Administration and teachers: Evidence-based educational practices[1]

La Administración y el profesorado: Prácticas educativas basadas en la evidencia

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Abstract

In the implementation, by teachers, of evidence-based educational practices, the Administration and national and international educational organizations have a fundamental role as generators of educational policies, regulations, reports and procedures for financing and incentives. Considering this, our research aims to study whether these types of institutions are true benchmarks for teachers in terms of the implementation of evidence-based educational practices, and to offer basic guidelines for improving the quantity and quality of these practices by teachers. For this, a quantitative study is developed through a questionnaire carried out to 462 teachers in Spain (Barcelona and Community of Madrid) in the Kindergarden and Elementary School stages. The results show that public administration and national and international organizations are not references for teachers when implementing evidence-based practices and are not sources of information that they consider relevant. We also identify the age and ownership factor of the educational center as significant variables regarding the relevance of these agents. We conclude that these institutions should modify their procedures to meet the concrete reality of teachers and improve their impact

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and reference level to promote evidence-based educational practices in schools. For this reason, we propose some basic guidelines, based on the responses of the teachers in our sample, which can serve, both for the Administration and for national or international organizations in the educational field, as a guide for improvement. Among them, it highlights the need for reports and communication by these agents with teachers to offer adequate contextualization, an affordable presentation of information, or the use of practical examples that favor the implementation of these practices.

Key words: evidence based practice, public administration, teachers, national organizations, international organizations.

Resumen

En la implementación, por parte de los docentes, de prácticas educativas basadas en la evidencia, la Administración y los organismos nacionales e internacionales educativos tienen un papel fundamental como generadores de políticas educativas, normativas, informes y procedimientos de financiación e incentivos. Teniendo en cuenta esto, nuestra investigación pretende estudiar si este tipo de instituciones son verdaderos referentes para el profesorado en cuanto a la implementación de prácticas educativas basadas en la evidencia, y conseguir ofrecerle orientaciones básicas para que mejore la cantidad y calidad de estas prácticas. Para ello, se desarrolla un estudio cuantitativo a través de un cuestionario realizado a 462 docentes de España (Barcelona y Comunidad de Madrid) de las etapas de Educación Infantil y Primaria. Los resultados muestran que la administración pública y los organismos nacionales e internacionales educativos no son referentes para el profesorado a la hora de implementar prácticas basadas en la evidencia y no son fuentes de información que consideren relevantes. Identificamos, además, los factores de edad y titularidad del centro educativo como variables significativas en cuanto a la relevancia de estos agentes. Concluimos que estas instituciones deben modificar sus procedimientos para atender a la realidad concreta del profesorado y mejorar así su impacto y nivel de referencia para promover prácticas educativas basadas en la evidencia en las escuelas. Por ello, planteamos algunas orientaciones básicas, fundamentadas en las respuestas de los docentes de nuestra muestra, que pueden servir, tanto para la Administración como para las organizaciones nacionales o internacionales de ámbito educativo, de guía de mejora. Entre ellas, destaca la necesidad de que los informes y la comunicación, por parte de estos agentes con el profesorado, ofrezca una contextualización adecuada, una presentación asequible de la información, o la utilización de ejemplos prácticos que favorezcan la implementación de estas prácticas.

Palabras clave: prácticas basadas en la evidencia, administración pública, profesorado, organizaciones nacionales, organizaciones internacionales.

Introduction

At present it is apparent that many governments around the world are making efforts to improve their political-administrative decision making by basing it on scientific evidence, both in general (Brown, Daly, & Liou, 2016) and as a result of emergency situations such as the Covid-19 pandemic (OECD, 2020). In the field of education, in this article we take into account the framework developed by England's National College for Teaching and Leadership, developed by Brown (2017). This defines evidence-based practice (EBP) as day-to-day work by educational professionals in educational centres that is directly connected to the most recent scientific studies, in which the scientific method and peer review play fundamental roles.

These practices are directly reliant on three figures: researchers, politicians, and educational professionals. The lack of promotion of evidence-based research that we encounter is the result of a lack of collaborative work between these figures, as instead of working in coordination, they often work in isolation as individual units (Gough, 2013). In order for a true mobilisation of knowledge, it is important to forge closer links between these agents and between professionals in the sector itself (Powell, Davies, & Nutley, 2017), to create intermediary leaders or liaison figures in schools (LaPointe-McEwan, DeLuca, & Klinger, 2017), and to foster research training for teachers (Campbell, 2016) to promote educational change. In the literature, there are three clear positions for promoting and leading this educational change through EBP. Firstly, there is a position that comes from the political-administrative sector and goes to schools, in other words, a top-down clinical model (La Velle, 2015) or an authority-based model (Mendel, 2018) that puts pressure on schools from above (Sáez, Robles & Vázquez, 2020). Secondly, there is one that originates with educational professionals themselves and reaches policies and administrative decisions in the educational field, thus working from the bottom up (Hattie, 2015; Nelson & O´Beirne, 2014). Thirdly, there is a combination of the previous two positions, forming a systematic and holistic focus in which the political-administrative and educational sectors work together in a coordinated and collaborative way to combine experiences and competences in pursuit of educational change (Brown, Schildkamp, & Hubers, 2017; Campbell, Pollock, Briscoe, Carr-Harris, & Tuters, 2017; Philpott, 2017). Taking this into account, it is worth noting

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that government agencies at their state-wide (MEFP), autonomous community (Departments of Education), and local (Departments of Education or Municipal Education Institutes) levels, and national and international organisations (professional associations, scientific societies, trade unions, UNESCO, IBE, OECD, Eurydice, OEI, etc.) have a very important position in the field of education as actors in the normative, prescriptive, and financial process of any stage of research, dissemination, and implementation of EBP. This educational sector is tied to a top-down model of mobilisation of knowledge that focuses on "what works" and "what should be done" (De la Orden, 2007), thus adopting a medical focus that sets out to offer the educational system treatments without encouraging a true research atmosphere (Godfrey, 2017) and without considering the cultural and contextual aspect of implementing these treatments in the great range of schools that exists (Biesta, 2007). Accordingly, there is a serious lack of institutions and processes promoted by this sector to create an EBP culture (Sharples, 2013), and the educational administration can be regarded as an organisation that lacks dynamism and learns slowly (Sanz-Moreno, 2014).

In Spain, as De la Orden (2014) notes, centralisation of research in universities is apparent, while virtually no research of any type that does not involve universities goes on in schools. The government becomes a mediator in research through funding, while organisations from civil society usually play an advisory role in legislative policies or the implementation of educational practices. So, the link between educational research (universities) and practice (schools) depends on effective transfer of knowledge between these two fields, often mediated by government agencies or by other organisations in the educational field owing to their funding and/or disseminating role. It should be noted that the lack of funding for research in education (Villar, 2018) and shortcomings in the transfer of scientific knowledge to teachers (Campbell, 2016) have created a vacuum that industry and major multinationals have taken advantage of in recent years to occupy an influential position in the educational community, even going so far as to play an active role in the process of educational change (see, for example, the recent coalition of major companies and foundations called HAZ Alianza por la Educación)[2].

[(2)] HAZ, Alianza por la Educación, comprises companies and public-private foundations such as Google, La Caixa, Endesa, ISDI, Vodafone, and Spain's Teatro Real. Its objective is to transform society through education.

This transfer of competences causes uncertainty within the academic community owing to a potential connection between the funding these businesses offer for research or educational events and the short- or long-term benefits they obtain from it. With this in mind, it is important to note that, in Spain, the organisations that formally provide evidence in education are the Ministry of Education through its research and statistics departments, national statistics centres, employers' organisations and trade unions, corporate organisations, and international organisations (Böhm, Arlette, & Riiheläinem, 2017).

The impact of this type of institution is closely related to the process of disseminating evidence from scientific research, where the following barriers to the implementation of EBP are apparent: the time needed to spend on research (Bell, Cordingley, Isham, & Davis, 2010), the large volume of information and lack of contextualisation (Sharples, 2013), the language barrier (OECD, 2007), lack of access to research (OECD, 2002), presentation of reports that does not take end users into account (OECD, 2001), teachers' lack of understanding of the technical-scientific language in reports and articles (Cooper, Klinger, & McAdie, 2017), and the difficulty of maintaining long-term links between networks and collaborative systems (Katz & Earl, 2010).

It is also important to note the experience of other countries, which for years have been able to integrate a culture of EBP into the field of education, to consider what aspects are conducive to this integration and what shortcomings have been observed in its application, in order to propose useful strategies to apply in Spain. Consequently, we have studied a series of factors that affect the development of EBP programmes. These are: age, with young teachers displaying a greater propensity to use it than older ones (Bell et al., 2010); cultural factors (OECD, 2007); the importance of the role of school leaders in the development of EBP (Brown & Zhang, 2017); attitudes towards research and knowledge (Penuel et al., 2016); participants' own definitions of research (Brew & Mantai, 2017); the presence of social support networks (Bathgate, Aragón, Cavanagh, Waterhouse, & Graham, 2019); and the degree to which the educational institution wants students' learning outcomes to improve (Shadle, Marker, & Earl, 2017). In addition, and following Biesta (2010), it is important to evaluate potential shortcomings in the following fields: knowledge (the epistemological dimension), effectiveness (the ontological dimension), and application (praxeological dimension).

In view of all of the above, this work sets out to pursue the following objectives from the "Evidence-based educational practices: design and validation of strategies for the improvement of educational centres" R&D project, of which it forms part: (1) Analysing processes for using scientific evidence to improve educational centres, (2) Designing and validating proposals to facilitate the transfer and adoption of educational practices based on scientific evidence in educational centres.

To this end, this study focuses on the political-administrative sector, taking into consideration government and national and international organisations in the field of education. The research questions are: (1) Do teachers regard government and national and international organisations in the field of education as reference points in the use of EBP? (2) What aspects should this sector improve to have a greater impact on teachers, and so improve the quantity and quality of use of EBP?

Accordingly, we propose the following objectives: (1) To analyse the extent to which the public Administration and national or international organisations are reference points for teachers in relation to EBP; and (2) to suggest improvements to the political-administrative sector to improve the impact of EBP and promote its development by teachers.

Method

As part of a research project that uses a mixed methodological approach including elements of quantitative and qualitative focuses, this work uses a quantitative perspective with the aim of analysing the role of the public Administration and national and international organisations in the field of education as reference information sources in the dissemination of evidence based practices.

First, we perform a descriptive analysis of the variables that define the profile of the teachers who comprise the sample in this study and of their valuation of the ideas promoted by the public Administration and national and international organisations as sources of information on which to base their practice in class/school, based on how often the teachers use these ideas and how useful they find them.

After this initial descriptive analysis, we analyse whether variables such as teachers' valuation of the characteristics of these sources or the

variables that define the profile of the teachers (age, sex, their level of education, the ownership of the centre, or the educational level at which they teach) condition their valuation of the usefulness and frequency of use of the sources of information analysed when providing a basis for their teaching practice.

Sample

We used convenience sampling. A total of 462 teachers participated in the study, from 197 educational centres in Barcelona (235 teachers from 88 centres) and Madrid (227 teachers from 109 centres). These centres included publicly owned and state assisted private schools at the early years and primary levels. The participants completed the questionnaire during the first quarter of 2019. The distribution of the sample was as shown in Table 1.

TABLE I. Sample

City	Teachers		Educational Centres	
	n	%		*n*
Barcelona	235	50.9	Barcelona	235
Madrid	227	49.1	Madrid	227
Total	462	100	Total	462

Source: Own elaboration

Instrument

To gather data, we designed a questionnaire based on academic literature in the field of evidence-based practice, taking into account the dimensions used in other instruments designed to analyse the use of research in teaching practice –Research Use Survey (RUS) (Nelson, Mehta, Sharples, & Davey, 2017)– complemented by elements linked to the teachers' commitment to educational research (Brown et al., 2016; Cher-

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ney, Povey, Head, Boreham, & Ferguson, 2012; Penuel, Allen, Coburn, & Farrell, 2015; Vanderlinde & Van Braak, 2010).

The evidence-based educational practice questionnaire makes it possible to establish how teachers view this topic. It has nine analysis categories that include a total of 16 items. The following ones are especially relevant for the study presented here: (a) sources of inspiration for innovation and their usefulness –type of sources, usefulness, and characteristics–, (b) ways of accessing evidence –mean of access; public Administration.

The questionnaire was subjected to external validation on the basis of several rounds of review by experts.

Procedure and analysis

After the questionnaire had been validated, we administered it to the participants online.

As stated above, the study presented here has two analysis variables: (1) the frequency of use of ideas promoted by government agencies and organisations as the basis of teachers' practice in class/school; and (2) the teachers' valuation of the usefulness of the information sources, principally reports by government agencies and organisations, for their educational practice. Both variables use a valuation scale of 1-4, where 1 is the lowest level (*disagree, never, not at all important*) and 4 the highest level (*totally agree, always, very important*).

In addition, we analyse whether variables that define the teacher profile (age, gender, their educational level, ownership of school, or the level at which they teach) or their valuation of the sources of information analysed, from the point of view of their characteristics, determine how often they use the sources and their valuation of how useful they are.

We performed descriptive statistical analyses of the data using means and frequencies to establish the characteristics of the sample and describe the principal analysis variables. This descriptive analysis includes the variable of cross valuation of sources from the point of view of their characteristics (1-4 scale) and inferential analysis using a contingency table and Pearson's chi-squared test between the *valuation of the characteristics of the sources* variable (1-4 scale, where 1 is not at all important and 4 very important) and the *frequency of use* and *valuation of useful-*

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ness of the sources variables; the T-test for independent samples of the analysis variables and gender (*male; female*), ownership of the centre (*public; private state-assisted*), and educational level (*university education –degree–; postgraduate education –master's/doctorate–*) variables; and ANOVA of the analysis variables and the age (*20-30 years, 31-40 years, 41-50 years, 51-60 years*) and level at which they teach (*early years, primary, early years-primary*) variables.

Sample description

The sample in this study comprised a total of 462 educators from educational centres in Barcelona and Madrid. Most of them were women (81%, with men representing 19%). The participants were aged between 20 and 60. The most representative age bands were 31 to 40 and 41 to 50 (29.7% and 29% respectively), with 16.6% of the sample in the 20 to 30 age band and 24.6% aged between 51 and 60.

The teachers in the sample mainly worked in publicly owned educational centres (61.5%; 38.5% worked in state-assisted private centres) and at the early years and primary educational levels, with primary being most common at 63.1% compared with 22.8% teaching at early years and 14.1% at both levels.

Their most frequent educational level was university degree: 80.8% had a degree in early years or primary education, while the smallest percentage (19.2%) had postgraduate qualifications (master's, doctorate, or another postgraduate qualification).

With regards to participants' teaching experience, 67.1% had over ten years' experience (31.9% between 11 and 20 years and 35.2% had 21 years or more). The remaining 32.9% had less than 10 years' experience.

Results

In this section, we present the results of the descriptive and inferential analysis of sources linked to the public administration and national and international organisations on which teachers base their teaching practice.

Descriptive analysis of sources linked to the public administration and national and international organisations on which teachers base their teaching practice

The aspects analysed, which the teachers in the sample state they have based their practice in class/school on at some point, include ideas promoted by local organisations –councils, pedagogical resource centres, etc.– (M = 2.16; SD = 1.00), ideas promoted by government agencies in the field of education –inspectors, the Ministry of Education, departments of education or similar– (M = 1.88; SD = 0.92), and ideas promoted by professional associations (M = 1.93; SD = 1.01).

These are aspects on which the teachers sometimes base their practice with 24.7% stating that they "sometimes" or "always" base their practice on the ideas promoted by government agencies in the field of education and 37.5% stating that they base their practice on ideas promoted by local organisations. However, the results indicate that the most common frequencies of use are "never" and "almost never". 62.3% never (32.8%) or almost never (29.5%) base their practice on ideas promoted by local organisations. 75.3% never (43.3%) or almost never (31.9%) base their practice on ideas promoted by government agencies in the educational sphere. 68.5% never (46.7%) or almost never (21.8%) base their practice on ideas promoted by professional organisations.

The teachers base their practice on the following sources of information: reports prepared by local or national organisations (M = 1.86; SD = 0.94), international reports (M = 1.75; SD = 0.92), and web portals of educational administrations (M = 2.22; SD = 1.00).

In relation to teachers' valuation of the usefulness of these sources, the results show that the highest percentages correspond to the "not at all important" and "of little importance" valuations. Of the sample, 75.9% consider that the reports drawn up by local or national organisations are not at all important (44.6%) or of little (31.3%) importance for their teaching practice. 78.8% consider that international reports are not at all important (51.8%) or of little (27.0%) importance for their teaching practice. 60.5% consider that the web portals of the educational administrations are not at all important (29.7%) or of little (30.8%) importance for their teaching practice, despite this being the best valued source; for 39.3% it is fairly (27.3%) or very (12%) important.

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Finally, the results of the descriptive analysis of the teachers' valuation of the sources' characteristics (a total of 10) show that the ones they value as "fairly important" or "very important" are: relevance to their context (79.4%, *M = 3.06; SD = 0.77*), rigour and quality of the content (76.6%, *M = 2.97; SD = 0.77*), accessible presentation (80.7%, *M = 3.08; SD = 0.73*), the practical examples the sources contain (78.4%, *M = 3.11; SD = 0.84*), and provision of materials that can be used in school (72.2%, *M = 2.97; SD = 0.91*). The characteristics regarded as "of little importance" or "fairly important" include: prestigious authorship of the source (69.6%, *M = 2.627; SD = 0.91*), the inclusion of support guides (65.3%, *M = 2.67; SD = 0.95*) or of some type of training (68.3%, *M = 2.56; SD = 0.93*) for implementing it, and stimulation of discussion in school (65.4%, *M = 2.85; SD = 0.90*). The characteristic relating to the support the source offers (personal, economic, recognition) was valued as being between "not at all important" and "of little importance" (71.2%, *M = 1.94; SD = 0.96*).

Inferential analysis of sources linked to the public administration and national and international organisations on which teachers base their teaching practice

The results of the valuation of sources of information from the perspective of their characteristics done by the teachers within the framework of this study, indicate the existence of statistically significant differences ($p < 0.05$) in practically all of them.

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TABLE II. Pearson's chi-squared test of the valuation of the characteristics of the sources

		Relevant to my context	Produced by a prestigious author or organisation	Rigorous and quality content	Presented in an accessible way	Includes guides that support its application/ implementation	Includes some sort of training that helps with its implementation	Contains practical examples	Offers materials that can be used in school	Stimulates discussion in school	Offers some type of support (personal, recognition, economic)
Ideas promoted by local organisations	*Sig.*	*0.002*	*0.000*	*0.002*	—	*0.025*	*0.000*	*0.023*	—	*0.010*	*0.000*
Ideas promoted by gov. agencies in educational field	*Sig.*	*0.048*	*0.001*	*0.003*	—	---	*0.000*	—	*0.035*	*0.004*	*0.000*
Ideas promoted by professional associations	*Sig.*	*0.001*	*0.000*	*0.002*	—	*0.002*	*0.000*	—	—	*0.011*	*0.000*
Reports prepared by local or national organisations	*Sig.*	*0.000*	*0.000*	*0.000*	—	*0.000*	*0.000*	*0.032*	—	*0.000*	*0.000*
International reports	*Sig.*	---	*0.000*	*0.000*	—	*0.000*	*0.000*	—	—	*0.000*	*0.000*
Web portals of gov. agencies	*Sig.*	---	*0.000*	*0.000*	—	*0.000*	*0.000*	*0.004*	*0.003*	*0.000*	*0.000*

Source: Own elaboration

As Table 2 shows, there is a first group of characteristics that identifies statistically significant differences in all of the sources analysed. These are the characteristics relating to authorship (*produced by a prestigious*

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author or organisation), content (*rigorous and quality content*), training (*includes some sort of training that helps with its implementation*), discussion (*stimulates discussion in school*), and support (*offers some type of support –personal, recognition, economic)*. In other words, teachers' valuation of the characteristics of the sources analysed determines how frequently they base their practice on these sources as well as their valuation of the sources' usefulness.

The characteristics linked to relevance of the sources (*relevant for my context*), support they offer for implementation (*includes guides that support its application /implementation*), practical examples (*contains practical examples*), and materials that can be used (*offers materials that can be used in school*) form a second group of characteristics that identify statistically significant differences in some of the sources analysed, but not all of them. In other words, these characteristics determine both the frequency of use of these sources as a basis for practice, and the teachers' valuation of their usefulness. International reports are the source with the weakest relationship to the valuation of its characteristics in this group.

Finally, a third group can be identified comprising only the accessibility characteristic (*it is presented in an accessible way*). This is the only characteristic with no statistically significant association with any of the sources analysed. In other words, how frequently teachers use the sources as a basis of the implementation of their practice and their valuation of the usefulness of them does not depend on how they are presented.

In addition, the results of the contingency table show the valuation of the sources' characteristics and the variables of: a) frequency of use of ideas promoted by government agencies and organisations on which teachers base their practice in class/school (a frequency of use between "never" and "almost never" was already identified in the descriptive analysis) and b) valuation of usefulness of sources (a valuation of "not at all important" and "of little importance" was already identified in the descriptive analysis). They show how the characteristics that identified statistically significant differences were mainly valued as being "not at all important" and "of little importance" by the teachers who "never" or "almost never" base their practice on the sources analysed and value the usefulness of these sources as being "not at all important" and "of little importance". Similarly, characteristics valued as "very" or "fairly" important were linked to a modest valuation of the sources' usefulness and

being used as aspects on which to base practice in centres with limited frequency; as shown in Tables 3 and 4 respectively.

TABLE III. Contingency table displaying ideas promoted by Administration and organisations and valuation of characteristics

		Ideas promoted by local organisations		**Ideas promoted by gov. agencies in the educational field**		**Ideas promoted by professional associations**	
		Never	***Almost never***	***Never***	***Almost never***	***Never***	***Almost never***
Relevant to my context	***Not at all important***	62.5%	25%	85.5%	12.5%	86.7%	6.7%
	Little importance	33.3%	37.2%	43.6%	33.3%	50.6%	24.7%
Produced by a prestigious author or organisation	***Not at all important***	64.4%	16.9%	64.4%	25.4%	71.2%	15.3%
	Little importance	32.4%	36.8%	47.1%	31.6%	52.2%	22.4%
Rigorous and quality content	***Not at all important***	55.6%	16.7%	77.8%	22.2%	77.8%	11.1%
	Little importance	43.2%	34.1%	53.4%	34.1%	51.7%	25.3%
Presented in an accessible way	***Not at all important***	—	—	—	—	—	—
	Little importance	—	—	—	—	—	—
Includes guides that support its application / implementation*	***Not at all important***	51.7%	21.7%	---	---	63.3%	8.3%
	Little importance	34.9%	30.2%	---	---	45.6%	31.2%
Includes some sort of training that helps with its implementation	***Not at all important***	53.8%	27.7%	67.7%	24.6%	70.8%	10.8%
	Little importance	30.9%	30.9%	43.6%	36.2%	45.0%	29.5%
Contains practical examples	***Not at all important***	56.5%	17.4%	—	—	—	—
	Little importance	38.6%	32.9%	—	—	—	—
Offers materials that can be used in school	***Not at all important***	---	---	—	—	—	—
	Little importance	---	---	—	—	—	—

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Stimulates discussion in school**	***Not at all important***	57.1%	14.3%	71.4%	19.0%	70.7%	12.2%
	Little importance	34.3%	35.4%	49.5%	30.3%	54.1%	23.5%
Offers some type of support (personal, recognition, economic)***	***Not at all important***	47.6%	26.2%	59.2%	28.8%	61.5%	17.1%
	Little importance	22.7%	28.8%	37.1%	33.3%	36.4%	28.8%

**The 34.1% of the sample that almost never uses ideas promoted by local organisations values this characteristic as fairly important.*
***The 35.4% of the sample that never uses ideas promoted by local organisations values this characteristic as very important.*
****The 31.4% of the sample that never use ideas promoted by local organisations values this characteristic as very important, and the 35.8% who almost never use this source regard this characteristic as fairly important.*

Source: Own elaboration

TABLE IV. Contingency table displaying "reports" linked to government agencies and organisations and valuation of characteristics

		Reports prepared by local or national organisations		**International reports**		**Web portals of gov. agencies**	
		Not at all important	***Little importance***	***Not at all important***	***Little importance***	***Not at all important***	***Little importance***
Relevant to my context	***Not at all important***	81.3%	6.3%	---	---	---	---
	Little importance	55.1%	33.3%	---	---	---	---
Produced by a prestigious author or organisation	***Not at all important***	84.7%	8.5%	93.0%	3.5%	50.8%	28.8%
	Little importance	55.1%	33.8%	60.4%	36.1%	32.6%	35.6%
Rigorous and quality content	***Not at all important***	94.4%	0.0%	100.0%	0.0%	72.2%	16.7%
	Little importance	59%	30.7%	71.6%	22.7%	42.0%	37.5%
Presented in an accessible way	***Not at all important***	---	---	---	---	---	---
	Little importance	---	---	---	---	---	---
Includes guides that support its application / implementation*	***Not at all important***	70.0%	21.7%	74.6%	18.6%	56.7%	28.3%
	Little importance	14.7%	32.3%	57.3%	29.8%	31.5%	35.4%

Includes some sort of training that helps with its implementation	***Not at all important***	84.6%	6.2%	84.1%	9.5%	47.7%	27.7%
	Little importance	41.6%	38.9%	53.4%	28.1%	26.8%	40.3%
Contains practical examples	***Not at all important***	73.9%	13.0%	---	---	52.2%	21.7%
	Little importance	47.1%	35.7%	---	---	37.1%	31.4%
Offers materials that can be used in school	***Not at all important***	---	---	---	---	55.9%	29.4%
	Little importance	---	---	---	---	30.1%	35.5%
Stimulates discussion in school**	***Not at all important***	76.2%	7.1%	84.6%	5.1%	58.5%	24.4%
	Little importance	53.5%	24.2%	61.2%	21.4%	35.4%	31.3%
Offers some type of support (personal, recognition, economic)***	***Not at all important***	62.5%	20.8%	70.2%	17.6%	39.6%	30.7%
	Little importance	38.6%	37.1%	43.1%	30.8%	28.2%	31.3%

** The 34.2% of the sample that values the usefulness of the web portals of educational administrations as being of little importance values this characteristic as fairly important.*
*** The 39.8% of the sample that values the usefulness of reports drawn up by local or national organisations as being of little importance values this characteristic as fairly important.The 34.4% of the sample that values the usefulness of international reports as being of little importance values this characteristic as fairly important.The 34.7% of the sample that values the usefulness of the web portals of educational administrations as being of little importance values this characteristic as fairly important.*
**** The 44.2% of the sample that values the usefulness of reports drawn up by local or national organisations as being of little importance values this characteristic as fairly important.The 41.9% of the sample that values the usefulness of international reports as being of little importance values this characteristic as fairly important.The 34.0% of the sample that values the usefulness of the web portals of educational administrations as being of little importance values this characteristic as fairly important.*

Source: Own elaboration

Finally, the results of the T-test for independent samples and ANOVA only showed statistically significant differences in the link between the variables of *ideas promoted by government agencies in the field of education* and *age* and *ownership of school*.

For the *ownership of school* variable, a statistically significant difference was only found with the *ideas promoted by government agencies in the field of education* variable ($p = 0.015$). In this regard, teachers from public centres ($M = 1.96$) based their teaching practice on ideas promoted by government agencies in the field of education more frequently than teachers from state-assisted centres did ($M = 1.75$).

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The *age* variable also displayed significant differences with age groups and the *ideas promoted by government agencies in the field of education* variable ($p = 0.001$), specifically between the teachers aged between 51-60 years and teachers aged between 20-30 ($p = 0.005$) and 31-40 ($p = 0.019$). In this case, teachers aged between 51-60 most frequently base their teaching practice on ideas promoted by government agencies in the field of education ($M = 2.15$), in contrast with the teachers from the other age groups (20-30; $M = 1.65$ and 31-40; $M = 1.75$).

Discussion

Creating a culture of evidence-based educational practice is, in itself, an element of educational change. Among other aspects, it involves a pressing need to motivate teachers to overcome the major educational challenge of using scientific knowledge in their professional practice (Brown et al., 2016; Campbell et al., 2017; Ion & Iucu, 2014; Nelson & O´Beirne, 2014), a challenge to which are added shortcomings in the transfer of scientific knowledge that would be of use for teachers (Campbell, 2016), and the consideration of the mechanisms that could be fostered to this effect.

Promoting and leading this educational change through EBPs requires the involvement and coordinated and collaborative work of many key agents –teachers, researchers, political-administrative agents in charge of setting educational policies, etc.– representing different sectors, primarily the political-administrative and educational (Brown et al., 2017; Campbell et al., 2017; Philpott, 2017; Powell et al., 2017) ones, and fluid communication between all of them (Easton, 2010).

In relation to the role of all of these agents in the development of this EBP culture, many studies focus on teachers and researchers, in particular on the importance of offering teachers the right opportunities to participate directly in educational research and collaborate with researchers (Anwaruddin, 2015; Cherney et al., 2012). Nonetheless, we cannot overlook the importance of the role of the Administration and national and international organisations from the field of education on the creation of a culture of EBP thanks to their obvious role in creating educational policies, regulations, reports, and funding procedures and/or incentives that can be applied in any area of research, dissemination, implementation, or promotion of EBP (Penuel et al., 2016).

With this in mind, it is apparent that government agencies and national and international public organisations from the field of education –as political-administrative agents– are relevant sources on which to base teachers' EBP. Nonetheless, the questions this work sets out to answer are, on the one hand, whether these political-administrative agents are reference sources of information on which our teachers base their practice and therefore, are possible mechanisms for the transfer of scientific knowledge that is of use to the teachers, and on the other hand, what this sector should improve to have a greater impact on teachers and so improve both the quantity and quality of use of evidence-based practices.

In the contextual reference framework of this work, the organisations that formally provide evidence in education are the government agencies in the field of education –inspectors, Ministry of Education, Departments of Education and such like–, corporate organisations –local organisations such as councils, pedagogical resource centres, etc.– and professional associations or international organisations (Böhm et al., 2017). Nonetheless, the results obtained here indicate that for the teachers participating in this study, the ideas these political-administrative agents promote (especially those promoted by government agencies in the field of education and professional associations) are aspects they use not at all frequently or not very frequently as a basis for their practice in class/school.

Consequently, in line with other previous studies, the limited relevance of the role these political-administrative agents play for teaching staff and educational centres in the framework of EBP is apparent (Godfrey, 2017; Sharples, 2013); despite the efforts (through legislation, reports, or ideas) the public Administration and national and international organisations are making in relation to the promotion of these practices (Böhm et al., 2017).

This study also shows how the teachers regard sources derived from the ideas promoted by these political-administrative agents –embodied in local, national, or international reports or the web portals of educational administrations– as being of little or no use for teaching practice. Consequently, it is important to establish why these teachers regard these sources of information on which to base their professional practice as unimportant.

Some of the earlier studies mentioned above, as well as other ones, identify among the principal aspects that shape this limited relevance of government agencies and organisations from the educational area with

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regards to the use of EBP for teaching staff and educational centres: the existence of a top-down model of mobilisation of knowledge, which provides the educational system with information and procedures that are not of use for it (Godfrey, 2017), the lack of contextualisation of information to allow for practical implementation (Detrich & Keyworth, 2016; Sharples, 2013) that is adapted to the needs of all students (Cook, Collins, Cook, & Cook, 2020), the lack of formal interaction between researchers and creators of educational policies (OECD, 2007), presentation of reports that does not take end users into account (OECD, 2001), inadequate dissemination of information (OECD, 2002), and lack of comprehension by teachers of the technical-scientific language in the reports (Cooper et al., 2017).

All of these aspects are linked to the characteristics that, for most of the teachers in this study, decide the usefulness of the sources of information based on ideas promoted by the public Administration and national and international organisations. Despite being underlined as important, they are also the aspects valued less and, presumably, identified less in the sources of information by the sample, making them sources that are "not at all important" or "of little importance" and relevance. Therefore, we can highlight the following areas of improvement as basic guidelines so that the Administration and national and international organisations can optimise the impact on teachers relating to the implementation of EBP: (1) Relevance to teachers' and students' context, (2) Rigour and quality of content, (3) Accessible presentation of information, (4) Use of practical examples, and (5) Promotion of materials that are genuinely usable in school.

These improvement proposals are based on the general opinions of the teachers who ask, as the people implementing EBP, that sources of information from political-administrative focus on their reality, thus helping them to think about putting into practice what these agents propose (OECD, 2001). Therefore, it is important that the information teachers need in practice is evaluated and that there is true contextualisation when adopting evidence (Cartwright, 2019). It is, as Biesta (2007, 2010) notes, it is ultimately important to establish an evidence-based culture that must be contextualised and close to everyday reality, ensuring it is useful and relevant for teachers and, therefore, making the transfer of useful scientific knowledge feasible, without in this process neglecting attention to shortcomings in the epistemological, ontological, and

praxeological dimensions with regards to the use of evidence in teaching practice.

In addition to this contextualisation of the evidence-based culture, there is a need –in a context which clearly still lacks specific training in research and evidence for teachers – to insist on the importance of consolidating the progress in teaching staff that participate in production and so should have the critical ability to read scientific evidence. The difficulty of understanding and interpreting the evidence in educational research reports, which are mostly expressed in a language full of technical terms that can hinder understanding, is one of the main difficulties teachers face (Cooper et al., 2017; Perinés, 2018) and so this is something to consider when presenting information to ensure it is accessible and useful and can be transferred.

On the other hand, in this analysis framework it is also important to consider other factors (age and ownership of the school) that this study identifies as possibly shaping how teachers use these sources of information as a basis for their teaching practice and, presumably, the importance and/or relevant role that these political-administrative agents might have.

In this sense, the results identify teachers aged over 50 and teachers at publicly-owned schools as most frequently basing their practice on ideas promoted by government agencies and organisations from the educational field.

These results lead us to identify which sector regards these sources derived from government agencies and national and international organisations as least important and, consequently, for which these political-administrative agents are not a reference in the framework of development of EBP in schools.

The findings of this work, especially those relating to these results, are of interest as there are no studies directly linked to the analysis of these specific aspects, although there are some that study the influence of factors such as age (Bell et al., 2010), organisational culture (OECD, 2007), the role of school leaders in the development of EBP (Brown & Zhang, 2017), and the educational institution's level of desire to improve students' learning outcomes (Shadle et al., 2017) in shaping the development of EBP in school contexts.

Conclusions

This work presents us with the challenges currently facing the culture of EBP. These are the challenge of transferring scientific knowledge that is of use to teachers and of establishing effective transfer mechanisms.

In this sense, it could well be claimed that political-administrative agents should contribute to this transfer and that their reports should be useful and effective transfer mechanisms. However, the results analysed here suggest that this is not the case.

On the one hand, we find that the public Administration and national or international educational organisations are not reference sources for teachers when implementing EBP. Furthermore, the teachers' valuation of the characteristics of the sources of information linked to the public Administration and national and international organisations shapes how teachers value the usefulness of these sources and how often they base their practice on them. The lower the teachers value these sources, the less frequently they use them as the basis of their practice in class/school and the less they value their usefulness. Similarly, the consideration, by teachers, of a lack of characteristics valued as important in the sources could explain their low valuation of the sources' usefulness and infrequent use of them as aspects on which to base their practice in the centres.

On the other hand, we can claim that the characteristics of the sources analysed here, which could therefore explain or help us understand the limited relevance and importance of these sources for the teachers, are at the same time basic guidelines for administrations to take into account if they want to be useful sources of information on which to base teaching practice.

Consequently, this work not only increases our knowledge of this topic, which is of general interest, but it can also be key for reformulating the policies and processes that the public Administration and national and international educational organisations currently follow.

The limitations of this study include the convenience sampling used owing to the broad teaching population. Nonetheless, the data and conclusions in this work can be regarded as reliable for understanding the role of the government agencies in regards to the implementation of EBP by teachers. In addition, we did our research in Spain, and so it is necessary to consider possible underlying differences in the culture and soci-

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ety of this country. Furthermore, we should note that teachers make very little use of the sources of information analysed, making it difficult to find significant identifying differences. Even so, the results of this work are in line with other research done in other countries and with other study samples, thus corroborating the reliability of the data.

Finally, it is important to note the lack of the perspective of the public Administration and of national and international educational organisations in this regard. While this is a limitation of this work, it leaves open a line of research that will be able to test the results and conclusions set out here.

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