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Educational research and school practice: unraveling a complex relationship from the perspective of management teams

Investigación y práctica educativa: desentramando una relación compleja desde la mirada de los equipos directivos

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ABSTRACT

Although the impact of educational research on improving teaching and learning processes in schools is recognised, the transfer of the results of scientific studies into educational practice is neither frequent nor always effective. Factors concerning the nature of the research, the organisational cultures of schools and the professional characteristics of teachers and

school management teams seem to influence these processes. The aim of this study is to analyse the views of school leaders on the value and ways of using research in educational action. The results presented here are from a qualitative study involving 15 members of school management teams from six Spanish provinces. Information was collected through semi-structured interviews. The data were analysed using a system of categories inductively developed and negotiated by the members of the research team. The results confirm the limited use of scientific knowledge in school practice, as well as some factors that facilitate or hinder it. The need for a change in the topics studied, the forms of research and the way in which the results are presented is underlined. It is also emphasised the key role that school management can play in bringing research closer to practice, offering support or establishing conditions which promote analysis and reflection on research, its meaning and the applicability of its results.

Keywords: evidence-based pedagogy, educational research, school improvement, educational leadership, school management

RESUMEN

Aunque se reconoce el efecto de la investigación educativa en la mejora de los procesos de enseñanza y de aprendizaje en las escuelas, la traslación de los resultados de estudios científicos a la práctica educativa no es frecuente ni siempre efectiva. Factores relativos a la naturaleza de las investigaciones, las culturas organizativas de los centros escolares y las características profesionales del profesorado y los equipos directivos parecen influir en estos procesos. Este artículo tiene como objetivo analizar la visión de los directivos acerca del valor y formas de uso de la investigación en la acción educativa. Los resultados presentados provienen de un estudio cualitativo en el que participaron 15 miembros de equipos directivos escolares pertenecientes a seis provincias españolas. La recogida de información se llevó a cabo a través de entrevistas semiestructuradas. El análisis se realizó empleando un sistema de categorías generado de forma inductiva y negociado por los miembros del equipo de investigación. Los resultados confirman el limitado empleo de conocimiento científico en la práctica escolar, así como algunos factores que lo facilitan o dificultan. Se subraya la necesidad de dar un giro en las temáticas de estudio, las formas de investigar y la manera de mostrar los resultados. Se enfatiza, asimismo, el papel clave que pueden jugar las direcciones escolares en el acercamiento de la investigación a la práctica, ofreciendo apoyos o generando condiciones que promuevan el análisis y reflexión sobre la investigación, su sentido y la aplicabilidad de sus resultados.

Palabras clave: pedagogía basada en la evidencia, investigación educativa, mejora escolar, liderazgo educativo, dirección escolar

INTRODUCTION

Educational research and school practice: a complex relationship

It is now accepted that educational action must be grounded in research, as it provides 'true knowledge' (Farley-Ripple, 2012). As Kaur et al. (2020) highlight, evidence-based pedagogy is advocated, as knowledge of 'what works' improves teachers' teaching skills and student outcomes (Cain & Allan, 2017). According to Brown and Zhang (2016), there is growing correlational evidence that the use of research, as part of initial and ongoing teacher education to address improvement priorities, has a positive influence on teachers, schools and system performance (Godfrey, 2014). Likewise, the experience of 'research-engaged' schools, which adopt a strategic and agreed approach to this area, is generally positive. This is because it helps them move from an instrumental model of improvement, based on 'best advice', to a culture of learning where they work together to understand what works, when and why (Godfrey, 2014; Hemsley-Brown & Sharp, 2003). This aspect is indeed the one most valued by teachers participating in the study by Ion et al. (2021), as it allows them to identify which elements of their practice need to be improved.

Nevertheless, research seems to have limited influence on practice and the definition of education policies (Levin, 2013; Galindo-Domínguez et al., 2022). Even when efforts are made by the administration, educational institutions or universities to promote research-based practices, most schools do not implement them (Ion et al., 2021). The literature identifies four interrelated problems marking the relationship between research and educational practice (Vanderlinde & Van Braak, 2010):

1. The research does not provide conclusive, valid and reliable results.
2. The research provides results with poor practical applicability.
3. Educational research is not meaningful for teachers.
4. The 'practical ones' lack the training to use the knowledge derived from the research.

According to Watling et al. (2019), educators doubt about the relevance of research for the school environment and its ability to improve educational outcomes. This is influenced by the closeness of the topics addressed in the studies to everyday work, as it favors the recognition of their usefulness, as well as the understanding of their meaning. It also influences that their use can be:

a) Instrumental, when participants are able to cite and document ways of using research results, which is appreciated quite occasionally;

b) Conceptual, shaping the perspectives from which decisions are made, which is observed when participants point out how research should be used, or use studies as general references;
c) Political, difficult to identify insofar as intentions are not explicit, when data are manipulated for some benefit;
d) Symbolic, by referencing studies to legitimize one's own discourse (Tan & Gilbert, 2014; Farley-Ripple, 2012).

According to these authors, the instrumental and conceptual uses of research prevail, focusing on studies which provide teaching tools or a better understanding of processes.

In short, the gap between research and practice in education persists (Malouf & Taymans, 2016; Neal, et al., 2015) and is a more complex phenomenon than is often portrayed in the literature. In the view of these authors, and in order to overcome this split, it is necessary to identify the factors that influence this fact. In addition, different actors express different opinions, both about its extent and its very nature (Vanderlinde & Van Braak, 2010). For example, teachers consider the gap to be wider than other groups and are sceptical about the value of educational research, as they consider the questions posed by researchers to be of minor relevance. School leaders express a more moderate stance, arguing that they read research reports and try to incorporate their results into daily practice. They acknowledge, however, the presence of an overly complex technical language in research reports. On the other hand, educational administrators do not see the research-practice gap as a problem, as they try to bring the results of the former closer to the developers of the latter.

Factors conditioning the use of evidence as a basis for educational practice: the role of school leaders

An obvious condition for the use of research results in practice is their accessibility, which is not only limited to the availability of sources, but also to their proximity to practice (Farley-Ripple, 2012; Galindo-Domínguez et al., 2022), their compatibility with experiences and the possibility of experimenting with them in order to demonstrate the advantages of research over experience or intuition (Watling et al., 2019). This requires knowing which research topics are valued by teachers, taking into account their need to immediately link evidence to their daily work. This would be helped by teacher involvement in defining what and how to research.

While, in the educational field, researchers are often the sole producers of evidence, in practice-associated research (Penuel et al., 2017) and action research (Carr & Kemmis, 1988), educators are also involved in the co-production or

production of evidence. Bringing these voices on board – e.g. in the framework of professional learning communities (Brown & Zang, 2016) – can facilitate the use of research results in practice. This possibility is conditioned by the policies which organize teachers' work and must be accompanied by support from the administration and school management. A key factor in the use of research, among other issues, is the time available (Farley-Ripple, 2012; Galindo-Domínguez et al., 2022). The nature of research methodologies and findings; policy orientations; teacher attitudes, perceptions and skills; and school leadership practices condition the use of educational research (Brown & Zhang, 2016; Cain, 2015; Levin, 2013). To the factors mentioned above, Cordingley (2008) adds the drive to change arising from dissatisfaction with the situation, ways of understanding, ideas or actions. This drive for improvement can be promoted by school leaders, given their ability to influence teachers' motivation, behavior and professional development. It is school leaders who can shape environments favorable to innovation and organizational learning, which are essential to increase the school's professional capital and successfully respond to educational challenges (Khaola & Oni, 2020; Daniëls et al., 2021). The aim is therefore for school leaders to exercise transformational leadership oriented towards learning and coexistence (Villa, 2019) which prioritizes school improvement. This involves addressing four factors: (1) ensuring the capacity of teachers to engage in the use of data; (2) creating attunement between school culture and the use of research; (3) promoting the use of research in the context of improving learning; (4) creating effective structures, systems and mechanisms to facilitate the use and sharing of best practice (Earl & Fullan, 2003; Brown & Zhang, 2016). In this sense, belonging to a school where one experiences a supportive climate and has the trust of leaders and colleagues facilitates the use of research to support teaching practice (Ion et al., 2022).

It is also necessary to make research-derived information perceived as useful, promoting frameworks for discussion and knowledge building. Thus, according to Brown and Zhang (2016), in professional learning communities, engagement with research is more likely to emerge from the development of experiences that link practice and research (Brown, 2017). This would amount to making research a cultural norm, an institutionally embedded activity. This would require the educational leader, whatever position he or she holds in the formal structure, to promote a vision of improvement around a common, jointly developed project which provides the necessary resources and empowers teachers to respond to the diversity of needs and the optimization of results (Earl & Fullan, 2003). In this sense, it is school leaders who are most likely to play this mobilizing role. This is reflected in the results of the study conducted by Gairín (2023), which verifies that 'the unanimity given to the role of school managers as moral support for change, but also as dynamisers of a process of change' (p. 134).

Concordantly, Malin et al. (2020) point to the need to create coherent systems in which teachers and managers can integrate research-based knowledge with other forms of knowledge, especially with the knowledge constructed in their daily practices, making consistent educational decisions. School leaders can encourage a committed vision on research culture by promoting the involvement of the school community in research as part of a 'culture of learning.' Key to this is supporting teachers' commitment to research and developing opportunities to foster attitudes favorable to participation in research activities and the use of scientific knowledge as a basis for educational practices (Ion et al., 2022). Thus, engaging in research within and between schools will require 'transformational' and 'learning-centered' leadership (Villa, 2019) aimed at providing contexts in which to work with evidence (Brown, 2017).

In the light of the above, this paper focuses on the views of school leaders on the value and ways of using educational research in educational practice.

METHOD

This study is part of a broader, descriptive and qualitative research project (Ref. EDU2017-90606-REDT) funded by the Spanish Ministry of Economy, Industry and Competitiveness and carried out within the framework of the RILME network of excellence. The overall purpose of this study was to determine the needs and uses of educational research by state education policy makers, teachers and school leaders in relation to educational improvement. This article focuses specifically on the views of the management team obtained through interviews.

The interview, as a qualitative technique, allows a large amount of information to be collected directly between the researcher and the research subject on a direct, day-to-day basis (Mayorga, 2004; Sierra, 1998). In this case, a semi-structured interview was chosen. The script used was agreed upon by the members of the research group, in accordance with the proposed objectives. It was made up of thirteen questions distributed in two blocks: I. Use of research (1. Do you use the results of educational research for decision making in your professional practice? And for your professional development? 2. On what issues do you use educational research for decision-making? 3. How do you apply the results of educational research in your professional practice? 4. For your professional development, what research topics are you interested in? 5. How do you usually access the results of the educational research you tell me about?) and II. Research needs (1. Do you think that there is enough good quality educational research available for your professional use? 2. What issues do you think need to be developed further? 3. If there were better and more accessible research, would you use the research results more? 4. What specifically do you think research would need to improve in order for you to

use more of its results in your practice? 5. If so, on what topics would you like to have research available for decision making or for your professional development? 6. And especially for school improvement? 7. And for school leadership? 8. In what format would you like the research results to be made available?) The interview script also included a set of questions designed to determine the interviewee's identification data. Interviews were conducted on a confidential and anonymous basis and lasted between one and one and a half hours.

Once completed and transcribed, the interviews were coded according to the common category system developed inductively by the members of the research team. The process of constructing this system began with several members of the team independently reading six randomly selected interviews to extract categories and subcategories for analysis. This process resulted in a first coding system, which was reviewed and completed on a consensus basis by the rest of the team members.

The category system was made up of 8 categories and 55 subcategories.

The following table shows the categories and some examples of subcategories.

Table1
Categories and examples of subcategories

Categories	Examples of subcategories
Issues in which research results are used	— Teaching methodologies; — Attention to diversity; — Educational resources.
Factors facilitating access to research results	— Management teams; — Colleagues; — Networks; — Teacher training centers.
Access routes to research	— Online; — Bibliographical material; — Scientific meetings.
Ways of transferring research results into practice	— Adaptation agreed with colleagues or other professionals; — Reproduction for personal use.
Topics of interest for personal, professional and institutional development	— Emotional intelligence; — Personal relationships; — Leadership; — Community relations.
Topics of interest of a curricular nature	— Methodology; — Attention to diversity; — Assessment.

Categories	Examples of subcategories
Conditions favouring the use of research results	— Format and language; — Commitment of the organization.
Conditions hindering the use of research results	— Lack of training; — Time constraints.

The content analysis (Miles, et al., 2014) of the interviews allowed us to extract frequencies of the different subcategories, as well as those paragraphs that we considered significant or relevant to highlight the vision of the management teams regarding educational research and their role in dynamizing its link to practice.

Participants

Out of the 20 members of the management teams of Infant and Primary Education Schools (IPES) and Secondary Education Schools (SES), which were to be selected intentionally, by criteria (4 for each of the five participating Autonomous Communities), only 15 took part in the study. They were from six Spanish provinces (Granada, Huelva, Madrid, Murcia, Seville and Tarragona), 10 were men and 5 were women. They are teachers with extensive experience in the field (X= 23, between 10 and 35 years), although with wide differences in the length of time they have held managerial positions (from 1 to 30 years). Of these, 12 are members of IPES management teams and 3 are from SES. Most of these teachers are trained in Education, in different specializations, although there are also graduates in Pedagogy, Psycho-pedagogy, Hispanic Philology and Political Science.

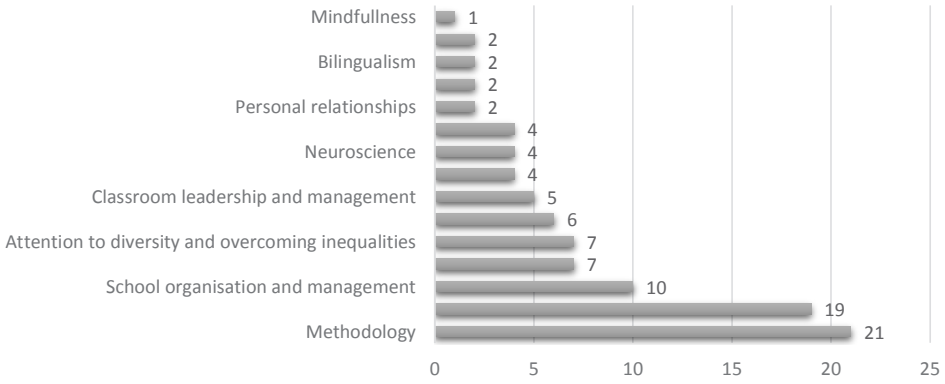
RESULTS

In accordance with what was stated in the introduction, we start from the consideration that school leaders can play a fundamental role in the way in which teachers approach and link their practice with the results of educational research. This occurs when they exercise forms of leadership that favor its use, as well as the configuration of cultures oriented to change and to base decisions on the exploration of reality (Gairín, 2023). Below, we present the vision of the school leaders interviewed according to three dimensions which bring together all the categories extracted. These dimensions are: research topics that are being used in educational practice, as well as those that should be researched; ways in which teachers access research results and how they are transferred to their practice; and factors which influence the development of both processes.

Research topics: usage and interest

As shown in Graph 1, according to the school leaders consulted, the results of educational research are used in schools in a variety of areas. The most frequently mentioned topic refers to teaching methodologies (12) and clearly related to this, teaching resources (4) and attention to diversity (3).

Figure1
Topics in which the results are used



We can assert that the issues on which scientific studies seem to be used the most are those related to teaching practice, as the following testimony reflects:

> 'For example, another place we have looked at – although I don't know how strongly this is supported by international research – but, a few years ago, the whole school decided to change the method of teaching mathematics to the ABN method' (EDS2).

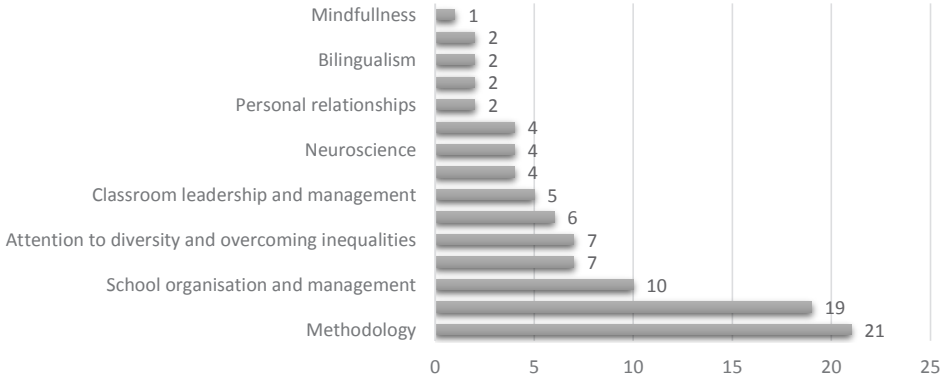
Paradoxically, assessment systems are scarcely mentioned (2) as topics in which research results are considered. With similar frequency are school organization (3), detection of gaps in training (2), professional development (2) and bilingualism (2).

As Graph 2 shows, the topics of most interest are teaching methodology (21) and leadership (19). Since the participants are school leaders, the responses are in line with interests about their practice in both educational leadership and classroom management.

> 'Well, we do use, above all, things that we see that work, such as all this service-learning, cooperative learning, and so on. We also read what results are being

achieved. We try to put it into practice. Of course, taking into account the characteristics that we have here, things that are being done or which we see that we can use to work with our kids. Cooperative, BPL (EDMA2).

Figure 2
Topics of interest



The topics whose frequency is ranked in third place are those related to how to organize the school and its management (10). Once again, this shows their interest in issues directly related to their management practice, such as attention to diversity and openness to the community (with a frequency of 7 in both cases).

> 'About human groups, complexity, how to encourage and excite them. How to motivate them, it is difficult to motivate teachers. It is difficult when everybody is a bit discouraged because there is not a very good environment for state education. To make them more innovative' (EDMA2).

Other topics directly related to the classroom, such as classroom management (5), curricular content (6) or assessment (4), are also deemed to be of interest. Finally, there is an area of great diversity which could be linked to personal issues such as the use of leisure time (2), personal relationships (2), or Mindfullnes (1) which appear with a clearly lower frequency. Interestingly, this group also includes school counselling (2), which appears as an issue of residual interest among the research topics mentioned.

Access to and transfer of research results: pathways and facilitating agents

Among the heterogeneous ways of accessing research results, the Internet stands out in different formats (forums, websites, blogs), both those of general use (22) and those provided by the public administration (6).

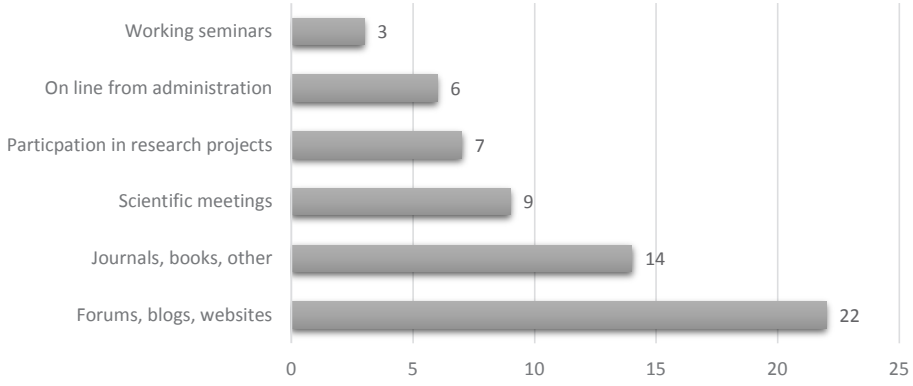
> 'Yes, on Twitter, for example. You can access information very quickly and, moreover, of course, we are in a world in which we are flooded with information, and the difficulty lies in finding relevant information that might be of interest to you. So on Twitter you make your own social network of what interests you' (EDT1).

> 'At the school we subscribe to different journals which publish on educational research results' (EDT4).

> 'Through reading professional journals' (EDT4).

As can be seen in Graph 3, traditional formats such as journals, books, etc. are used to a lesser extent (14). Attendance at conferences and scientific meetings is another way of access reported by respondents (9), as well as participation in research projects (7) and working seminars (3).

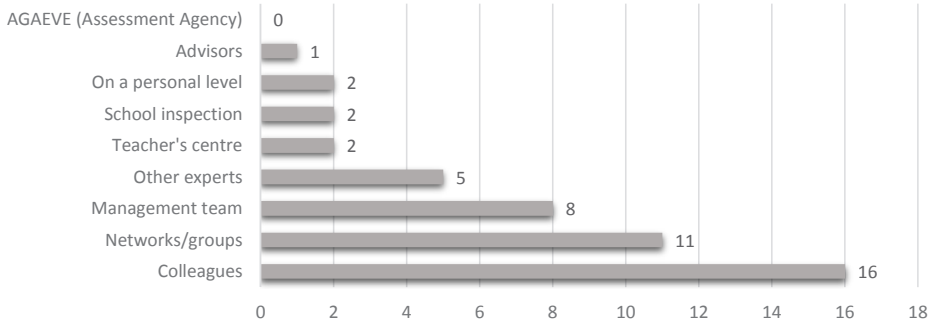
Figure 3
Pathways to results



Regarding the agents which facilitate access to research results (Graph 4), colleagues (16) and networks or groups (11) stand out, followed by the management team (8).

> '… also share it with other people, for example, as we were saying, tutors. To say to them: "hey, look at this paper, it is very interesting for your daily practice in the classroom".' (EDT4)

Figure 4
Agents facilitating access to research results

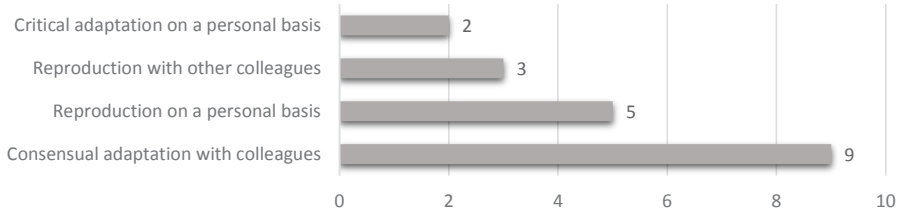


Channels external to schools are less frequently mentioned, such as experts (5), teachers' centers (2) and inspectors or advisors (1). Interestingly, the Evaluation Agency AGAEVE is not considered as a facilitating agent.

> 'What we sometimes do is to contact a school to see how they work with projects, how they work with robotics, and so on, because if I read a book about robotics or how to implement it, it is not going to solve the problems that I am going to have on a day-to-day basis' (EDT1).

Figure 5 shows the pathways in which, according to the managers interviewed, research results are transferred into educational practice. The most common way is the consensual adaptation of research results together with other colleagues (9), although it is also done on a personal basis, out of self-interest. In this second case, contrary to when the adoption of the results is collective, the more or less linear reproduction of what is contained in the research reports consulted seems to predominate (5) over their critical adaptation (2).

Figure 5
Translation of results



The possibility of dialogue and discussion among colleagues probably provides greater security when adapting research results to the context, whereas in individual transfer there is a tendency to reproduce and not introduce modifications.

> 'We do these kinds of activities because we have read about these issues and because we see the need for those moments during breaks, when children have to rest but also have to be active' (EDM4).

Conditioning factors for the applicability of research results

Regarding the conditions most conducive to the use of research and its results, the link between research and practice (12) and the accessibility of information (11) confirm the previous comments. Also, although with a somewhat lower frequency, the visibility of actions (8) and the involvement of teachers (8) are emphasized as issues that favor the use of research results.

Building on the above, it is likely that this teaching commitment is promoted by other factors such as group work (8) and institutional commitment (7). A manifestation of the latter could be represented by school-based training, which is also a noteworthy element (6), as is collaborative training or research (4).

> 'A leadership that pulls forward so that colleagues can be colleagues like them and that they see us as teachers like them, to whom we ask for help when we need it and who give us ideas to get things done; a management team that pulls forward with their colleagues, respects ideas and carries out a task that I think is fundamental' (EDM4).

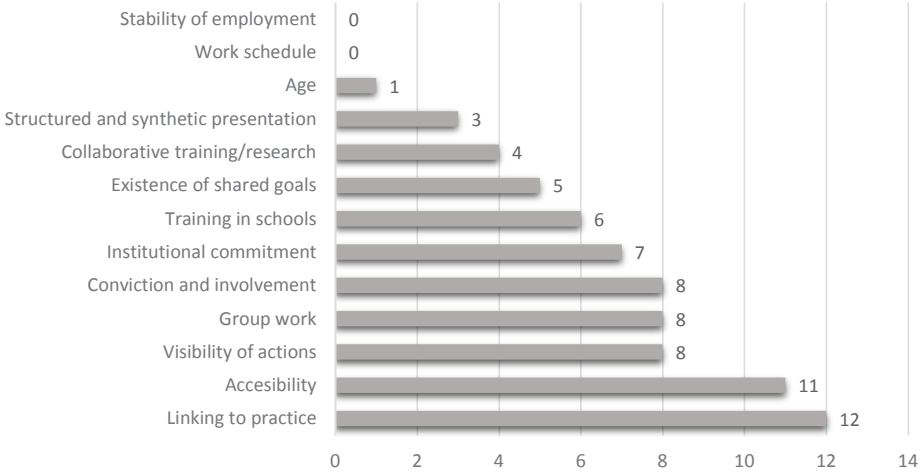
As reflected in this quote, the role of the educational leader is pivotal in the use of research-derived information in schools.

The way in which information is presented is also mentioned, albeit less frequently (3).

'It should be improved... we should also talk more with teachers to find out what their weaknesses are, what problems they are facing in order to help them... if we want a direct implementation in a school, we also need to know what problems can be found in a school on a daily basis so that these investigations can have an impact' (EDM2).

'Universities are the source par excellence of research, there are wonderful professionals... but many times there is a certain disconnection between schools and universities... it would be important that you convey this to us in some way, also by holding... well, I don't know, some kind of symposium, conferences, colloquiums, to call us and also say that, where the new research is going nowadays' (EDM2).

Figure 6
Conditions favoring



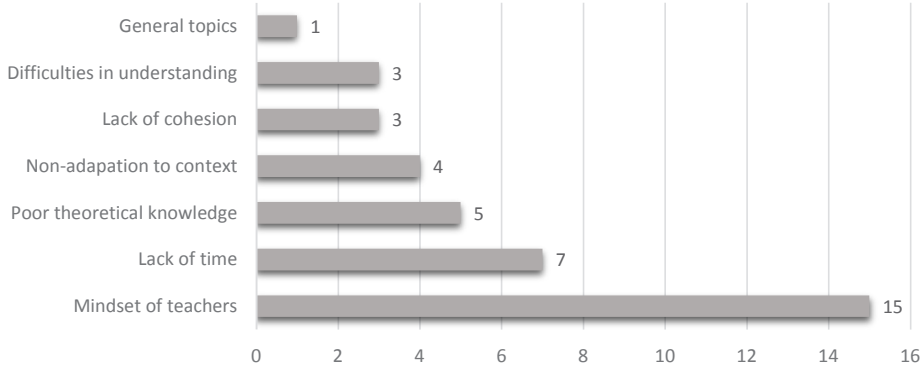
However, it does not seem that issues such as job stability, age, or the characteristics of the space are seen as facilitators for the use of scientific studies.

In contrast, if we focus on the factors that hinder the use of educational research results (Graph 7), we find the highest frequency (15) in the mindset of the teachers.

'... sometimes teachers do not apply the new trends or the conclusions reached by research because the teachers themselves do not give them credibility [...] They think that the research done at the university is theory and they do not really know our work. It's as if they don't quite believe it' (EDT3).

Concerning the teaching staff, the management teams participating in the study identified lack of time (7), poor theoretical knowledge (5), difficulties in understanding research reports (3) and lack of cohesion (3) as factors hindering the use of research results in practice.

Figure 7
Conditions hindering use



Other issues that hinder the use of research, linked to its nature, are: the general nature of the topics addressed in scientific studies (1) and the consequent need for contextualization involved in its implementation in practice (4).

DISCUSION AND CONCLUSIONS

The analysis of the data reveals that, from the perspective of the participants in the study, the two areas in which the results of educational research are most used are those related to the incorporation of active methodologies into teaching-learning processes (cooperative learning, problem-based learning, etc.) and the use of ICTs. Interest in these subjects would be linked to the methodological change driven by the adoption of the competence-based approach to education and the growing incorporation of ICTs in teaching, reinforced by the situation generated by COVID-19. Both of these factors have contributed to the concentration of much of the innovation processes in educational institutions on these aspects (Villa et al., 2015; Trujillo et al., 2020). Contributions from school managements teams point out that the use of research is essentially instrumental, as it is especially aimed

at providing tools applicable to teaching to solve a specific problem or make a particular decision (Tan & Gilbert, 2014; Farley-Ripple, 2012). This is consistent with the findings of Ion et al. (2021) about teachers' appreciation of the possibility of identifying in scientific studies those strategies that work to know which aspects of practice need to be strengthened.

It is also striking that the interest shown in methodological transformation does not extend to a topic as important as the assessment system. From an optimistic perspective, it might be thought that this is because the assessment systems adopted in schools amply cover the needs and interests of teachers. However, it is also possible that, as has been the case at university level, the methodological progress made with the adoption of the competence-based approach to learning has not been coupled with a redefinition of assessment systems (Cano, 2008; Ión & Cano, 2012). This would lead to an assessment developed independently of the methodological action, which could result in significant gaps and inconsistencies in the training processes (López et al., 2018). It would be interesting, in this sense, to develop research processes that, focused on the analysis of educational practice, could help to clarify this question.

School managers also emphasize leadership as a research topic of special interest, in addition to the teaching-learning methodology. They speak of a leadership which is projected not only in their role as administrators and managers of an educational institution, but also in their commitment to openness to the community, the improvement of curricular aspects linked to the improvement of educational practice (methodology, contents, etc.), and others linked to personal development. This diversification of interests is proof of the complex and multifaceted nature of educational leadership (Johnson et al., 2020). It requires the performance of bureaucratic and administrative duties, as well as other tasks of a social, pedagogical or personal growth nature, particularly in 'an increasingly rapidly changing context that increases the complexity of governance and management' (Gairín, 2023, p. 134).

It is striking how little prominence is given to topics such as attention to diversity, counseling and school dropout. This fact seems to confirm, as already pointed out by Cardno et al. (2018), that diversity does not have high priority among school managers. This finding invites to pay more attention to the training of school management teams and their commitment to inclusion and equity in schools (DeMatthews et al., 2021, Harris, et al., 2017). Nowadays, and in the Spanish case, the political commitment to this issue is both insufficient and contradictory (López-López et al., 2021). The Spanish Organic Law 3/2020 on Education, in its article 135.4, establishes, for the performance of the managerial function, the need to present a non-discriminatory management project, aimed at achieving school success for all students and committed to equality between women and men. However, the

training proposal for the performance of the managerial function, published by the Ministry of Education, Culture and Sport (Royal Decree 894/2014), does not include any mention to diversity, inclusion or equity in the competences and content blocks covered, which is nonetheless paradoxical.

Among the agents that facilitate access to research, priority is given to colleagues, other groups or networks of professionals outside the school, and the management teams themselves. Colleagues and management teams become key factors for accessing new information, exchanging experiences and materials, clearing up doubts, receiving support and creating working groups committed to innovation and improvement. They are key agents in bringing research closer to practice, enabling its use to achieve shared goals, fostering learning and empowerment of those involved, and increasing their professionalism in the workplace itself (Cain, 2015; Brown & Zhang, 2016). This would strengthen, according to Ion et al. (2022), favorable attitudes towards educational research and its use in daily practice.

For Khaola and Oni (2020) and Daniëls et al. (2021), school managers who act as leaders can play an important pedagogical role in guiding teachers' learning, in their motivation and work behaviour, providing the means, setting the conditions for innovation and developing organizational learning climates based on trust in leaders and fellow teachers (Ion et al., 2022). All these aspects are essential to increase the school's professional capital and respond effectively to challenges.

The most frequently used means of access to research, according to school management teams, is the virtual one, followed by bibliographical documentation and scientific meetings. It is confirmed that the accessibility to information and the rapid visibility of research results offered by the Internet favour the use of educational research (Cain, 2015; Cordingley, 2008; Farley-Ripple, 2012; Watling et al., 2019). However, for Cordingley (2008) this accessibility of research documents should not only be understood as rapid retrieval (physical accessibility), but also in terms of the ability to understand their content (cognitive accessibility). School management teams can contribute to improving this cognitive accessibility by creating professional learning communities which analyse and reflect on research, the meaning of research, its feasibility, and its application possibilities (Farley-Ripple, 2012; Brown & Zang, 2016; Daniëls et al., 2021). This should be done on the basis of a clear identification of the aspects to be emphasised in day-to-day activity (Ion et al., 2021).

The transfer of research results to educational practice is, in the participants' opinion, mainly done through consensual and negotiated adaptations. In these processes, findings and discoveries are shared, conditions for joint work are created, and agreements are reached on what works, what should be changed, why, how and when (Godfrey, 2014; Hemsley-Brown & Sharp, 2003).

Tellingly, there are few or no references to the contribution of researchers to this type of process aimed at facilitating access to research results or their transfer to practice. This absence reflects the need to strengthen the theory-practice relationship, to foster the transfer of knowledge, and to increase the commitment of research to improving educational practice and schools. The traditional disengagement between the two contexts is a factor in the limited impact that research has had on improving educational practice (Levin, 2013). In addition, although Tan and Gilbert (2014) and Watling et al. (2019) have expressed doubts about the impact of mere access to research-derived knowledge in improving classroom practices, many authors emphasise the need to strengthen the school-university relationship in order to enhance the theory-practice connection and increase the applicability of research results (Vanderlinde & Van Braak, 2010, Malouf & Taymans, 2016; Brown & Zhang, 2016). From this perspective, it is recommended to promote research that is close to practice and open to the participation of the educational community (Carr & Kemmis, 1988; Brown & Zang, 2016; Coburn, et al., 2013; Penuel et al., 2017).

According to the interviewees, the appropriate use of the results of educational research is conditioned by factors that could be considered intrinsic to the research itself, such as: that the content of the research is linked to practice, the possibility of easy access to its results, its clear exposition and the visibility of the actions developed in the studies, and that the practitioners have participated in them in a collegiate way (Cordingley, 2008 o Farley-Ripple 2012). They also identify other conditioning factors affecting teachers (lack of theoretical training, difficulties in understanding research reports, lack of cohesion, etc.), and schools (lack of group work, lack of time, lack of institutional commitment, etc.).

The first conditioning factors should lead researchers to consider a shift in the topics of study, as well as in the ways of researching and showing what is researched. Research must be concerned with the worries and priorities of practice, if it is to be considered by teachers in their decisions to improve their teaching practice (Galindo-Domínguez et al., 2022). The pathway and the way studies and their results are shown should also be analysed, as suggested by Cordingley (2008) and Farley-Ripple (2012). These authors differentiate between physical accessibility to the studies (access route) and understanding accessibility due to the complexity of the reports themselves and their length. This is an aspect that, although to a lesser extent, has also been highlighted by the study managers.

To overcome the second group of factors which hinder the use of research in practice, school management teams need to establish times and dynamics in schools that allow teachers to reflect collaboratively on the studies that the needs analysis has identified as necessary to improve their practice (Brown & Zhang, 2016). But, above all, they are urged to encourage the involvement of school members in

the design and development of these studies. The aim is to bring diverse voices and practitioners themselves into the research processes, in order to facilitate a shift from a transmission model of improvement – based on 'best advice' – to one focused on the culture of learning, in which school staff jointly question the what and why of changes (Hemsley-Brown & Sharp, 2003). This shift is a priority condition if the implementation of research results in practice is to be guaranteed (Brown & Zang, 2016). But it is also a priority for school management teams to support teachers when they engage in action research (Carr & Kemmis, 1988) or participatory research projects (Díez-Gutiérrez, 2020; Pereda & Prada, 2014), or when they are interested in analysing studies which allow them to improve their practice (Cain, 2015). Group work, institutional commitment, as well as in-school training of teachers to carry out research processes linked to practice, are tasks that must be encouraged by school leaders if they wish to promote a school culture based on enquiry and focused on improving learning (Brown & Zhang, 2016; Cain, 2015; Levin, 2013). Likewise, it seems imperative to promote a climate of trust and mutual support which facilitates the undertaking of research activities and the use of scientific knowledge as a foundation for practices (Ion et al., 2022). This could lead to educational decisions based on the integration of academic knowledge and knowledge produced in other ways (Malin et al., 2020).

These actions, led by school management teams, could help to overcome several of the obstacles that, according to school leaders, hinder the use of research results in schools. Thus, teachers' mindsets, attitudes and perceptions – which are the most prominent determinants of the lack of applicability of research in practice – together with their limited theoretical training – which prevent them from having adequate capacities or skills to generate, understand (Cordingley, 2008) and use research results (Brown & Zhang, 2016; Cain, 2015) – could be diminished through school-based training processes led by school management teams. It is therefore recognised that it is essential to build a culture focused on change, a change based on researching reality and collecting data to substantiate decisions. In this way, organisations would be able to respond adaptively to changes in context (Gairín, 2023).

Another problem that has been highlighted is the lack of time, an aspect that has been validated by studies such as those of Farley-Ripple (2012), Cain (2015) and Galindo-Domínguez et al. (2022). These studies underline the need for teachers and management teams to have time during the school day to investigate and analyse research reports. The autonomy of school management teams in organisational and time-related aspects facilitates the creation of these spaces and times to approach research.

Theoretical contributions

From a theoretical perspective, this study contributes to increasing existing knowledge about the value and ways of using research in educational practice. It does so by focusing on the perspectives of management teams, which is unusual despite the key role they play in the improvement processes of educational institutions, their influence on teachers, and their ability to overcome many of the obstacles to the use of research in educational practice (Gairín, 2023; Godfrey, 2014).

Implications

The results of this study have different implications. Firstly, they reveal the need to undertake useful educational research, linked to practice, which responds to the specific interests and needs of schools and teachers, and which provides knowledge that can be used by teachers to improve their practice (Ion et al., 2021; Galindo-Domínguez et al., 2022). This type of research can also be extremely helpful in clarifying the imbalances and inconsistencies that may exist in educational action (Ión & Cano, 2012; López et al., 2018).

Secondly, the results show the convenience of having school cultures and climates which foster collaboration, learning and empowering of school members to question practice, make decisions, and actively engage in improvement processes (Hemsley-Brown & Sharp, 2003). The aim should be to provide favourable conditions in schools for collaborative learning and to reach agreements and consensus on what to change, why and how to do it, as suggested by Daniëls et al. (2021) and Godfrey (2014).

Third and finally, this study highlights the relevance of leadership and the important role that school management teams can play in facilitating the use of and access to research results, by creating enabling conditions in schools which foster joint reflection on educational research and its feasibility in their particular context, and by supporting the collaborative work of teachers and their commitment to the improvement of practice (Daniëls et al., 2021; Gairín 2023). Any progress in this direction requires attention to the training of school leaders and the analysis of the actions undertaken by them in the performance of their functions as transformational leaders committed to an educational practice based on research into reality (Cardno et al., 2018; Johnson et al., 2020; Khaola & Oni, 2020).

Limitations and future research

The main limitation of this study is of a methodological nature and lies in the small number of participants. It would be advisable to further explore the value and forms of use of research on educational action by increasing the number of participants, including larger and more representative samples. It would also be interesting to carry out studies that analyse the situation in other countries, or comparative studies which offer a more global and contrasted perspective on the matter addressed in this paper.

REFERENCES

Brown, C. (2017). Further exploring the rationality of evidence informed practice: a semiotic analysis of the perspectives of a school federation. *International Journal of Educational Research*, *82*, 28-39.

Brown, C., & Zhang, D. (2016). Is engaging in evidence-informed practice in education rational? What accounts for discrepancies in teachers' attitudes towards evidence use and actual instances of evidence use in schools? *British Educational Research Journal*, *45*(5), 780-801. https://doi.org/10.1002/berj.3239

Cain, T. (2015). Teachers' engagement with research texts: beyond instrumental, conceptual or strategic use. *Journal of Education for Teaching*, *41*(5), 478-492. https://doi.org/10.1080/02607476.2015.1105536

Cain, T., & Allan, D. (2017). The invisible impact of educational research. *Oxford Review of Education*, *43*(6), 718-732. https://doi.org/10.1080/03054985.2017.1316252

Cano, M. E. (2008). La evaluación de competencias en la educación superior. *Profesorado. Revista de Currículum y Formación del Profesorado*, *12*(3), 1-16.

Cardno C., Handjani M., & Howse J. (2018). Leadership practices and challenges in managing diversity to achieve ethnic inclusion in two New Zealand Secondary Schools. *New Zealand Journal of Educational Studies*, *53*, 101-117. https://doi.org/10.1007/s40841-017-0096-x

Carr, W., & Kemmis, S. (1988). *Teoría crítica de la enseñanza. La investigación-acción en la formación del profesorado.* Martínez Roca.

Coburn, C. E., Penuel, W. R., & Geil, K. E. (2013). *Research-practice partnerships: a strategy for leveraging research for educational improvement in school districts*. William T. Grant Foundation.

Cordingley, P. (2008). Research and evidence-informed practice: focusing on practice and practitioners. *Cambridge Journal of Education 38*(1), 37-52. https://doi.org/10.1080/03057640801889964

Daniëls, E., Muyters, G., & Hondeghem, A. (2021). Leadership training and organizational learning climate: measuring influences based on a field experiment in education. *International Journal of Training and Development*, *25*, 43-59. https://doi.org/10.1111/ijtd.12206

DeMatthews, D .E., Serafini, A., & Watson, T. N. (2021). Leading inclusive schools: principal perceptions, practices, and challenges to meaningful change. *Educational Administration Quarterly*, *57*(1), 3-48. https://doi.org/10.1177/0013161X20913897

Díez-Gutiérrez, E. J. (2020). Otra investigación educativa posible: investigación-acción participativa dialógica e inclusiva. *Márgenes, Revista de Educación de la Universidad de Málaga*, *1*(1), 115-128. http://dx.doi.org/10.24310/mgnmar.v1i1.7154

Earl, L., & Fullan, M. (2003). Using data in leadership for learning. *Cambridge Journal of Education*, *33*(3), 383-394, https://doi.org/10.1080/0305764032000122023

Farley-Ripple, E. N. (2012). Research use in school district central office decision making: a case study. *Educational Management Administration & Leadership 40*(6), 786-806. https://doi.org/10.1177/1741143212456912

Gairín, J. (2023). Práctica profesional basada en evidencias y organizaciones que aprenden. *Perfiles Educativos*, *45*(180), 122- 138. https://doi.org/10.22201/iisue.24486167e.2023.180.60983

Galindo-Domínguez, H., Perines, H., Verde Trabada, A., & Valero Esteban, J. M. (2022). Entendiendo la brecha pedagógica entre la investigación educativa y la realidad del profesorado: un análisis de las barreras y propuestas. *Educación XX1*, *25*(2), 173-200. https://doi.org/10.5944/educxx1.29877

Godfrey, D. (2014). Leadership of schools as research-led organizations in the English educational environment: cultivating a research-engaged school culture. *Education Management Administration & Leadership*, *44*(2), 1-21. https://doi.org/10.1177/1741143213508294

Harris, J., Carrington, S., & Ainscow, M. (2017). *Promoting equity in schools. Collaboration, inquiry and ethical leadership*. Routledge.

Hemsley-Brown, J., & Sharp, C. (2003). The use of research to improve professional practice: a systematic review of the literature. *Oxford Review of Education*, *29*(4), 449-471.

Ion, G., & Cano, E. (2012). La formación del profesorado universitario para la implementación de la evaluación por competencias. *Educación XX1*, *15*(2), 249-270. https://doi.org/10.5944/educxx1.15.2.141

Ion, G., Suárez, C. I., & Vicario, A. D. (2021). Evidence-informed educational practice in Catalan education: from public agenda to teachers' practice. *Center for Educational Policy Studies Journal*, *11*(2), 37–57. https://doi.org/10.26529/cepsj.1062

Ion, G., Brown, C., & López E. (2022). Achieving research-informed practice amongst teachers in madrid and Catalonia: findings from a quantitative analysis. *International Journal of Education Policy & Leadership*, *18*(2), 80-98. http://doi.org/10.22230/ijepl.2022v18n2a1123

Johnson, A. D., Clegorne, N., Croft, S. J., & Ford, A. Y. (2020). The professional learning needs of school principals. *Journal of Research on Leadership Education*, *16*(4), 305-338. https://doi.org/10.1177/1942775120933933

Kaur, A., Nur, A. H. B., Purnomo, Y. W., Zailani, M., Yusof, M., & Suswandari (2020). Educational researchers in Malaysia – who they conduct their research for? *Pertanika Journal of Social Science and Humanities*, *28*(2),1083-1104.

Khaola, P. P., & Oni, F. A. (2020). The influence of school principals' leadership behavior and act of fairness on innovative work behaviors amongst teachers. *SA Journal of Human Resource Management*, *18*(0), Artículo a1417. https://doi.org/10.4102/sajhrm.v18i0.1417

Levin, B. (2013). To know is not enough: research knowledge and its use. *Review of Education*, *1*(1), 2-31. https://doi.org/10.1002/rev3.3001

Ley Orgánica 3/2020, de 29 de diciembre, por la que se modifica la Ley Orgánica 2/2006, de 3 de mayo, de Educación. Boletín Oficial del Estado nº 340 de 30 de diciembre de 2020.

López, M. C., León, M. J., & Pérez, P. (2018). El enfoque por competencias en el contexto universitario español. La visión del profesorado. *Revista de Investigación Educativa*, *36*(2), 529-545. http://dx.doi.org/10.6018/rie.36.2.314351

López-López, M. C., León-Guerrero, M. J., & Romero-López, M. A. (2021). La dirección escolar en España y su compromiso con la inclusión. Una asignatura pendiente de evaluación. In I. Aznar., J.A. López., M. P. Cáceres., C. De Barros., & F. J. Hinojo (2021). *Desempeño docente y formación en competencia digital en la era SARS COV 2* (pp.163-175). Dykinson.

Malin, J. R., Brown, C., Ion, G., Van Ackeren, I., Bremm, N., Luzmore, R., Flood, J., & Rind, G.M. (2020). World-wide barriers and enablers to achieving evidence-informed practice in education: what can be learnt from Spain, England, the United States, and Germany? *Humanities and Social Sciences Communications*, *7*, 99. https://doi.org/10.1057/s41599-020-00587-8

Malouf, D. B., & Taymans, J. M. (2016). Anatomy of an evidence base. *Educational Researcher*, *45*(8), 454-459. https://doi.org/10.3102/0013189X16678417

Mayorga, M. J. (2004). La entrevista cualitativa como técnica de la evaluación de la docencia universitaria. *RELIEVE - Revista Electrónica De Investigación Y Evaluación Educativa*, *10*(1), 23-39.

Miles, M., Huberman, A., & Saldaña, J. (2014). *Qualitative data analysis (3ª ed.).* SAGE.

Neal, J. W., Neal, Z. P., Kornbluh, M., Mills, K. J., & Lawlor, J. A. (2015). Brokering the research-practice gap: a typology. *American Journal of Community Psychology*, *56*, 422-435. https://doi.org/10.1007/s10464-015-9745-8

Penuel, W., Allen, A., & Finnigan, K. S. (2017). *How research-practice partnerships can support ESSA implementation for educational improvement and equity: a guide for school districts, state education leaders, and researchers*. https://bit.ly/3IYQGbO

Pereda, C., & Prada, M. Á. de. (2014). Investigación-acción participativa y perspectiva dialéctica. *Arxius de Sociologia*, *31*, 57-68.

Real Decreto 894/2014 por el que se desarrollan las características del curso de formación sobre el desarrollo de la función directiva establecido en el artículo 134.1.c) de la Ley Orgánica 2/2006. Boletín Oficial del Estado nº 270. https://bit.ly/4cuuzHH

Sierra, F. (1998). Función y sentido de la entrevista cualitativa en la investigación social. In J. Galindo (Ed.) *Técnicas de investigación en sociedad, cultura y comunicación* (pp. 277-354). Pearson Educación.

Tan, K. C. D., & Gilbert, J. K. (2014). Chemistry teaching: impact of educational research on the practices of chemistry teachers in Singapore. Chemistry *Education Research and Practice*, *15*(2), 207-218. https://doi.org/10.1039/C3RP00158J

Trujillo, F., Segura, A., & González, A. (2020). Claves de la innovación educativa en España desde la perspectiva de los centros innovadores: una investigación cualitativa. *Participación Educativa*, *7*(10), 49-60. https://bit.ly/3VVuOFZ

Vanderlinde, R., & Van Braak, J. (2010). The gap between educational research and practice: views of teachers, school leaders, intermediaries and researchers. *British Educational Research Journal*, *36*(2), 299-316. https://doi.org/10.1080/01411920902919257

Villa, A., Arranz, S., Campo, L., & Villa, O. (2015). Percepción del profesorado y responsables académicos sobre el proceso de implantación del Espacio Europeo de Educación Superior en diversas titulaciones de educación. *Profesorado. Revista de currículum y formación del profesorado*, *19*(2), 245-264.

Villa, A. (2019). Liderazgo: una clave para la innovación y el cambio educativo. *Revista de Investigación Educativa*, *37*(2), 301-326. http://dx.doi.org/10.6018/rie.37.2.365461

Watling, J., Mills, K., McAllindon, K., Neal, Z., & Lawlor, J. (2019). Multiple audiences for encouraging research use: uncovering a typology of educators. *Educational Administration Quarterly*, *55*(1) 154–181. https://doi.org/10.1177/0013161X18785867