in Education, 2005). In Spain, the most recent reports published by the Ministry of Education show low performance by students in writing, both in primary education and in compulsory secondary education (Ministerio de Educación, 2010, 2011). Students' low performance in written competence raises questions about how writing is taught at school and how much the teaching of it uses instructional practices of scientifically proven effectiveness; a line of research of which the present study forms a part. A number of studies at an international level that focus on the teaching of writing in primary education (Brindle et al., 2016; Coker et al., 2016; Cutler & Graham, 2008; Gilbert & Graham, 2010 in the USA; De Smedt et al., 2016, in Belgium; Rietdijk et al., 2018, in the Netherlands; Dockrell et al., 2015, in the United Kingdom; Pacheco et al., 2009, in Spain) and in secondary education (Graham et al., 2014; Kiuhara et al., 2009, in the USA). However, as far as we are aware, no similar studies have been performed in Spain that consider primary and secondary education and analyse the extent to which teachers report using instructional practices for teaching of writing, the efficacy of which has been proven in meta-analysis studies. An analysis of this sort would help rule out low performance or difficulties in learning of writing being the consequence of inadequate instruction, in line with the preventative focus linked to the now-prevalent response to intervention model (Arrimada et al., 2018).

1.1. Review of meta-analyses of writing instruction

Meta-analyses are vital to determine the efficacy of an educational practice. They provide an appraisal of the scale of the effectiveness of different educational practices, assessed through various studies, based on a comparable shared metric: effect size (Lipsey & Wilson, 2001).

By reviewing academic literature concerning meta-analyses published in the educational field of writing in recent years, we have identified a total of five meta-analyses published since 2007 (see Graham & Harris, 2018; Graham et al., 2015; Graham et al., 2012; Graham & Perin, 2007; Koster et al., 2015) (See Annexe I). This search considered meta-analyses that focus on instruction in writing as a teaching and learning objective, excluding ones centred on writing as a tool for learning. We also excluded meta-analyses on intervention in writing with students with learning disorders or low performance in writing.

After selecting the meta-analyses to be studied, we identified the effective instructional practices derived from them. These were divided into the two categories established by Graham and

Harris (2018) in their recent meta-analysis of the meta-analyses, differentiating between *practices relating to the teaching of different writing skills or dimensions* and *practices relating to different supports or frameworks for teaching it*. For each of these, we analysed the year groups for which their effectiveness had been corroborated and the effect size obtained in the different meta-analyses (Annexe I). Based on this review, we identified highly effective instructional practices for improving written competence at both educational stages (primary and secondary), which have an effect size equal to or greater than 0.7, such as: *explicit instruction in planning and review strategies*, *instruction in vocabulary relating to different text types*, *providing feedback to students about their texts*, and *setting objectives before writing the text*. It is also apparent that most of the effective practices endorsed in primary education are also endorsed in secondary education, except for *instruction in transcription skills* and *instruction in creativity*. Regarding *grammar instruction*, although the results indicate that it is not effective for improving students' written competence, we should note that this practice comprises the control instruction compared with other instructional focuses, and so we have chosen to include it in the analysis. Finally, regarding *process focus*, although it was included in the analysis, the results regarding its effectiveness are inconclusive given that the effect sizes obtained in the different meta-analyses analysed range from negative values of -0.05 to mean values of 0.48.

1.2. Teachers' variables that affect teaching of writing

When analysing the teaching of writing, various pieces of research have considered the influence different teacher's variables can have on it.

One of these variables is the teacher's efficacy in teaching of writing. According to Graham et al. (2001), this has been operationalised in two dimensions: personal efficacy, relating to teachers' confidence in their own knowledge and teaching skills, and general efficacy, which relates to their ability to use this knowledge to confront limitations deriving from contextual factors. The results of previous studies show that teachers' level of personal efficacy is related to reporting a greater use of effective practices supported by meta-analysis studies for teaching of writing (Brindle et al., 2016; Gilbert & Graham, 2010). However, no such relationship has been found when it comes to the level of general efficacy. It is important to note that these conclusions derive from studies done in the USA with teachers of years 3-6 of primary school. In Spain, only the study by Pacheco et al. (2009), which used a sample of 137 early-years and primary teachers, showed that the teachers' levels of personal and general efficacy determined the type of activities relating to writing that they use in class and the writing skills on which they work. Nonetheless, there are no data on how this variable influences teachers' reported use of instructional practices whose efficacy is proven by meta-analysis studies throughout compulsory education.

Another modulating variable is attitudes towards writing and the teaching of it, referring to the degree of importance teachers give to the teaching of writing and to writing as a skill (Brindle et al., 2016). The results of previous studies show that some positive attitudes are related to a greater use of instructional practices in writing whose efficacy is proven by meta-analysis studies. However, this conclusion derives from a single study from the USA with teachers in years 3-4 of primary school (Brindle et al., 2016).

Regarding the relationship between teachers' perceived level of preparation for teaching of writing and their reported use of effective instructional practices, the conclusions of previous studies from the USA are contradictory. Previous studies have shown that teachers who feel better prepared for teaching to write use effective practices whose effectiveness is backed by meta-analyses more frequently in years 3-6 of primary school and in the first years of secondary school (Brindle et al., 2016; Gilbert & Graham, 2010; Graham et al., 2014). Nonetheless, there was also empirical evidence for the absence of a relationship in teachers in the last years of secondary education (Kiuhara et al., 2009).

2. This Study

This study has three objectives. The first is to analyse the frequency of use of instructional practices whose efficacy for teaching of writing has been corroborated by meta-analysis studies reported by teachers from primary education and compulsory secondary education in Castilla y León. Possible differences are analysed according to three educational levels: years 1-3 of primary school, 4-6 of primary school, and 1-4 of secondary school. Secondly, we analyse teachers' reported levels of efficacy, attitudes, and level of preparation for teaching of writing, and the differences between them according to the three educational levels listed above. Finally, we analyse the influence these teacher's variables have on their reported use of these instructional practices, analysing whether this influence is maintained in the different educational levels studied.

To the best of our knowledge, this is the first study to analyse teachers' reported use of instructional practices for teaching writing, derived from an empirical review of meta-analyses of the field of writing, in Spain. Likewise, it uses a broad representative sample that covers all of compulsory education (primary education and compulsory secondary education), identifying three levels that allow comparison with other international educational settings by differentiating between years 1-3 of primary school, years 4-6 of primary school, and compulsory secondary education. Furthermore, the breadth of the sample makes it possible to analyse for the first time whether the influence of the teacher's variables analysed on the teachers' reported use of effective practices for teaching writing is consistent across the different educational levels analysed; this would allow us to cast some light on the existing gaps in knowledge in the scientific literature.

3. Method

This study used a survey methodology, administering a questionnaire to Spanish compulsory education teachers of Spanish language and literature in schools in Castilla y León. To administer the questionnaire, we used intentional sampling. We contacted by telephone the management of all of the schools in Castilla y León that deliver the primary and compulsory secondary educational stages. To do this, we used a list of schools in this Autonomous Region available on the website of the Education Department of the Junta de Castilla y León (http://www.educa.jcyl.es/es). We telephoned the management of these schools and asked them to collaborate by distributing and forwarding an email featuring information about the study, a link to access the survey, and instructions for completing it to all of their staff who teach Spanish language and literature at primary and/or compulsory secondary education level. Those who voluntarily chose to participate in the study could then complete the survey.

3.1. Participants

515 teachers of Spanish language and literature in primary education and compulsory secondary education from the nine provinces of Castilla y León participated in the study. Table 1 shows their distribution by educational level, gender, academic qualifications, the ownership of the school, the province where they teach, years of teaching experience, and the number of students in their group/class.

3.2. Instruments

We used Google Forms to design an online questionnaire with four sections[1].

— Section 1. Sociodemographic information.

This section collected descriptive data for the sample that are included in Table 1. We also included two items relating to teachers' perceived level of preparation for teaching of writing during their university training and afterwards through specialist courses, using the answer scale: none (1), minimal (2), adequate (3), and high (4).

— Section 2. Teachers' practices for teaching of writing.

We evaluated how often teachers reported using 20 effective instructional practices in the teaching of writing derived from the review of meta-analysis studies carried out in the instructional area of writing (see Annexe I).

Of these 20 items, 11 related to the teaching of different dimensions of writing and nine focused on different supports for teaching it (see Table 2). The response scale was: never (1), several times a year (2), once a month (3), several times a month (4), once a week (5), several times a week (6), and daily (7). The Cronbach's alpha was .93, indicating that the questionnaire used had high reliability.

— Section 3. Teacher efficacy in teaching of writing.

TABLE 1. Distribution of the sample by educational level.

Variable	Educational Level							
	1-3 Primary (n = 167; 32.4%)		4-6 Primary (n = 209; 40.6%)		1-4 Compulsory Secondary (n = 139; 27%)		TOTAL (N = 515)	
	N	%	N	%	N	%	N	%
Gender								
Male	17	10.2	56	26.8	46	33.1	119	23.1
Female	150	89.8	153	73.2	93	66.9	396	76.9
Qualification								
Diploma	121	72.5	134	64.1	7	5.0	262	50.9
Bachelor's Degree	38	22.8	63	30.1	117	84.2	218	42.3
Master's	6	3.6	6	2.9	8	5.8	20	3.9
Doctorate	1	0.6	3	1.4	5	3.6	9	1.7
No response	1	0.6	3	1.4	2	1.4	6	1.2
Ownership of the school								
Public	140	83.8	173	82.8	93	66.9	406	78.8
Private-State Assisted	27	16.2	36	17.2	46	33.1	109	21.2
Province								
Ávila	23	13.8	16	7.7	20	14.4	59	11.5
Burgos	18	10.8	23	11.0	20	14.4	61	11.8
León	35	21.0	33	15.8	19	13.7	87	16.9
Palencia	13	7.8	13	6.2	13	9.4	39	7.6
Salamanca	21	12.6	22	10.5	16	11.5	59	11.5
Segovia	6	3.6	25	12.0	15	10.8	46	8.9
Soria	8	4.8	10	4.8	8	5.8	26	5.0
Valladolid	36	21.6	46	22.0	13	9.4	95	18.4
Zamora	7	4.2	21	10.0	15	10.8	43	8.3
Years' experience of teaching								
M	18.83		20.53		17.43		19.14	
SD	9.41		9.98		10.09		9.89	
Number of students in group-class								
M	16.13		17.53		22.76		18.46	
SD	7.47		7.06		7.47		7.76	

Source: Own elaboration.

The Spanish version of the Teacher Efficacy Scale for Writing questionnaire, which was developed by the research team of Dr Steve Graham in 2001, was used. It comprises 15 items: 10 relating to personal efficacy (e.g. "When students' writing performance improves, it is usually because I found better ways of teaching that student") and 5 relating to general efficacy (e.g. "The hours in my class have little influence on students' writing performance compared to the influence of their home environment"). The answer scale was: strongly disagree (1), moder-

ately disagree (2), slightly disagree (3), slightly agree (4), moderately agree (5), and strongly agree (6).

The original Teacher Efficacy Scale for Writing questionnaire (Graham et al., 2001) had a Cronbach's Alpha of .84 for the personal efficacy dimension and .69 for the general efficacy dimension, while the validated Spanish version had Cronbach's alphas of .77 and .73 respectively. The values obtained in this study were .77 for personal efficacy and .75 for general efficacy, which indicates adequate reliability.

— Section 4. Teachers' attitudes towards writing and the teaching of it.

We used a translation of the questionnaire by Brindle et al. (2016). This comprises 7 items (e.g. "I am a good writer", "I like teaching writing"), and uses as its answer scale: strongly disagree (1), moderately disagree (2), slightly disagree (3), slightly agree (4), moderately agree (5), and strongly agree (6).

The analyses by Brindle et al. (2016) showed a single factor with a Cronbach's alpha of .87, a very similar value to the one obtained in this study (.83), indicating adequate reliability of the instrument used.

3.3. Procedure

We carried out the data collection for the study during the second half of the 2017-2018 school year. To do this, we telephoned the management of all of the schools in Castilla y León that provide primary and compulsory secondary education to explain the aim of the study to them and ask them to agree to participate. The centres that agreed to participate received an email explaining the study, a link to access the survey, and instructions on how to complete it. The management of the centres forwarded the email to all of their Spanish language and literature teachers so that any of them who voluntarily decided to participate in the study could complete the questionnaire. One month after contacting all of the schools, we sent a reminder email including the link to the survey again, the instructions on how to complete it, and the deadline for being able to complete it. The link to the online survey was active from January to April.

3.4. Statistical analysis

To analyse the differences between educational levels in the frequency of use of practices for teaching writing and in the teacher's variables analysed, we carried out one-way analysis of variance (ANOVA) with three comparison groups: years 1-3 of primary school, 4-6 of primary school, and 1-4 of secondary school. To control the risk of type I errors, we used the Bonferroni technique, considering that there were statistically significant differences when the p value was lower than .0025 in the case of instructional practices (p = .05/20) and when the p value was lower than .013 in the case of the teacher's variables (p = .05/4). In cases where we found significant differences, we performed post-hoc analyses using the Tukey HSD technique with the Bonferroni correction and we considered that there were statistically significant differences when the p value

was lower than .017, both in the case of the instructional practices (p = .05/3) and in teacher's variables (p = .05/3). It was not obligatory to respond to all of the items in the survey and so not all of the participants answered all of them. Therefore, we performed the ANOVA analyses on the basis of the responses obtained and so the number of cases (n) for each instructional practice and teacher's variable analysed are stated.

To determine the influence of the teacher's variables analysed on instructional practice, we carried out multiple regression analyses, taking educational level, the levels of and general efficacy, attitudes, and the level of preparation for teaching of writing as predictor variables. Before the analysis, we eliminated the participants who did not reply to any of the items leaving a final subsample of N = 436. In the first phase of the analysis, we introduced the educational level and the four modulator variables of the teacher into the model (model 1). To this end, we made the educational level variable a dummy variable taking years 1-3 of primary school as the reference educational level. In the second phase, we introduced interaction between the educational level and the modulator variables of the teacher into the model (model 2). The variables introduced into this model were centred on the mean.

4. Results

Firstly, we display the results relating to how often teachers report using instructional practices supported by meta-analysis studies for teaching of writing and differences by educational level. Secondly, we show the results of the modulator variables analysed along with their differences by educational level. Finally, we analyse the influence of these modulator variables on the use of the instructional practices.

4.1. Use of effective teaching practices in the teaching of writing

As Table 2 shows, teachers report making infrequent use of these instructional practices independently of educational level. None of the practices analysed were used on a daily basis. The most used, with a frequency ranging from several times a week to once a week, are those relating to the teaching of spelling and grammar. The remaining practices analysed are used between once a week and once a month, except for teaching of writing through new technologies and process focus, which are used between several times a year and once a month.

We found statistically significant differences by educational level in 13 of the 20 instructional practices analysed.

The pairwise comparison analyses showed that the compulsory secondary education teachers reported teaching the following writing dimensions less often than all of the primary teachers: transcription skills (spelling, $p < .001$, $d \geq .48$; handwriting, $p < .001$, $d \geq .62$; and typing, $p \leq .003$, $d \geq .46$), planning strategies ($p \leq .004$, $d \geq .36$) and revision strategies ($p < .001$, $d \geq .43$), and fostering students' creativity ($p \leq .002$, $d \geq .38$).

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TABLE 2. Descriptive statistics for use of instructional practices for teaching of writing and differences by educational level.

Practice	TOTAL		1-3 PRIMARY		4-6 PRIMARY		1-4 SECONDARY		F	Partial eta squared
Dimensions	*N*	*M* (*SD*)	*n*	*M* (*SD*)	*n*	*M* (*SD*)	*n*	*M* (*SD*)		
Handwriting	509	5.57 (1.40)	164	5.95 (1.24)	207	5.66 (1.28)	138	4.99 (1.57)	19.57	.07***
Grammar	510	5.18 (1.41)	165	5.14 (1.55)	207	5.28 (1.34)	138	5.09 (1.34)	.84	.003
Planning strategies	506	4.79 (1.59)	165	4.87 (1.61)	206	5.05 (1.46)	135	4.29 (1.64)	10.16	.04***
Revision strategies	505	4.71 (1.76)	164	4.91 (1.87)	205	4.93 (1.62)	136	4.14 (1.74)	10.04	.04***
Vocabulary on different text types	505	4.70 (1.72)	163	4.86 (1.85)	207	4.85 (1.63)	135	4.27 (1.64)	5.82	.023
Different text structure types	504	4.23 (1.52)	161	4.13 (1.66)	207	4.33 (1.41)	136	4.14 (1.74)	.80	.003
Fostering creativity before writing texts	508	4.22 (1.77)	162	4.63 (1.74)	207	4.29 (1.67)	139	3.63 (1.80)	12.74	.05***
Handwriting	504	4.00 (2.36)	163	5.33 (1.98)	204	3.91 (2.29)	137	2.56 (1.99)	64.21	.20***
Observation/emulation of textual models	507	3.84 (1.54)	163	3.57 (1.64)	207	3.83 (1.41)	137	4.18 (1.57)	5.98	.023
Combining phrases	503	3.45 (1.97)	158	3.20 (2.02)	207	3.70 (1.94)	138	3.35 (1.93)	3.20	.013
Typing	508	1.80 (1.39)	164	1.79 (1.33)	205	2.17 (1.63)	139	1.27 (0.82)	18.36	.07***
Supports										
Providing more writing time	510	4.66 (1.53)	163	5.06 (1.51)	208	4.77 (1.44)	139	4.04 (1.50)	18.53	.07***
Setting objectives before writing texts	507	4.60 (1.78)	161	4.89 (1.86)	208	4.72 (1.69)	138	4.10 (1.72)	8.18	.03***
Providing feedback (peer/adult)	503	4.37 (1.83)	162	4.74 (1.92)	207	4.47 (1.69)	134	3.75 (1.76)	11.76	.05***
Collaborative practice	505	3.97 (1.67)	161	4.10 (1.65)	207	4.27 (1.60)	137	3.37 (1.65)	13.12	.05***
Content search/organisation before writing texts	503	3.74 (1.54)	162	3.59 (1.61)	203	4.04 (1.53)	138	3.45 (1.39)	7.32	.03**
Sensory experiences/imaginary situations before writing texts	504	3.74 (1.71)	163	4.24 (1.69)	204	3.79 (1.66)	137	3.08 (1.60)	18.40	.07***
Self-evaluation with specific criteria	505	3.04 (1.73)	164	2.98 (1.90)	205	3.27 (1.66)	136	2.74 (1.56)	4.03	.016
Process focus	509	2.81 (1.33)	162	2.71 (1.44)	208	3.04 (1.29)	139	2.58 (1.20)	5.81	.022
Teaching of writing using ICT	508	2.76 (1.63)	162	2.52 (1.60)	208	3.22 (1.65)	138	2.34 (1.46)	15.56	.06***

* ≤ .0025 ** ≤ .001 *** ≤ .0001
Source: Own elaboration.

Similarly, the compulsory secondary education teachers reported using the following supports for teaching of writing less frequently than the primary teachers: collaborative work on writing texts ($p < .001$, $d \geq .44$), providing students with more time for writing ($p < .001$, $d \geq .50$), setting writing objectives before composing the text ($p \leq .004$, $d \geq .37$), providing students with feedback about their texts ($p \leq .001$, $d \geq .42$), and doing activities relating to sensory experiences or imaginary situations before writing the text ($p < .001$, $d \geq .44$). With regards to doing search activities and organising content before writing texts ($p \leq .014$, $d \geq .29$) and teaching writing through technologies ($p < .001$, $d \geq .43$), the pairwise comparison analyses showed that the compulsory secondary education teachers and teachers from years 1-3 of primary education reported using this type of practice less frequently than those from years 4-6 of primary.

4.2. Teacher's variables modulating the teaching of writing

As Table 3 shows, regardless of their educational level, the teachers analysed display a moderate level of personal efficacy, a low level of general efficacy, good attitudes, and a minimal level of preparation for teaching writing.

We found statistically significant differences by educational level in the level of personal efficacy and the level of preparation.

The pairwise comparison analyses showed that compulsory secondary education teachers reported a lower level of personal efficacy than teachers from years 4-6 of primary ($p = .003$, $d = .37$). These differences were not found with regards to teachers from years 1-3 of primary ($p = .022$).

Similarly, compulsory secondary education teachers reported a lower level of

TABLE 3. Descriptors of the teacher's variables and differences by educational level.

	TOTAL		1-3 PRIMARY		4-6 PRIMARY		1-4 SECONDARY		F	Partial eta squared
Variable	N	M (SD)	n	M (SD)	n	M (SD)	n	M (SD)		
Personal efficacy	507	4.58 (0.59)	164	4.61 (0.60)	207	4.64 (0.53)	136	4.43 (0.63)	5.83	.02*
General efficacy	507	2.61 (0.84)	165	2.62 (0.82)	206	2.64 (0.85)	136	2.56 (0.84)	.39	.002
Attitudes	506	5.01 (0.74)	164	5.10 (0.66)	207	4.96 (0.79)	135	5.0 (0.73)	1.63	.006
Preparation	515	2.43 (0.62)	167	2.51 (0.57)	209	2.51 (0.56)	139	2.20 (0.72)	12.83	.05***

* ≤ .013 ** ≤ .001 *** ≤ .0001
Source: Own elaboration

preparation than all of the primary education teachers ($p < .001$, $d \geq .47$).

4.3. Influence of the teacher's variables on use of effective instructional practices

The results of the regression analysis (Table 4) showed that the teacher's variables analysed together explain 12% of the variance in the use teachers reported of instructional practices for teaching writing. However, only the level of personal efficacy, attitudes, the level of preparation, and the compulsory secondary educational level significantly contributed to the use of these practices, with the contribution of the compulsory secondary educational level being negative. The interaction between educational level and the teacher's variables analysed did not involve an increase in the predicted variance (model 2), suggesting that the influence of these variables is maintained across all of the educational levels analysed.

TABLE 4. Regression analysis taking instructional practices as the predictor variable.

Models	B	Beta	*SE*	*t*	*p*
Model 1					
***4-6 Primary**	0.056	.026	0.112	0.496	.620
***Compulsory Secondary**	-0.423	-.176	0.125	-3.375	.001
Personal Efficacy	0.183	.100	0.090	2.040	.042
General Efficacy	0.053	.041	0.059	0.900	.369
Attitudes	0.247	.170	0.071	3.481	.001
Training	0.330	.188	0.084	3.929	< .001
Model 2					
4-6 Primary	0.071	.033	0.115	0.622	.535
Compulsory Secondary	-0.421	-.175	0.129	-3.271	.001
Personal efficacy	0.202	.110	0.147	1.376	.170
General efficacy	0.107	.081	0.109	0.977	.329
Attitudes	0.139	.096	0.138	1.002	.317
Preparation	0.408	.233	0.167	2.448	.015
4-6 Primary × Personal efficacy	-0.209	-.068	0.219	-0.954	.341
4-6 Primary × General efficacy	-0.089	-.044	0.144	-0.619	.536
4-6 Primary × Attitudes	0.212	.101	0.176	1.209	.227
4-6 Primary × Preparation	-0.069	-.024	0.215	-0.323	.747
Compulsory Secondary × Personal efficacy	0.127	.039	0.222	0.574	.566
Compulsory Secondary × General efficacy	-0.095	-.038	0.156	-0.606	.545
Compulsory secondary × Attitudes	0.081	.029	0.196	0.413	.680
Compulsory secondary × Preparation	-0.144	-.051	0.220	-0.652	.515

* The educational level variable was made a dummy variable taking years 1-3 of primary school as the reference educational level.
Source: Own elaboration.

5. Conclusions

Based on the results of this study, we can draw the following conclusions. Firstly, compulsory education teachers in Spain report little use in teaching of writing of instructional practices supported by meta-analysis studies; this result is consistent with what previous studies in international contexts have found (see Brindle et al., 2016; Gilbert &

Graham, 2010; Graham et al., 2014; Kiuhara et al., 2009). In turn, when comparing educational stages we found that teachers in compulsory secondary education seem to make least use of this type of instructional practices for writing. This could reflect a change in how teachers conceptualise writing, as it changes from being regarded as an object of study in primary education to a tool for use in studying in secondary education (Fidalgo et al., 2014). However, many official reports have underlined the high number of students in secondary education who have still not achieved adequate written competence (Ministerio de Educación, 2011). Ultimately, although scientific knowledge has provided a solid scientific basis for effective instructional practices for improving students' written competence in the different educational stages, as corroborated in the review of meta-analyses in the present study, the results obtained appear to suggest a limited transference of this scientific knowledge to the educational sphere. One possible solution to this shortcoming in transference could be linked to the promotion of professional development programmes for teachers regarding instruction in writing that not only provide better knowledge of these instructional practices (Koster et al., 2017), but which also enable teachers to achieve a command of them that enables practical application of them and their adaptation to the specific needs and characteristics of class groups autonomously and independently; a key aspect for their transfer to the school context (Finlayson & McCrudden, 2020).

On the other hand, of all of the instructional practices analysed, the ones teachers report using most frequently are generally those relating to command of low cognitive level writing processes, in line with what is reported in previous studies in other educational settings (Cutler & Graham, 2008; De Smedt et al., 2016; Gilbert & Graham, 2010). This could have a negative impact on the written competence of students in Spain given that the scientific evidence suggests that acquiring a command of written competence not only requires automation of low cognitive level processes, but also the attainment of a self-regulated command of high cognitive level processes, such as planning and revising texts (Berninger & Winn, 2006; Salvador Mata & García Guzmán, 2009). The greater emphasis teachers give to low cognitive level processes in teaching of writing could explain the limitations of students' metacognitive knowledge in Spain, which is mainly linked to the mechanical processes of writing (García & Fidalgo, 2003), or the limited and ineffective use students make of cognitive and self-regulation strategies in their writing process (López et al., 2019; Fidalgo et al., 2014). Given this, there appears to be a vital need for teachers to place more emphasis on the high cognitive level processes involved in textual composition when teaching writing, both in primary education and compulsory secondary education. Accordingly, of all of the instructional focuses centred on improving students' textual composition, strategic and self-regulated instruction is the instructional focus that the different meta-analyses have corroborated as being most effective for

improving students' written competence at different educational stages (Fidalgo et al., 2008; Torrance et al., 2015), including in the initial years of primary education when automation of low cognitive level processes has still not been achieved (Arrimada et al., 2019). Furthermore, there are empirical reviews that demonstrate the efficacy of this instructional focus on students' written performance, including when the instruction is implemented by the teacher, although, in this case it is necessary to provide prior preparation and external support before and during its implementation (Finlayson & McCrudden, 2020); hence the importance of fostering the application of professional development programmes for teachers.

Moreover, in relation to the analysis of teachers' modulating variables, we can draw the following conclusions. Firstly, in line with previous studies, the personal efficacy dimension and attitudes towards writing and teaching of it have a positive relationship with effective instructional practices for teaching of writing (Brindle, et al., 2016; Gilbert & Graham, 2010; Graham et al., 2014), a relationship we also observed in the secondary education stage. For its part, the influence of teachers' perceived level of preparation for teaching of writing in their instructional practice extended to all of the educational levels analysed, something that helps clarify the influence of this variable throughout both primary and secondary education. Similarly, the comparative analysis of the two educational stages in this study makes it possible to corroborate that compulsory secondary education teachers display lower levels of personal efficacy and preparation for teaching of writing compared with teachers from primary education.

Given the important effect these teacher's variables have on the use of effective instructional practices for teaching of writing throughout compulsory education, and consequently, on the students' writing performance, it is necessary to consider them both when analysing teaching practice for teaching of writing and in the future design of professional development programmes for teachers. If teachers display a high level of personal efficacy, it is more likely that they will normally implement this type of instructional practice in their group-class since belief in self-efficacy shapes an individual's performance, effort, and persistence when faced with this task (Zimmerman, 2000). This also happens in relation to attitudes towards writing and the teaching of it since if teachers regard writing skills as important, and so value teaching of them, it is to be expected that they will consider and apply effective new practices to teach students and foster their writing performance (Brindle et al., 2016). In this sense, the moderate level of personal efficacy of teachers in Spain combined with the positive attitude they display towards writing and teaching of it would, for its part, favour the inclusion of these instructional practices in their ordinary practice, with a consequent expected positive effect on students' writing performance. However, as well as a good predisposition and a high level of efficacy for teaching of writing, teachers must also have a broad

knowledge of and preparation in the use and implementation of these instructional practices (Graham & Harris, 2018). On this line, the low level of preparation reported by the teachers analysed in this study is worrying.

Given all of this, we note the need to include professional preparation regarding the implementation of this type of empirically validated instructional practices, not just, as has been suggested, in teachers' ongoing professional development programmes but also in university syllabuses with special attention to secondary teaching; this would partially help cover some of the gaps in professional preparation observed in different school subjects, particularly in secondary teaching master's programmes (Jover, 2015; Martín Vegas, 2015; Santos Rego & Lorenzo Moledo, 2015).

Finally, before ending we should note some areas for consideration in the present study. A first one relates to the fact that the study sample was limited to a single Spanish Autonomous Region, which could limit the generalisability of the results. However, this seems unlikely for several reasons. The results obtained in Spain fit what is stated in previous studies carried out in other countries. Furthermore, in Spain, at a legislative level, there are minimum teaching requirements regarding objectives, competences, content, standards and evaluable learning outcomes, and evaluation criteria that must be fulfilled in each educational stage in all autonomous regions (Primary Education Royal Decree 126/2014, of 28 February; Compulsory Secondary Education and Baccalaureate Royal Decree 1105/2014, of 26 December). Similarly, an exploratory analysis of the legislative measures that implement the general curriculum in different autonomous regions suggests that the treatment does not differ by region. A second matter to take into account in this study concerns the type of sampling used. The fact the final study sample comprised teachers who voluntarily chose to participate could result in limitations concerning representativeness, as it could be that the teachers who participated are ones who have a high motivation towards teaching of writing. Nonetheless, the results provided in this sense relating to their teaching self-efficacy or their attitudes towards writing do not appear to support this explanation. Another aspect of the present study to consider relates to the nature of the survey design used and the fact that what was analysed was not the teachers' actual practice in the teaching of writing but what they say they do in their practice. Although the study represents a first step in the analysis of the teaching of writing in Spain, we suggest as a future line of research carrying out complementary observational studies to make it possible to go beyond frequency of use and analyse how teachers implement these instructional practices, considering, in turn, the influence of the social context in which teaching takes place and the interactions and dynamics in class.

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ANNEXE 1. Review of meta-analysis studies of the educational area of writing.

Practice \ Study	Graham & Harris, 2018		Graham et al., 2015		Graham et al., 2012		Graham & Perin, 2007		Koster et al., 2015	
Dimensions	Years	ES	Years	ES	Years	ES	Years	ES	Years	ES
Instruction in planning and review strategies	2-10	1.26	2-8	1.00	2-6	1.02	4-10	0.70	4-6	0.96
Instruction in vocabulary about different text types	3-8	0.78	3-8	0.78						
Fostering creativity before writing texts	3-6	0.76			3-6	0.70				
Instruction in transcription skills: handwriting, spelling, and typing	1-3	0.55	1-3	0.55	1-3	0.55				
Instruction in combining phrases	4-9	0.50	4-7	0.56			4-11	0.50		
Instruction in different text structure types	2-10	0.44	2-6	0.41	2-6	0.59	4-10	---	4-6	0.76
Observation/emulation of examples of text models	3-12	0.30	3-8	0.40			4-12	0.25		
Instruction in grammar	3-11	-0.17			3-6	-0.41	4-11	-0.34	4-6	-0.37
Supports										
Setting objectives before writing texts	4-8	0.80	4-8	0.80	4-6	0.76	4-8	0.70	4-6	2.03
Providing feedback to students about their texts (adult/peer)	2-6/	0.87/ 0.77			2.º-6.º 2.º-6.º	0.80/ 0.37	5.º-12.º	---	4.º-6.º	0.88
Collaborative practice in writing texts	2-12	0.74	2-8	0.66	2-6	0.89	4-12	0.75	4-6	0.59
Self-evaluation of texts based on specific criteria	2-12	0.51							4-6	0.43
Content search/organisation activities before writing texts	2-9	0.48	2-6	0.54	2-6	0.54	4-9	0.32	4-6	0.13
Teaching of writing through ICT	1-12	0.44	1-8	0.47	1-6	0.47	4-12	0.55		
Activities relating to sensory experiences/imaginary situations before writing texts	3-12	0.37					7-12	0.32		
Providing students with more writing time	2-8	0.24	2-8	0.24	2-6	0.30	4-8	---		
Process focus	1-6 6-12	0.48 0.25	1-8	0.37			4-6 7-12	0.27 -0.05	4º-6º	-0.25

Source: Own elaboration.

Notes

[1] The questionnaire included a fifth section regarding teachers' theoretical orientations in the teaching of writing using the Writing Orientation Scale questionnaire developed by Graham et al. (2002). However, the Cronbach's alpha obtained for this was very low (alpha < .60). We performed factorial analyses, but the results obtained did not fit the original structure of the scale, and so we concluded that the scale did not work in our sample and we decided to eliminate these data from the analysis.

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