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Presentation

REVISTA DE EDUCACIÓN is a scientific journal published by the Ministerio de Educación, Cultura y Deporte. Founded in 1940, and since 1952 called *Revista de Educación*, it has been a privileged witness of the development of education in the last decades, and an acknowledged means for the dissemination of education research and innovation, both from a national and international perspectives. It is currently assigned to the Instituto Nacional de Evaluación Educativa within the Dirección General de Evaluación y Cooperación Territorial and it is published by the Subdirección General de Documentación y Publicaciones of the Ministerio de Educación, Cultura y Deporte.

Each year we publish four issues. Starting next issue (No. 361), the magazine will have three sections: Research, Essays and Education Experiences, all of them submitted to referees. In the first issue of the year there is also an index of bibliography, and in the second number a report with statistic information about the journal process of this period and the impact factors, as well as a list of our external advisors.

From 2006 to the second number of 2012 (May-August 358), *Revista de Educación* was published in a double format, paper and electronic. The paper edition included all the articles in the especial section, the abstracts of articles pertaining to the rest of sections, and an index of reviewed and received books. The electronic edition contains all articles and reviews of each issue, and it is available through this web page (www.mecd.gob.es/revista-de-educacion/), where it is possible to find more interesting information about the journal. From the 358 number *Revista de Educación* becomes exclusively an online publication.

Revista de Educación assesses, selects and publishes studies framed in well established lines of research, mainly: methodologies of education investigation and assessment; analysis of education systems and public policies; evolution and history of contemporary education systems; education reforms and innovations; quality and equity in education; curriculum; didactics; school organization and management; attention to diversity and inclusive education; educational guidance and tutorship; teacher selection, training and professional development; international cooperation for the development of education.

Revista de Educación is available through the following data bases:

Index

Monographic issue: Policy Building and Generation of Knowledge in Education

Research

Salutation

The Education Journal has just published its 400th issue. This is a clear indication of the Ministry of Education's commitment, over more than seventy years, to maintaining a high quality scientific journal, with accredited recognition in our R&D system and important use value both for researchers and for those responsible for the design and assessment of public policies in education and training.

The commemorative purpose of this issue on the contribution of the Education Journal to Spanish education leads us, first of all, to recall that the goal of the Journal has always been to promote the knowledge production in the field of education, as well as to cover a wide range of educational issues with the common denominator of disseminating the scientific knowledge underlying them. From this perspective, the Journal is a privileged observatory of the evolution of contemporary educational trends; of proven fields and methods of educational research and of those which are not fully explored yet; of the challenges involved in the organisation of modern educational systems based on common points of reference in the international context. In short, of the conceptual and methodological progress made in education for the effective exercise of active citizenship and the development of a democratic society.

Taking into account the contents of its issues and its demanding publication frequency, the studies and contributions that the Journal of Education brings together are clear evidence of the commitment to making effective the right to education and to receiving a quality education without compromising equity. Therefore, they provide a remarkable example of the need to analyse the factors involved in any educational situation -notably those that are an added value- without neglecting the influence of the historical coordinates and the social context in which they are analysed and which, to a certain extent, explain them.

In this respect, it must be noted that the Journal has not avoided tackling any educational topic and has paved the way for the analysis of a wide range of issues: educational reforms; investment and resources in education; management and organisation of educational centres; cur-

riculum, school texts and educational methods; catering for diversity; the teaching career and teacher training; assessment of the educational system; skills for the labour market and the transition to working life, among others. The aim of producing and disseminating scientific knowledge has been broadened to include current issues in Spanish education, such as inclusive education, early childhood, school coexistence and rural schools.

On many occasions, the Journal has dealt with education in the broadest sense of the term, approaching it from the formal, non-formal and informal perspectives, thus promoting research on issues and in areas of socio-educational intervention that also require visibility and the transfer of advances, especially when we are talking about lifelong learning.

In addition, the special issues have analysed some of the main educational policies developed in Spain (educational support and reinforcement policies such as the PROA Plan, the Bologna process and university reform) and crucial issues for the progress of the common educational project (key competences, early school dropouts, promotion of reading, education for sustainable development).

Likewise, the need to integrate the views of international organisations involved in education is strongly present in the history and current affairs of the Journal. In particular, it is a platform for the dissemination of external evaluations that are part of international studies, which allow for a broad comparison of the quality of education, the improvement of school efficiency, and teaching and learning processes or the teaching practice. This has provided a valuable contrast on what it means to put education at the core of the concerns of societies and governments. This is particularly useful for educational administrators and managers. At the same time, it has also fostered debate in the scientific community and the transparency of Spanish educational research on issues that are part of the body of ideas and methods of scientific disciplines (development of competences, tutoring and guidance, specific teaching methods, use of ICTs), thus underlining the need for research as a cornerstone of education.

As a result, the Education Journal, being a scientific publication, has been and continues to be an invaluable channel of communication between academics and policy makers, and this is one of its main distinctive features.

In this 400th issue, we must remember that the aim of promoting the proven quality of knowledge in the field of education has been shared

by the editors and publishers who have been at the helm of the journal. This has been the case from the 1990s onwards, when the assessment of scientific activity in all fields of knowledge based on the impact factor was established, and when the number of scientific journals in education in Spain increased significantly..

In this context, the link between the Education Journal and the units established by the Ministry's organisational structure at any given time has enabled the editors to play a role that goes beyond the purely administrative functions and has contributed to the progressive professionalisation of the management of the editorial process. Its editors, who are renowned in the scientific field of Education, have been able to attract the best papers and engage the best reviewers in the review process in line with the ethical principles and criteria for the assessment of scientific production established both nationally and internationally.

Undoubtedly, the work carried out by all of them has gradually consolidated the current reputation of the Journal, ensuring the quality it has achieved in light of today's metrics and laying a solid foundation to play the role that is expected of scientific, periodical and peer-reviewed journals in the digital era.

Finally, it is important to note that the Ministry of Education and Vocational Training, in its role as publisher, will continue to ensure the development and quality of the Education Journal. Education needs to describe, explain and predict the phenomena that are taking place, and to this end it is essential to produce, publish and disseminate the results of educational research. To sustain the scientific communication that the Education Journal allows is still necessary not only to reflect on the experience acquired and the achievements made by Spanish education, but also to be able to face future challenges with as much information as possible.

Spanish education is undergoing a moment of major transformation due to the development of Organic Laws that are set to transform the education and vocational training system in our country. Research spaces such as the Education Journal can contribute to generating critical mass around the improvement in the implementation of policies and programmes that will make Spain a benchmark in education, overcoming the barriers that have hindered large sections of the population in the past from developing the necessary skills throughout their lives in order to make progress in a changing world and ensure individual and social wellbeing.

In short, education needs to describe, explain and predict the phenomena that are taking place, and to this end it is essential to produce, publish and disseminate the results of educational research. At the same time, it is necessary to ensure access to this knowledge to the scientific and academic community, to public education policy makers and, in general, to anyone interested in accredited and useful knowledge in the field of education and for the advancement of society through Education. For this purpose, the Education Review is oriented.

Pilar Alegría Continente
Minister of Education and Vocational Training

Monographic section

Presentation: Policy building and generation of knowledge in education

Presentación: Construcción de políticas y generación de conocimiento en educación

Alejandro Tiana Ferrer

Guest Editor

Revista de Educación reaches its 400th issue, 82 years after its creation and 71 years after the adoption of its current name. Indeed, the first issue of *Revista Nacional de Educación*, the predecessor of the current journal, appeared in January 1941. It was born in a post-war environment, with an explicitly Falangist militancy and a strong ideological and indoctrinating content at the service of "patriotic reconstruction". Eleven years later, in January 1952, the first issue of *Revista de Educación* was published. This journal was a continuation of its predecessor but with a new name and a more open and expressly educational ideological orientation, although still with very different characteristics and approaches to those of today. After a long journey, it reached its 300th issue in 1993, which later led to the publication of a special issue in 1996 commemorating the first three hundred issues. In its presentation, as the director of the journal between 1989 and 1996, I wrote some brief historical notes on the journal's trajectory over those 52 years, to which I refer interested readers (Tiana, 1996).

We have now reached issue 400, another very special number. The director and editors of *Revista de Educación* have thought it appropriate to devote this issue to a monographic theme that involves a reflection, among other things, on the role that scientific journals can play in today's world. A wise decision, in my opinion. Whereas in the commemoration of the 300th issue it was decided to make a systematic review of the journal, from its origin up to that point, in order to have a good documentary

base in times when digitisation was less advanced, it is now very appropriate to focus on the role of the journal and its impact on the construction of public education policies. Such is the genesis of this monographic issue, to which I was kindly offered to collaborate as a guest editor. In addition to the intellectual interest I have in the subject (whose conception and formulation we defined together), I must admit that being the only person to have the opportunity to present two issues with such round numbers was an additional incentive for me to accept the offer.

Thus, readers have before them a monographic issue entitled "Policy construction and knowledge generation in education". The choice of this theme is also related to the contribution that *Revista de Educación* has been making to Spanish education throughout its history, although a special emphasis is placed on the most recent years.

On the one hand, the journal has played a prominent role in the generation of knowledge in the field of education and in the dissemination of the knowledge produced, adapting its characteristics to the different historical situations it has experienced. Particularly since the 1980s, it has been analysing issues of interest and current affairs in the field of education, having contributed to the introduction of international ideas, movements and trends in Spain, always from an analytical and critical perspective. In addition, it has contributed to opening up the Spanish educational scene to the world, both in terms of the subjects dealt with and the contributors it has brought on board. The culmination of these approaches came with the inclusion of the journal in the main international databases and with the recognition of its quality indicators, which continues to this day.

On the other hand, the journal has served as a support for the analysis and critique of the main educational policies developed in Spain and in other countries. It has contributed pedagogical studies, but also sociological, psychological, political and economic studies, among others, adopting a multidisciplinary approach. Many of these studies have applied comparative approaches, which have contributed to a proper understanding and assessment of the Spanish situation in its specificity as well as in its international dimension.

Yet, the theme of this issue goes beyond this vision, which focuses on the journal itself. While it is true that the articles published over the years have reflected the main trends in the generation of knowledge in the field of education, they have not been confined exclusively to the academic

sphere, however rigorous their approaches and demands may have been from this point of view. Given the journal's ties with the successive ministries responsible for education, it has also paid special attention to the educational policies that have been developed over time, both Spanish and international. It is not my intention here to provide a detailed review of the relevance of the issues addressed from this perspective, as it is sufficient to consult the list of such issues to see for oneself. Consequently, it can be said that there is a continuous interaction between the generation of knowledge and the construction and analysis of public policies in the field of education, which the history of the journal clearly illustrates.

In order to address the many facets of the proposed theme, this issue includes a total of nine articles dealing with a variety of topics. Although each of the authors has chosen the approach that seemed most appropriate, the nine articles can be grouped into three main categories.

The first category includes four articles focusing on the contribution that knowledge in education can make to the construction of educational policies and, more specifically, to what has come to be known as evidence-based policymaking. Indeed, three of them include this term in their titles. The use of this term also makes it possible to insert them unreservedly into the trend that has been in force for more than a decade, which advocates the need for policy decisions to be made on the basis of the best available evidence in order to avoid mistakes or improvisations. This trend is based on the studies developed by the OECD in the 1990s on the role of educational research and its contribution to policymaking, which were taken up more strongly in the first decade of the 21st century. As stated in a famous and influential report entitled *Evidence in Education* (OECD, 2007), we must consider what constitutes evidence in this field, what specific contribution educational research can make to it, how knowledge can be used for the construction of sound educational policies, and how the dysfunctions and problems detected by countries in this area can be addressed. According to the proposal of the specialists involved in the report, the objective is to promote *evidence-informed policy research*. That is broadly what the first four articles discuss.

Francesc Pedró's article addresses the difficulties of incorporating international comparative evidence in educational policymaking. A great researcher and expert in the field of comparative education policies and well acquainted with the actions developed by the OECD and UNESCO, where he has been working for two decades, Pedró's extensive interna-

tional experience serves as the basis for his reflections. The core of his reflections lies in the paradox that, despite the growing amount of international comparative evidence, individual countries' educational performance is not improving significantly. The contributions made by studies such as PISA and the political recommendations to which they have given rise do not seem to be producing the expected improvements.

According to Pedró, there are three reasons that could explain this paradox. Firstly, there is the perverse (not simply complicated) nature of educational problems, which involve several actors and have uncertain and non-linear connections between their policy variables. Secondly, there are communication gaps and barriers between researchers and knowledge generators, on the one hand, and policymakers, on the other hand. The latter also lack the training to properly understand the scope of such evidence. Thirdly, there is an evidence implementation gap, as the success of certain initiatives is not only explained by their own merits, but also by how they are implemented, which has to do with the expectations placed on them, the existing governance contexts, the collaboration of the different actors in the policy-making process, and the vicissitudes of the political cycle.

He concludes by stressing that comparative studies can only be seen as a source of information and not as the basis for technocratic prescriptions, which are nothing more than wishful thinking. In order to improve the influence that knowledge and evidence can exert, he argues that education policy researchers should become more familiar with the theoretical and conceptual richness of public policy studies in general.

The article by Manuel Fernández Navas and Ana Yara Postigo Fuentes also explores this line of thinking, although their approach is more focused on the analysis of the theoretical foundations and the specifics of evidence-based education. They link the relevance given to evidence-based education with the expansion of what Daniel Innerarity calls the *dataism* present in our complex societies, based on the claim to find simple solutions to problems that must necessarily be complex. They locate the founding event of evidence-based teaching in a conference by David Hargreaves in 1996, in which he called for more research-based teaching, which had great impact and dissemination. From then on, the idea spread, not without difficulties and contradictions.

Both authors believe that the main problem underlying this trend lies in the epistemological problems it raises, as well as in the reductionisms

it is forced to accept in order to progress In their study, they pay special attention to the paradigm war that took place in educational research at the end of the 20th century. Indeed, their subsequent analysis of the reductionisms proposed by Wrigley is inserted in this perspective. For the authors, these reductionisms (experimental, psychological, social class, efficacy and bell jar), which serve as the backbone of their analysis, pose abusive simplifications that feed the delusion of finding adequate (simple) solutions to complex problems. Hence the fundamental criticism to be made of the evidentialist tendency, to which they devote a large part of their article.

The problem, however, is not limited to the adoption of abusive reductionism, but also has to do with the resurgence of a technocratic paradigm, whereby education should be considered merely as a technical matter, thus detaching it from the intentions, objectives and purposes that give it meaning, an approach that seemed to have been superseded. The conclusion they draw from these analyses is that underneath the proposal for evidence-based education lies, rather than a concern for improving education, an effort to construct narratives that support the educational policies adopted. They argue that education and research should be understood as complex processes and not simply as technical issues based on the analysis of quantitative data.

There is no doubt that the development of major international assessment programmes, most notably the PISA project, has given a strong impetus to this idea of making more and better use of the evidence that is available or can be built up. The above-mentioned OECD study found that the increasing attention paid by countries to the assessment of educational outcomes has been a powerful factor in re-launching a trend that barely got off the ground twenty years ago. It is therefore worth looking again at the international organisations that have promoted such massive surveys (such as the OECD) or are using them to drive their education policies (such as the European Union).

The article by Nóra Révai, Jordan Hill and José Manuel Torres presents and discusses some results of a study recently carried out by the *Centre for Educational Research and Innovation* (CERI) of the OECD, to which they belong. The project, called *Strengthening the Impact of Education Research*, follows the path of those mentioned above, developed by the same organisation in the 1990s and in 2007. It is a study based on a survey answered in 2021 by ministerial representatives from 37 educa-

tion systems in 29 countries and subsequently supplemented by semi-structured interviews with representatives from six of these countries. The purpose of the article is to identify some of the issues that facilitate the use of research in education policy and teaching practice, as well as the main features of recent research output. As can be easily seen, the authors address an issue that is of great interest when it comes to promoting evidence-based policymaking, since research is considered to be one of the main sources of evidence.

The article presents the data obtained in relation to three main aspects: 1) who are the main actors in the mobilisation of research, that is, who facilitates its use; 2) what does this mobilisation consist of, or in other words, what are the mechanisms applied to promote its use; 3) what are the barriers that hinder the mobilisation and use of research. The survey conducted, with questions of various types and formats, attempts to explore these issues, along with some others that are not the subject of this paper.

The conclusions obtained are certainly interesting. Firstly, it is apparent that the education systems differ notably in the number and nature of the actors who promote the use of research. In contrast to the traditional distinction between researchers, policymakers and educational practitioners, there are now other actors such as research funders, textbook publishers, technology companies, think tanks, networks of researchers and practitioners, the media and students, who have a greater or lesser presence and activity, depending on the case. In addition, in many countries, there are intermediary agencies and other similar organisations. The same can be said about the multiplicity, diversity and variable presence of mechanisms to promote the mobilisation and use of research. While there are some fairly widespread instruments, such as the funding of specific and targeted research programmes, there is a wide dispersion among the ten main mechanisms identified and their relative presence in different education systems. The article also highlights the existence of significant and varied barriers to such mobilisation. Overall, the article points to the excessive presence of actors and mechanisms based on a linear conception of such mobilisation, as opposed to others that should be present on the basis of relational or systemic models. Finally, it concludes with the need to develop the latter models in order to achieve a more effective use of the results of the research.

The article by Javier Valle and Lucía Sánchez-Urán widens the focus to deal with the activities developed not only by the OECD but also by

UNESCO and the European Union. Their central thesis, which serves as the backbone of their paper, is that international organisations have been launching a set of ideas, concepts and approaches to education, which spread rapidly in this globalised world, with the real or symbolic support of the organisations themselves, to the point of becoming trends that produce a notable impact in the different countries that adopt them. In this global context, international organisations play a decisive role, exercising a soft power that is as evident as it is influential, which is why it is worth taking a look at the type of action they promote.

In order to show how international organisations exert this influence, two examples of great relevance today are analysed. The first one concerns the concept of lifelong learning, whose main promoter was UNESCO, half a century ago, under the term *lifelong education*, and which would later be replicated and expanded by the OECD and the European Union, becoming highly relevant in the last twenty years. The second example refers to the discourse of evidence-based education policy, which fits neatly into the theme of this issue. While earlier we spoke of how the work of CERI-OECD contributed to the development of this discourse, Valle and Sánchez-Urán describe the contribution made by UNESCO and the European Union.

The analysis carried out by the authors on the construction and dissemination of this discourse is based on the study of the programmes and documents produced by these organisations, which corroborates their theses. They also provide an analysis of the main systems of indicators used in the implementation of this discourse, especially the publications *Education at a Glance* (OECD) and *Education and Training Monitor* (European Union). From this, they draw some conclusions which are worth comparing with those provided by the other three papers included in this category of the theme addressed in the issue. On the one hand, they insist on the predominance of the use of quantitative data and of data referring to learning outcomes, which is in line with the reflection on *dataism* mentioned above. In this respect, they suggest the need to use other qualitative indicators, with explanatory potential, referring to processes and contexts. On the other hand, the authors underline the strong economistic component of these sets of indicators, which, due to the way they are defined, also contribute to constructing the reality that they claim only to describe. Finally, they argue for the need to combine this type of "evidence" with other "micro" information, more comprehen-

sive and capable of offering more complete and complex information to support decision-making and the construction of educational policies.

The second category covered in this issue includes three articles focusing on the role of scientific journals as a vehicle for the dissemination of knowledge about education and, by extension, their role in the construction of such knowledge. Although two of them deal with matters related to *Revista de Educación* itself, this group of papers does not focus solely on it. The articles in this category look at other Spanish and Portuguese journals, with the aim of broadening the field of analysis.

The article by Marta Ruiz Corbella, Ernesto López Gómez, Arturo Galán González and Consuelo Vélaz de Medrano traces the evolution of several Spanish scientific journals on education over a decade (2011-2020). The authors, all of them involved at some point in the editing of these journals, are aware of the role they play today as the main channel of communication of research, hence their interest in studying them. They argue convincingly that two complementary phenomena, which have been taking place since the 1980s, are involved in explaining this decisive role. On the one hand, they analyse how Spanish science policy has been configured and constructed, one of the central components of which has been the promotion of the scientific production of our institutions and researchers. In this regard, they particularly highlight the work carried out recently by the Spanish Foundation for Science and Technology (FECYT in Spanish), created in 2001, which has strongly supported the professionalisation and internationalisation of Spanish scientific journals. On the other hand, they underline the driving role played in this process by the system for evaluating the research activity of university teaching staff, to the extent that six-year research periods have become an essential tool for the professional development of scholars. Given that the six-year periods and the accreditation systems for teaching staff attach decisive importance to scientific papers and the publications in which they appear, it is only logical that journals have become highly relevant, notwithstanding the problems that this predominant position may cause.

The article reviews the evolution of the eight journals included exclusively in the *Education* category of the *Scopus* ranking (as it includes a greater number of Spanish journals than the *World of Science* database) during the decade 2011-2020, leaving aside those included in two or more categories (59 journals). Seven of them are published by Spanish universities and the eighth journal is *Revista de Educación*. Altogether,

they published 2340 articles in the above-mentioned decade. Their analysis has provided a full picture of the evolution of these journals.

The authors conclude that a clear positive trend can be observed over these ten years in terms of impact and indexing, which is particularly evident for *Educación XXI* and *Revista de Educación*. The eight journals analysed have generally improved their position in the ranking, with a predominant presence in the second quartile (Q2). The analysis goes into greater detail on the language used, the presence of non-Spanish authors (mostly Latin American) and the keywords used in the articles published. Overall, the paper paints a positive picture, although there are still some critical points that will require attention in the coming years.

The article by Ramón López Martín is a good example of how a scientific journal can serve as a source for reconstructing relevant aspects of education in the past. In this case, he studies how school practices and pedagogical styles in Spain in the 20th century are reflected in *Revista de Educación*. The article's theoretical framework focuses on the study of schools as a social space that is constructed with a culture of its own. In accordance with this perspective, special attention is paid to the so-called *school culture*, insofar as it allows a comprehensive look inside the school institution, as many researchers have been calling for. In this sense, school culture includes three key elements, namely theories (or accounts of pedagogical ideals and discourses, resulting from the reflection of experts), rules (or regulations and administrative prescriptions promoted by system managers) and school practices developed by teachers. The interaction of these three elements constructs the school culture that must be studied.

From this theoretical framework, the author turns to *Revista de Educación* as an exceptional witness of Spanish education in the second half of the 20th century, which allows him to re-read the models of school practices and pedagogical styles developed in that time and context. In addition, he insists on the double role that this journal has played: on the one hand, it has contributed to the generation of knowledge related to the aforementioned triple dimension of school culture; on the other hand, it has captured the evolution of these aspects during the period in question. Given the breadth that would be required to analyse the evolution of all the elements of school culture, the author has selected school practices and pedagogical styles as being of special interest, leaving aside on this occasion the analysis of discourse and rules.

The article distinguishes three periods, each of which has unique characteristics that allow them to be considered as units of analysis. The first period corresponds to the *post-war school*, which is characterised by a nationalist and Catholic orientation that has led to it being referred to as *national-Catholic*. The author underlines the explicit desire to achieve a Christian, patriotic and intellectual education for children, placing schools at the service of religion and the nation. Numerous references in *Revista Nacional de Educación* support this objective, which overrides the need to guide teaching practice. The absence of questionnaires and school programmes meant that encyclopaedias and school textbooks were the fundamental reference point for school practice in this first period. The second period, one of *technocratic modernisation*, began as the journal changed its name and its focus. The openness experienced, albeit timid, allowed the introduction of pedagogical criteria into the school environment, which the article analyses in detail. For example, the review does a good service to the understanding and dissemination of the 1953 questionnaires, which were intended to serve as a guide for a new approach to school activity. The 1960s marked a new step forward, with the publication of new questionnaires in 1965, which led to an array of modern teaching tools, which are also dealt with in several issues of the journal. A few years later, the Spanish General Education Act of 1970 marked the beginning of a new era which saw the culmination of the techno-bureaucratic nature of pedagogy. Finally, the third period corresponds to the *democratic school*, in which education ("of all and for all") is understood as an instrument at the service of democratic coexistence. Modernisation reaches *Revista de Educación*, which takes a leap in quality and reflects the international efforts that are taking place to build a modern school capable of responding to new challenges. The new education law passed in 1990 (LOGSE in Spanish) symbolises this change, which became a reality with the implementation of the law, the stage at which the author concludes his research.

The third article in this second category, written by Álvaro Nieto Ratero, Pedro Seguro Romero and Evangelina Bonifácio is linked to the previous two. It is connected with the article by Ruiz Corbella, López Gómez, Galán González and Vélaz de Medrano in that it adopts the same time period for the analysis and focuses on journals included in one of the most renowned quality indexes (again *Scopus*), although this time it deals with Portuguese journals. It also connects with the article by López

Martín in that it deals with the treatment of a specific issue in these journals, this time relating to the construction of teacher training policies. It is precisely the selection of this topic that allows us to link up with the central theme of the issue, relating to the generation of knowledge and the construction of educational policies.

The article begins by presenting the main changes that have taken place in the first two decades of the 21st century with regard to initial and in-service teacher training in Portugal. The regulations published in the form of decree-laws in 2001, 2007 and 2014 have been defining and redefining the characteristics of the Portuguese teacher training system. The presentation of this system serves as a reference for the study of the articles published in relation to teacher training and professional development policies. To carry out the analysis, the authors have selected the only two Portuguese education journals included in *Scopus* (*Revista Portuguesa de Educação* and *Revista Lusófona de Educação*). In the years under consideration (2011-2021) the former published 14 articles (out of a total of 253) on teacher education and development and the latter 32 (out of a total of 419). Overall, 46 articles were published on these topics, out of a total of 672 articles published in those years, representing a limited 6.8%. The authors carry out their analysis on the basis of these 46 articles.

A detailed study of the articles published in both journals leads to several conclusions. Firstly, the number of articles on the chosen topic is quite small. Their chronological appearance has been irregular, without there necessarily being a concentration at times of regulatory change (although some of them fall outside the period in question). On the other hand, the focus and subject matter of these articles is very varied, with no clear constants. The absence of monographic issues devoted to the chosen topic despite its relevance is also striking. All of this leads the authors to stress the need to involve more actors in this task of knowledge generation and to establish more relationships between them. Specifically, they conclude their article by stressing the need for greater involvement of practising teachers in the construction of teaching policies, despite the difficulties that this entails.

The third miscellaneous category of this monograph includes two articles that deal with two specific cases of educational policymaking. The two articles are very different from each other, but they are related in their desire to analyse the construction of public education policies in relevant fields.

The article by Guillermo Ruiz focuses on the construction of educational policies in a federal state, namely the Republic of Argentina. The central focus of his work lies in the effect produced by the educational reforms carried out in the first years of the 21st century, although his analysis goes back a little further in time when necessary. The conceptual framework that serves as the basis for the study is to be found in the analysis of the characteristics of federal states and their translation into the field of education. After analysing the fundamental features of federalism and characterising the Argentinean state as a federal model that can be called a coming-together model, he describes the distribution of responsibilities in the field of education between the federal state and the provincial jurisdictions. In his view, despite its unequivocally federal political and administrative definition, Argentina historically experienced a gradual process of centralisation, which also affected education. Subsequent decentralisation processes, of varying pace and scope, produced what he calls a dispersed diversification of the education system, one of the main (pernicious) effects of which is to call into question the effectiveness of the principle of equality between citizens and jurisdictions. The author devotes special attention to this central issue in his article.

In order to analyse the impact of recent education reforms, the author selects several issues, which can be grouped into two main topics. First, he analyses the changes introduced by the 2006 law in the academic structure of the education system. This reform introduced the possibility of choosing between two alternative durations of primary and secondary education (7+5 or 6+6), which were adopted almost equally by the different provincial jurisdictions. Alongside and closely linked to the variable duration of these educational stages is the difficulty in achieving the desired convergence of curricular policies. Despite the existence of common compulsory contents and common priority learning cores, the diversity of academic structures throughout the country made it difficult to implement the new curricula under equal conditions. To this, we must add the different rates of adoption of common State standards by provincial jurisdictions, which has introduced further inequalities.

While the analysis of academic structures and curricula shows the emergence of territorial inequalities as a result of the implementation of the 2006 education reform, the analysis of school coverage confirms this even more. Differences in educational coverage are studied from two points of view. On the one hand, from the perspective of coverage

in absolute terms, which shows the existence of a high level of coverage in the years of compulsory schooling. On the other hand, from the perspective of the relative weight of public and private education, which reveals notable differences between the different territories, with public schooling rates of over 85% in several provinces in the north-west and north-east coexisting with rates of almost 50% in the city of Buenos Aires. According to the author, the data confirm his thesis of a dispersed diversification, which compromises the achievement of effective equality in education Correcting it would require a more active role of the federal State as a promoter and guarantor of the right to education.

The last article, by Inmaculada Sánchez Macías, Alice Semedo and Guadalupe García-Córdova, adopts a comparative approach to the educational policies implemented in three countries (Spain, Portugal and Mexico) in the field of heritage education. The authors carry out an analysis of the curricular regulations in force in each country, focusing on the similarities and differences found in their respective laws. In short, they develop a comparison of educational policies related to the curriculum.

The authors, all of whom are professors at universities in the aforementioned countries, begin their study by examining the curricular models in force in each country, describing the regulations that govern them and their characteristics. They then go on to analyse the curricula in force at the educational stage from 11 to 16 years of age, in accordance with national particularities. They explain their conception of heritage education, understood as a transversal subject that is linked to the concept of individual and social identity, related to the existing connection between heritage and society and aimed at strengthening citizenship. Heritage education is carried out through different school subjects, such as History and Geography, Art, Language, Philosophy, Religion, Music, and Civic Education, among others, although the situation differs from one country to another.

To carry out their analysis, they use a range of quantitative and qualitative tools and software, including document analysis and word co-occurrence, which help them to highlight similarities and asymmetries in heritage education. Among their conclusions, they highlight the relationship of their respective definitions with culture and art, the existence of explicit references to values and attitudes, and the diversity of concepts used and contents included. They conclude by pointing out the need to redefine established curricula, given their inadequacies, to extend the

concept of heritage used and to adapt heritage education to new methodologies and ICTs.

Overall, the issue reviews a number of issues related to the generation of knowledge in education and the construction of public education policies. We hope that the reader will find the selected articles of interest. Although they do not exhaust the subject, they do provide a set of suggestive and complementary perspectives.

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On the difficulties of incorporating international comparative evidence into educational policy making. Lessons that the education sector could learn from political science

Sobre las dificultades de incorporar las evidencias comparativas internacionales en la formulación de políticas educativas. Lecciones que el sector de la educación podría aprender de la ciencia política

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Abstract

International comparative studies in education are considered by their proponents as relevant sources of evidence for the improvement of public policies in education and are frequently referenced by policymakers. However, the increase in comparative evidence, especially thanks to the OECD's PISA program, does not seem to have translated into significant improvements in the quality of educational policies, as relatively few countries have improved their results. The tradition of public policy analysis sheds light on the main difficulties encountered by comparative studies to be used appropriately in the public policy formulation process. From this perspective, three of these barriers are analyzed: the perverse nature of the educational problems to which we are trying to respond, the communication barriers between researchers and producers of evidence and policymakers, as well as issues of the latter's capacity to handle the evidence; and, finally, the implementation gap. The analysis of these three barriers is completed with some final considerations on improving the dialogue between political science and public policymaking in education.

Keywords: comparative education, comparative studies, education policy, evidence, political science, public policies.

Resumen

Los estudios comparativos internacionales en educación son considerados por sus proponentes fuentes relevantes de evidencia para la mejora de las políticas públicas en educación y son, con frecuencia, referenciados por los decisores políticos. Sin embargo, el aumento de evidencias comparativas, singularmente gracias al Programa PISA de la OCDE, no parece haberse traducido en mejoras significativas en la calidad de las políticas educativas pues son relativamente pocos los países que han mejorado sus resultados. La tradición de análisis de políticas públicas permite arrojar luz sobre las dificultades principales con las que tropiezan los estudios comparativos para ser utilizados apropiadamente en el proceso de formulación de políticas públicas. Desde esta perspectiva, se analizan tres de ellas: la naturaleza perversa de los problemas educativos a los que se intenta dar respuesta; las barreras de comunicación entre los investigadores y productores de evidencias y los decisores políticos, además de problemas de capacidad de manejar las evidencias por parte de estos últimos; y, finalmente, la brecha de implementación. Su análisis se completa con unas consideraciones finales acerca de cómo mejorar el diálogo entre la ciencia política y las políticas públicas en educación.

Palabras clave: educación comparada, estudios comparativos, política educativa, evidencias, ciencia política, políticas públicas.

Introduction

The culture of evidence seems to be absent in the professional decisions of teachers and school administrators who rarely use research findings in their decision-making about which strategies or programs to adopt (Dagenais et al., 2012; Morrison et al., 2014). Education probably constitutes the field most hit by the discourse of evidence, understood as a pressure that largely comes from external actors who resonate poorly with most existing lessons among education professionals (Krejsler, 2013). In countries like the United States or England, where local authorities and school boards are responsible for making decisions about school programs and interventions, recourse to evidence, particularly through experimental evaluations, could facilitate decision-making processes (Slavin, 2021). Following this wake, a few European countries have created centers or programs to collect and disseminate evidence on the effectiveness of different educational programs among teachers and school managers, particularly (Eurydice, 2017). This is

not an easy task: some of these public initiatives have also been closed or have become sustained by private entities in England (Pellegrini & Vivanet, 2021); in Spain, the La Caixa Foundation, in collaboration with the *Education Endowment Foundation* has recently launched a similar initiative[1].

In line with what is happening in other sectors of public activity, such as in particular agriculture, health care, or science and technology (Cheung & Xie, 2021), it is worth asking whether evidence can also be a resource in the process of formulating public policies aimed at solving educational problems. A typical case is the quality of learning and its equity or educational inclusion for a country or an autonomous jurisdiction, particularly through regulatory, consultation, or funding mechanisms. Of course, it can be argued that the nature of public policies is different from that of programs[2], as is their formulation process. Still, political science has spent decades analyzing the opportunities and barriers for public policies in all sectors to be informed by evidence. For various reasons, the study of education has long been a neglected topic in political science. In recent times, however, scholarly interest in the field has rapidly increased (Busemeyer & Trampusch, 2011). To what extent international comparisons might play an equivalent role in informing policy to experimentation in decisions about interventions and programs (Mølstad & Pettersson, 2019). This would be to go beyond the well-analyzed process of education policy borrowing, with excellent cases such as those of school inspection in Israel and Turkey (Nir, Kondakci, & Emil, 2018), the Danish school reform of 2013 (Karseth, Sivesind, & Steiner-Khamsi, 2022) or the UK-inspired assessment in Hong Kong (Yan & Brown, 2021).

The main international comparative source of evidence on education, the OECD's PISA Program, has existed for more than two decades. Throughout these years, the Program has disseminated several policy recommendations based precisely on the analysis of the results, such as, for example, the relevance of school autonomy and the critical role of pedagogical leadership, not to mention the low effectiveness of investments

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[1] https://educaixa.org/es/repositorio-evidencias-educativas

[2] A public policy is a set of objectives, decisions, and actions of a government to solve problems that both citizens and the government itself consider a priority at a given time. These actions and decisions involve multiple actors, sectors, or levels of government. Public policy is materialized in programs and projects, for the execution of which resources are allocated. (Kingdon, John W., 1984).

in educational technology, or the relative value of low student-teacher ratios or higher teacher salaries (Schleicher, 2018). If there is evidence about what works and why, then how to explain that on an international scale, progress remains scarce and that so few countries whose results improve and, at the same time, so many others worsen, and that the majority remain stable (OECD, 2020)?

Political science research has shed light on why it is so difficult to promote comparative evidence in public policymaking processes (Cairney & Oliver, 2017a). But examples of application to the education sector are very scarce; not only have political scientists tended to neglect the sector in their analyses, but also education scholars have made little effort to look to political science for answers to these problems (Jakobi, Martens, & Wolf, 2009).

From this perspective of dialogue between political science and public policies in education, this contribution focuses on analyzing three fundamental reasons that could explain the paradox that, despite having more and more comparative evidence, educational policies fail to improve results at the national level or at the level of the competent autonomous jurisdiction with the capacity to formulate its policies. The first is that the nature of the educational problems we are trying to respond to is so complex that it requires public policy designs that are no less complex and so contextualized that it is impossible to find in comparative evidence more than a source of information. In other words, what is presented as evidence of educational policy would not be so because it would only offer partial, atomized, or incomplete information, fundamentally focused on programs and projects. The second is that there are communication barriers between researchers and producers of evidence and policymakers, as well as problems in the latter's ability to manage the evidence. The third is that even assuming that none of the above reasons is true, there is an implementation gap: policies would be correctly formulated based on the available evidence, but they would never be properly or fully implemented for various reasons, including conflicts of agenda between the different agents, in particular teachers and families, but also the different levels of government and public administrations.

Each of these three reasons is discussed below. Their analysis is completed with some final considerations on improving the dialogue between political science and public policy in education.

The perverse nature of educational problems

Although traditional sectors of public activity, such as school education, have well-defined intervention methodologies and dominant assumptions about their dynamics, many emerging policy issues do not generate the same agreement on methods or interactions between variables to be considered (Simpson, 2019). Even for educational problems that have been addressed for some time, such as, for example, the impact of family support on school outcomes, the internal complexity of such issues may have become more apparent, or the opening of policy areas to a broader set of policy actors may have led to alternative conceptualizations to the traditional ones. For example, governments have been formulating and implementing school policies for decades. Still, school policies have been subsumed into the more diffuse realm of education policy to incorporate other subsectors with which they interact and with different visions. Instead of being limited to the school sector, this sphere of action is now also concerned with issues related to early childhood education or university education, both being relatively recent areas of government intervention and limited by the proverbial autonomy of providers (Pedró Garcia, 2021).

One way of parameterizing the complexity of educational problems is to use the concept of wicked problems. This concept comes from the literature on systems theory and planning (Rittel & Webber, 1973). (Rittel & Webber, 1973) and was developed to describe the emergence of a set of problems, such as poverty, that challenge the ability of governments to formulate public policies effectively. These problems share some common traits that can be summarized in three main areas (Termeer, Dewulf, & Biesbroek, 2019). First, they are poorly defined and linked to other problems. In addition, the solutions for those problems are not easy to find and are connected to the same actors that cause the problems. And finally, it seems impossible to know, *ex-ante*, what would constitute a good solution. While each of the characteristics is important, the general argument underlying them is that an increasing number of problems facing governments and societies cannot be solved effectively through the traditional procedures governments have typically used to find solutions. In short, these are problems for whose resolution there is a lack of evidence because their very nature prevents the parameterization of solutions based on the available evidence (Turnbull & Hoppe, 2019).

It is important to distinguish between wicked and complicated problems (Peters & Tarpey, 2019). The latter category of the issues may have several moving parts, such as actors, but the relationships between them are linear and largely predictable. Indeed, all policy problems are complicated at a certain point, with multiple interests and usually multiple veto points on which decisions must be made. A clear example is the issue of equalizing teacher salaries with those of other public professionals with equivalent entry requirements: it is not simple to resolve, and there are several players, but, to some extent, the behaviors of the finance ministry, the teachers' unions, and the education ministry are predictable. On the other hand, Wicked problems involve several actors but have more uncertain and non-linear connections between the variables that make up the policy domain. The complexity is evident in a political issue as apparently simple as concertation or chartering, i.e., whether or not private schools in a country where they are deeply rooted should be able to receive public funds in exchange for what quid pro quo. However, the reaction of public schools and unions to such an initiative can evolve if, as is usually the case, the negotiation for concertation takes place in the middle of salary negotiations, as has been the case in several European countries such as Spain and France. In this sense, the discussion of wicked problems can be linked to that of the so-called "intractable political disputes" (Susskind & Field, 1996). (Susskind & Field, 1996). In this case, a problem is considered intractable much less because of its technical characteristics and the uncertain interactions of variables than because of the political preferences and associated policy frameworks of the actors involved. Easier problems, from the perspective of the wicked problems literature, may be intractable from a more political stance. Wicked problems can be described using six attributes. (Sternberg & Frensch, 2014):

- Lack of transparency: multiple variables are involved, and often the troubleshooter sees only the symptoms, not the causes. A large number of variables means that the troubleshooter must focus on only a subset and may choose incorrectly.

- Politicizing: The presence of multiple and possibly conflicting objectives. To successfully address a complex problem, a solution will have to satisfy various stakeholders with different and probably conflicting goals. Therefore, negotiations will be necessary.

- ■ The situation's complexity: there are complex patterns of interaction between variables and, therefore, low predictability.

- ■ Connectivity of variables: changes in one variable may have multiple connections with other relevant variables, making it difficult to predict the consequences of even small changes.

- ■ Dynamic developments: The policymaking situation is prone to rapid and unpredictable changes, which puts decision-makers under considerable pressure.

- ■ Delayed effects: the timing of the impact of interactions is unpredictable and often delayed.

Policy problems such as improving school learning outcomes can certainly be described as wicked problems, and, indeed, some analysts have developed the concept of "wicked super problems"[3] to describe climate change and other extremely twisted contemporary policy problems (Levin, Cashore, Bernstein, & Auld, 2012). And still, other analysts have also emphasized problem complexity as a more generic way of describing policy problems that do not easily fit into the usual linear conceptions of public policymaking and governance (Duit & Galaz, 2008; Klijn, 2008).

Political problems in education are difficult to conceptualize and even more difficult to solve. To this extent, they fit perfectly within the definition of wicked problems offered by political science. Given this reality, comparative evidence can be useful in providing information on other countries' previous experiences. In doing so, they can help to break down the problem into its various components and to visualize alternative solutions, whether they are feasible within the regulatory framework itself. But it is hard to imagine that comparative evidence can do more than inform in the context of wicked problems. When comparative evidence, which explains differences generated in the past, is used to normativize the present and prescribe courses of action, it inevitably oversimplifies the definition of problems, neglects the particularities of

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[3] These problems have the basic characteristics of wicked problems but have additional ones that make them even more problematic for the public sector (Levin, Cashore, Bernstein and Auld, 2012). Perhaps the most important of these problems is that the capacity to solve them is being exhausted. Specifically, these problems are characterized by the existence of a tipping point that, once reached, will have meant a fundamental change in the nature of the issue and there may be no capacity for a solution as, for example, climate change.

each national context, or feigns a conceptual leap to promote certain educational policies. Such approaches have been criticized on countless occasions concerning the work of the OECD and the World Bank, in particular (Takala, Kallo, Kauko, & Rinne, 2018; Zapp, 2021) and even more specifically in the case of policy recommendations based on the results of PISA (Pedró, 2012; Sjøberg & Jenkins, 2022), including their even more striking application to the case of developing countries (Auld, Rappleye, & Morris, 2019).

Communication and capacity gaps

Assuming the perverse nature of problems in educational policy and the intrinsic difficulty of making comparative evidence a solid base on which to base policy formulation, its informative relevance is beyond doubt. A better knowledge of comparative evidence on the part of politicians and managers would improve their decision-making capabilities without constraining their actions. In this regard, there is a notable tradition of policy studies on evidence-policy gaps, in which scholars describe their attempts to overcome the barriers between the production of evidence by researchers and its use by policymakers. The most frequently reported barriers (Owen, Watkins, & Hughes, 2022) relate to problems in effectively disseminating high-quality information, namely, lack of time, support, resources, and incentives for researchers to engage in dissemination. These studies suggest that evidence is often not presented at the right time and that researchers cannot quickly anticipate the demand for information to solve a very specific problem. In addition, policymakers lack the research skills needed to understand the evidence. More generally, one could say that researchers, on the one hand, and policymakers, on the other, have different scientific and political cultures even in sectors marked by science and technology, as is the case in the public health sector (Cairney & Oliver, 2017b).

The most frequently suggested solutions to these barriers highlight the limits of this theoretical analysis. For example, to address the supply-side problem, studies emphasize the need for improved dissemination to ensure that policymakers pay attention to and understand the best evidence (Oliver, Innvar, Lorenc, Woodman, & Thomas, 2014). But unfortunately, few studies recognize that policymakers will not

share the sense that there is a hierarchy of evidence. Instead, too many assume that better dissemination will cause policymakers to think, like researchers, that evidence alone is persuasive or it is worth the redundancy, self-evident.

Most political theories explore the implications of two basic ideas: that policymakers are constrained by bounded rationality (Simon H., 1976) and that they share power with many actors in complex policymaking systems (Cairney, P., 2016). In part, bounded rationality is related to policymakers' inability to gather and consider all evidence relevant to policy problems. Instead, they employ two routes: rational, which pursues clear objectives and prioritizes specific sources of information, and irrational, which relies on emotions, hunches, beliefs, and habits to make decisions quickly.

The main problem with many education policy studies is that they focus on the first route. They identify the problem of uncertainty and incomplete information and try to solve it by creating hierarchies of evidence and improving the provision of comparative data to policymakers through policy recommendations that often do not indicate financial feasibility or political viability. They ignore the role of negotiation and persuasion in reducing ambiguity. We must begin by recognizing politicians' tendency to base their judgments on their well-established beliefs and routes based on their values, emotions, and familiarity with information. From there, we need to think about how to reduce ambiguity, persuade politicians to frame a problem primarily in a certain way, and thereby demand evidence that will help solve that problem (Dekker & Meeter, 2022).

In education, many models of research impact are based on strategies that make minimal reference to policy formulation, namely, identification of the research question, development of a research methodology, implementation of data collection, analysis, and synthesis, interpretation of results, and development of research recommendations and, subsequently, for both policy and practice. In this patrician model, the process is owned and controlled by the researchers, who then advise or disseminate their work to policymakers. Under this logic, the proposed solution to improve the use of comparative evidence is to develop scientific competence in governments. Many studies assume it is realistic to produce a captive audience of policymakers willing to invest the time necessary to prioritize and understand the available evidence. This approach is at

odds with the less rigid ways in which many forms of evidence are used by policymakers (Cairney, P., 2016).

Second, very few studies acknowledge the role of values in policy. Instead, an often implicit and untested assumption is that policymaking should be as evidence-based as medicine, which is at odds with the most common starting point, in the study of politics, of producing a democratic system that translates conflicting social values and preferences into policy solutions. Of course, a political system based on value judgments and evidence may be desired. Still, the trade-offs between these goals must be recognized and addressed, and the production of evidence is also an inherently value- based process. Of the few existing analyses of this issue in the education sector, an investigation into how members of the UK Parliament used the available evidence concerning the policy decision that led to the Selective Schools Expansion Fund, a policy designed to allow the former 163 selective *grammar schools to* apply for additional funding to expand their pupil numbers, stands out. It became clear from the research that, ultimately, the values espoused by the majority were more determinative than the evidence made available to them by the OFSTED agency (Bainbridge, Troppe, & Bartley, 2022).

The implementation gap

The third gap in the use of comparative evidence is the recognition of the gap between the evidence of what has worked and the reality of the context in which a policy inspired by comparative evidence is implemented. There is a growing awareness that policies do not succeed or fail on their own merits but that their progress also depends on the implementation process. Unfortunately, the normatively attractive top-down view of policy and its implementation is based on three questionable assumptions: a chronological order in which expressed intentions precede action; a linear causal logic according to which objectives determine instruments and instruments determine outcomes; and a hierarchy in which policy formulation is more important than implementation (Hupe, 2015). Yet, despite several decades of criticism, it is a model that still retains some popularity among policymakers and is probably the one on which comparative researchers in education rely.

The classic concept of the policy implementation gap (Gunn, L.A., 1978). (Gunn, L.A., 1978) has been complemented in recent years by complex systems thinking informed by unpredictability, nonlinearity, and adaptability (Rapport et al., 2018). Here, the factors shaping and influencing policy implementation are complex, multifaceted, and multilevel, with public policies invariably resembling wicked problems that are resistant to change, have multiple possible causes, and with potential solutions that vary across place and time depending on the local context (Rittel & Webber, 1973).

There is currently a great deal of interest in the notion of policy failure (Volcker, 2014), but, as McConnell has pointed out (2015, p. 231), failure lies at the end of a success-failure spectrum where it is characterized by outright non-compliance. Such a situation will be unusual. As he observes, "failure is rarely unequivocal and absolute... even policies that have been known as classic policy failures also produced small, modest successes".

Four general factors can be identified that contribute to policy failure even when they claim to be supported by international comparative evidence: overly optimistic expectations; implementation in dispersed governance; bad collaborative policymaking; and the vagaries of the political cycle. Each of these is discussed below.

Overly optimistic expectations

One might think that the most ambitious and costly policies - the large projects - would be the most carefully assessed for risk. However, "over-optimism" was the title given to an influential review of failure in large government projects in the UK by the National Audit Office (National Audit Office, 2013). This problem is not confined to the UK: a comparative study by the OECD (OECD, 2015a), for example, also notes that successful implementation is a constant challenge for government centers. This is the case when policies require a long-term approach. A study by the Institute for Government in the United Kingdom of four such policy areas -fighting poverty, climate change, international development, and homelessness- identified three common features that complicate implementation (Ilott, Randall, Bleasdale, & Norris, 2016).: costs and benefits are unevenly distributed over time - there is a large time lag between

implementation and positive outcomes; they tend to be intellectually controversial, politically contentious, and difficult to execute; and causes and effects span different government agendas across several administrations or departments.

The French policy of class size reduction in priority areas is a good example of this unbridled optimism. Initiated in 2017, taking as its starting point a single comparative study on the impact of class size reduction, its low impact and high costs demonstrate the intrinsic difficulties of a simple policy aimed only at modifying one parameter of school provision (Pellegrini & Vivanet, 2021).

Dispersed governance contexts

Policies formulated at the national level may face the challenge of ensuring some degree of consistency in their implementation at the subnational level. This process is especially complicated when the sub-national level has some degree of independent political authority, as is increasingly the case in education (Gamage & Zajda, 2009; Sausman et al. (2016), when it draws on the concept of local universality to describe the process by which general standards, products, or guidelines are shaped and adapted to fit local contexts and enacted in practices. However, it is less clear how central authorities can respond to this reality, especially when it occurs in ways hidden from policymakers' views.

Even when governance is concentrated rather than dispersed, implementation will still depend heavily on local context: the literature on complex systems has made it abundantly clear that an intervention that is successful in one place does not necessarily deliver the same results elsewhere (Braithwaite, Churruca, Long, Ellis, & Herkes, 2018) as has been pointed out many times in Comparative Education (Mølstad & Pettersson, 2019). All these links with the literature that for decades has been dealing with receptive and non-receptive contexts to change, pioneered by Pettigrew et al. (1992), and emphasizes the need for policymakers to confront the messy engagement of multiple actors with diverse sources of knowledge. (Davies, Nutley, & Walter, 2008).

Added to this is the complication that those acting at the top levels cannot succeed without knowing what is happening at or near the front line. Such is the premise of the bottom-up school of thought on

policy implementation and echoes the notion of Lipsky (1980) of the "street-level bureaucrat" whose discretionary power may prove decisive in determining the success or failure of a policy. One of the salient features of many policies- especially those requiring direct contact with the public, such as education- is that middle-level personnel, particularly the school inspectorate, have considerable contact with outside agencies and often enjoy discretionary powers that give them de facto autonomy from their managers. Although many of the decisions of these agents may seem small individually, they can radically reshape strategic policy intent (Hudson, Hunter, & Peckham, 2019).

One of the biggest recent reversals of fortune in the education sector illustrates the importance of understanding external factors: the sustained improvement in the performance of disadvantaged pupils in London's public schools around 2005-2014. This remarkable success is a puzzle because the improvement was not predicted and resists explanation from commonly understood factors. For example, demographic changes cannot explain the improvement. Instead, it appears that more resources, a successful teacher recruitment campaign and new buildings have played a supportive, if not decisive, role and that new institutions focused on school management helped (Blanden, Greaves, Gregg, Macmillan, & Sibieta, 2015).

Inadequate collaboration in the policy formulation process

Policy development has tended to take place in separate administrative departments or ministries, even though most interventions will almost certainly have broader implications affecting external parties. Moreover, despite growing academic interest in developing ideas and tools to promote inter- organizational partnerships, improvements have been patchy at best and limited (Gazley, 2017). The weakness of collaborative policymaking and the failure to establish common ground for public problem-solving through constructive management of differences remains one of the key reasons for subsequent implementation difficulties.

Except for the simplest of tasks, policy design requires ongoing collaboration with a range of stakeholders at multiple political, policymaking, managerial, and administrative levels, as well as the involvement of local

implementing agents, municipalities where they have competencies or decentralized entities, as well as end-users, students, and families, and, of course, front-line staff, school managers and teachers, and a range of local service agencies such as, for example, educational resource centers. Ansell et al. (2017) emphasize the need for policies to be designed to connect stakeholders vertically and horizontally in the process of collaboration and joint deliberation. They argue this should not be equated with a long and cumbersome search for unanimous consent; rather, it is a search for sufficient common ground on which to proceed, without which there will be ongoing conflicts over the legitimacy of the policies and the organization's mission. Therefore, policy design and implementation must become an integrated process rather than a series of discrete and distinct stages. Another question is whether policymakers are equipped with the necessary skills, competencies, capabilities, and capacities to address these systemic shortcomings and succeed in that endeavor (Williams, P., 2012).

The Pact provides an excellent example of this practice for Educational Excellence in French- speaking Belgium, an open process initiated in 2015 (Dachet & Baye, 2021). Due to the many different actors involved, it tends to take a compromise position between the purely evidence-based paradigm and the professional development considerations traditionally advocated by teachers and didactic specialists. By its definition, structure, and proposals, the Pact pays particular attention to the reform of both curricula and the structures of the educational system. We would also like to underline the will to bridge the gap between professionals and researchers by financing research carried out in schools in collaboration with teachers. Finally, the cooperation of all educational actors in the country, including families, is an innovative and valuable feature of the Pact's work. It has made it possible to (1) initiate a process of interaction between researchers, educational authorities, and practitioners; (2) identify promising educational programs in French-speaking Belgium that correspond both to researchers' recommendations and to standards and curricula; (3) create groups of experts in the field that can be used both in the evaluation of educational programs and their validation; and (4) have educationalists and educational science researchers jointly define minimum methodological standards for all categories of research.

The vicissitudes of the political cycle

Politicians tend not to be held accountable for the results of their policy initiatives: in the event of failure, they are likely to have moved on or gone away. One of the consequences is that the prospect of short-term results too easily attracts them. This can lead to pushing through policies as quickly as possible rather than engaging in the cumbersome, lengthy, and frustrating details of how things might work in practice. Evidence suggests that the political thrust needed to drive long-term policy development tends to dissipate over time (Norris, E., P. Bouchal, J. Rutter, & M. Kidson, 2014). The education sector is a classic example, as credited by the OECD. (2015b) by highlighting the virtual absence of public evaluations of education policies and reforms, with barely 10% of initiatives having undergone rigorous evaluation. The concern here is that policymakers are more likely to get credit for evidenced legislation than for implementation problems that have been avoided. Indeed, the latter is likely to be seen as the problem of others rather than themselves (Weaver, K., 2010). Therefore, it is not surprising that politicians at the head of ministries focus their efforts on new laws, on the one hand, and on material investments that have a very important symbolic value for voters (such as the delivery of digital devices or the opening of new schools).

As Cowen has rightly noted (2019), the emphasis on evidence from experiments allows policymakers to target interventions teachers must implement rather than policies for which they are responsible. The focus on empirical evidence favors teacher-level interventions rather than structural changes to the education system since the latter's effects are almost impossible to measure through experiments. For example, letting teachers teach mathematics with certain didactics can be evaluated experimentally, but not a structural reform of the educational system. This bias also has a positive side. Structural overhauls of the educational system carry great costs (both financial and mental) and dangers; this should be an argument for being more conservative when it comes to structural reorganizations than with classroom interventions. In addition, Cowen (2019) similarly points out that it could be solved by drawing on the full range of research techniques available when studying the potential benefits of structural changes in educational systems. This is, again, consistent with the maxim of always using the best available evidence.

Conclusions

The benefit of having an international evidence base is undeniable if the information is not confused with prescription. The example of the Pact for Educational Excellence in French-speaking Belgium is, to date, one of the few cases where the boundaries between the two are clear. And it is also an excellent example of a social dialogue on educational reform that makes all the existing international comparative evidence available to all stakeholders for each of the policy agenda elements. But unfortunately, it remains a unique example of the difficulties associated with the use of comparative evidence in the process of shaping education policy.

The brief analysis presented above of the three fundamental reasons why international comparative studies are not used as a solid basis for policy formulation is also implicitly a warning about the impossibility of their ever being used as a solid basis for policy formulation. Beyond the perverse nature of educational problems, or the difficulties of communication and policy implementation, comparative studies can only be considered one more source of information to support the formulation process. The risks of a prescriptive, technocratic approach are very clear: it aspires, either out of naivety or bad faith, to overlook the values, perspectives, and lived experiences of stakeholders and citizens directly or indirectly involved in these policies. Increasing evidence, even if it is of an international comparative nature, cannot alone solve wicked policy problems that, like educational ones, must be seen as based on competing viewpoints and value frameworks. Addressing these problems requires deliberation and debate about the nature of the issues and exploring alternative ways forward. This deliberative process of seeking solutions, with its recognition of the perspectives and values that frame the definition of the problems, is very different from the imposition of prescribed solutions on the grounds of international authority or experience-based answers that emerge from the growth of empirical knowledge.

Finally, the analysis carried out has been intended to be, at the same time, an example of how a closer approach of educational policy researchers to the theoretical and conceptual richness of public policy studies can be extremely fruitful and enriching so that policy theory serves, in the classic expression of Carney (2015) to have an impact on public policy. In the same way, it will also be useful for political science to access the

background of a sector as dynamic and complex, not perverse, as that of education.

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Evidence-based education. Scientific dangers and political advantages

Educación basada en la evidencia. Peligros científicos y ventajas políticas

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Abstract

This paper argues that one of the dangers of the new democracies, whose complexity has increased unprecedentedly in modern societies, is, according to Innerarity (2020), their simplification. One characteristic of these modern and complex democracies is what the same author calls dataism, which consists of linking quantification with truth, relating it to a false idea of objectivity and misleading certainty that prevents a thorough knowledge of reality, which would allow decisions to be made in a way that is more in line with the real problems. Faced with the constant problems and complexities of societies, this dataism produces a demand for data in order to legitimise political decision- making, linking it to a fallacious idea of science. It is in this context that evidence-based education and research have become relevant. The problem is that this perspective is based on very different assumptions from those that epistemologically constitute education as a discipline of knowledge. Therefore, this evidentialist perspective is forced, on the one hand, to assume what Wrigley (2019) calls reductionisms in order to deploy its theories and research; on the other hand, to understand education as a technical matter, an educational vision that already had its time of splendour and that seemed to have been overcome precisely because it did not

offer quality answers to classroom practices. Our approach is that, far from an honest political concern for improving education, the underlying idea is the creation of political narratives that give legitimacy to their policies. Nothing better in the age of dataism than to use data and evidence-based languages to connect with mental frameworks of objectivity, truth or science, which give legitimacy to these narratives.

Resumen

En este trabajo se plantea que uno de los peligros de las nuevas democracias, cuya complejidad ha aumentado sin precedentes en las sociedades modernas, es, según Innerarity (2020), su simplificación. Una característica de estas modernas y complejas democracias es lo que el mismo autor denomina dataísmo y que consiste en vincular la cuantificación con la verdad, relacionándola con una falsa idea de objetividad y de certidumbre engañosa que impide un conocimiento cabal de la realidad, lo que permitiría una toma de decisiones más ajustada a la problemática real. Ante los constantes problemas y complejidades de las sociedades, este dataísmo produce una demanda de datos para poder legitimar la toma de decisiones política, vinculándola a una idea falaz de ciencia. En este contexto es donde la educación y la investigación basadas en la evidencia han cobrado relevancia. El problema es que dicha perspectiva parte de unos presupuestos muy diferentes a los que epistemológicamente constituyen la educación como disciplina de conocimiento. Por lo cual, esta perspectiva evidencialista se ve obligada, por un lado, a asumir lo que Wrigley (2019) llama reduccionismos para poder desplegar sus teorías e investigaciones; por otro lado, a entender la educación como un asunto técnico, una visión educativa que ya tuvo su época de esplendor y que parecía superada justo por no ofrecer respuestas de calidad a las prácticas de aula. Nuestro planteamiento es que, lejos de una preocupación política honesta por mejorar la educación, la idea que subyace es la creación de relatos políticos que den legitimidad a sus políticas. Nada mejor en la época del dataísmo que usar lenguajes basados en datos y evidencias para conectar con marcos mentales de objetividad, verdad o ciencia, que den legitimidad a estos relatos.

Palabras clave: Educación basada en la evidencia, democracia, reduccionismo, ciencia, política educativa.

Introduction

Innerarity (2020, p. 9) states that "[l]a principal amenaza de la democracia no es la violencia ni la corrupción o la ineficiencia, sino la simplicidad"

and that "[l]a uniformidad, la simplificación y los antagonismos toscos ejercen una gran seducción sobre aquellos que no toleran la ambigüedad, la heterogeneidad y plurisignificación del mundo, que son incapaces de reconocer de manera constructiva la conflictividad social".

In this sense, the same author, Innerarity (2021), talks about how the paradigm of measurement promises to manage this complexity of modern democracies, and how this has been constituted in what he calls *dataism*:

> Mi hipótesis es que el dataísmo, es decir, la creencia de que la cuantificación produce la verdad, privilegia una falsa idea de la objetividad y proporciona una certidumbre engañosa que impide un conocimiento cabal de la realidad, sobre el que deberían adoptarse las correspondientes decisiones.

On this phenomenon of oversimplification in education and policy decision-making, Wrigley (2019, pp. 1-2) says

> examine inadequate theorisation and mechanistic causal assumptions in education which result in a loss of complexity, openness and values. This seems particularly appropriate at present for England and similar systems, where reductionist approaches have become hegemonic in many aspects of schooling. In recent years, a strident ideological campaign, led by government ministers, has sought to reconceptualise and reconfigure what counts as educational achievement, high-quality teaching, social justice and research evidence.

Other authors such as Denzin (2009) join in this criticism. Although for us one of the main consequences of this situation is, as we will see below, the return to the consideration of education as a technical matter (Wrigley, 2019, p. 2): "This involves not only the depoliticisation of politics and policy (Harvey, 2010: 218–219), but also a shift towards a technical discourse when considering curricular and pedagogical issues and practices."

In the end, in this search for *evidence-based objectivity*, the only way to make social science problems, and especially education problems, fit into their scientific perspective and methods is to reduce their complexity by removing elements, connections, keys or cultural structures from the problems.

In this paper we present how this same phenomenon that occurs in politics is occurring in educational research and in the reception of

its findings by teachers, an issue that feeds back into and conditions educational research itself. Because, furthermore, how it is received by teachers is, inescapably, a political question. We are therefore going to try to describe the problems presented by this hegemony of the evidence-based perspective, as well as to delve into the reasons for its dissemination in the educational and political world.

Some background: knowing the past to understand the present

The Paradigm War

Fernández-Navas and Postigo-Fuentes (2020) explain the end of what has come to be called the *Paradigm War* (Denzin, 2010; Gage, 1989; Given, 2017; Maxwell, 2010), which is how the confrontation between the positivist paradigm, on the one hand, and the interpretive and critical paradigm on the other, which took place in the 1980s and 1990s, came to be known.

Thus Fernández-Navas and Postigo-Fuentes (2020) explain that the educational research that had flourished in the 1960s and 1970s, heavily influenced by positivism and extolling what was then known as the scientific method for researching and developing teaching, gave rise to a hierarchy of scientific methods and conceptions for producing valid knowledge based on fundamentally quantitative methods. However, these did not produce the expected results.

In the face of this unease, criticisms of this way of understanding education and educational research flourished (Fernández-Navas and Postigo-Fuentes, 2020):

> que los actos de los seres humanos, incluyendo la enseñanza y el aprendizaje, están estrechamente ligados a las intenciones, objetivos y propósitos que les dan significado. La perspectiva positivista de la ciencia parte de la idea de que existen vínculos causales directos y unidireccionales. Sin embargo, muchos teóricos sostienen que no existen conexiones causales entre el comportamiento del maestro y el aprendizaje del alumno. (p. 47)

In this sense, the researchers of the positivist paradigm understood the study of behaviour as an objective matter, without assuming that the behaviours of human beings are the result of the interpretations we make of the situations we are presented with. Thus, the causality that the

mechanical, chemical or biological perspectives allowed the positivists, by which they established cause-effect explanations between variables and their "hypothesis of uniformity" and by which they understood that phenomena occur in the same way in different places and at different times, was questioned.

The critique was complemented by the contributions of the critical paradigm that demanded the need to understand education in relation to society, as well as the ideology underlying the constructions of concepts such as knowledge, curriculum or teaching, posing education as another space of class and power struggle.

As we will see below, we find ourselves in a situation of a new reconfiguration of paradigm warfare in which what has come to be called evidence-based education plays a prominent role.

The origin of the evidentialist perspective

Before delving into the implications of evidence-based education, it is necessary to understand its origin. According to Fernández-Navas and Postigo-Fuentes (2020), it is the reflection of Hargraves (1996) that openly raises the problem that educational practice is not taking into account the advances that have been made in research in this field.

In the same sense, Hederich, Martínez Bernal and Rincón Camacho (2014, p. 24) state:

> [s]e identifica la conferencia de D. Hargreaves (1996), [...], como el evento fundacional de lo que más adelante pasaría a llamarse una "enseñanza basada en la evidencia". Como se mencionó, inicia Hargreaves (1996) su conferencia con la idea de que la enseñanza no es, en este momento, una profesión basada en la investigación, lo cual explica muchas de las dificultades que enfrenta. De acuerdo con el autor, para llegar a serlo deben darse cambios profundos; por un lado, en el tipo de investigación que se hace en educación, y por otro, en los modos en los que esta investigación se organiza y se disemina.

The problem here is that, while what Hargraves (1996) calls for is reasonable and even desirable, it is not what "evidence-based education" represents, which puts forward a very specific perspective of what it means to educate and what it means to research (Wrigley, 2018).

Ferrero (2018) states that this evidentialist perspective is "aquella basada en las mejores pruebas disponibles" and that it is based on: large samples, use of control and experimental groups and measurement of the "effect size", measuring efficacy through statistical analyses whose aim is replicability and whose star methodology is usually meta-analysis and systematic reviews.

Authors such as Biesta (2007) have long been raising the dangers of the shift of "evidence- based education" towards a technocratic perspective on education.

> On the research side, evidence-based education seems to favor a technocratic model in which it is assumed that the only relevant research questions are questions about the effectiveness of educational means and techniques, forgetting, among other things, that what counts as "effective" crucially depends on judgments about what is educationally desirable. On the practice side, evidence-based education seems to limit severely the opportunities for educational practitioners to make such judgments in a way that is sensitive to and relevant for their own contextualized settings. The focus on "what works" makes it difficult if not impossible to ask the questions of what it should work for and who should have a say in determining the latter. (p. 5)

The problem, as the authors see it, is that evidence-based education systematically forgets to make explicit that its quality criteria and the perspectives of the areas of knowledge on which they are based (fundamentally the cognitive-behavioural perspective of psychology) are just that, a concrete perspective of the many available within methods and disciplines. Ignoring this issue, taking advantage of this culture of dataism (Innenarity, 2021) mentioned above and together with the new needs for political legitimisation which we will discuss later, this evidentialist perspective is becoming widespread among teachers and politicians which, in turn, feeds back into the strength of this trend.

The epistemological problem, situated knowledge and transferability

The criticisms of the positivist paradigm described in the previous section crystallise what we call the epistemological problem of the evidence-based perspective.

First of all, it should be noted that education is framed within the social sciences and that these, due to their idiosyncrasies, have very different characteristics to the natural sciences (Vasen 2012, 2018).

In this type of science, the fundamental way of conducting research is based on the search for causality and for this purpose the experimental or quasi-experimental method is used. Through which we see what effects are caused by the changes introduced in the variables. With this we guarantee causality. In other words, the effects produced are only due to the changes introduced (Maxwell, 2012).

This is why it is very important in this type of methodology to "isolate external variables". In other words, the experiment must not be contaminated by anything that could produce that change and, therefore, lead us to make a mistaken attribution of causality.

The epistemological problem with the *evidence-based* approach to education is that the use of experimental or quasi-experimental methods is quite complicated in education, given the nature of the problems it studies. How can one guarantee without a high degree of uncertainty that the observed effects are due solely and exclusively to the changes introduced and not to the immense variety of variables that occur in the social sciences? Isolating variables is controversial in our field.

In addition to all this, there is the *problem of the abstract*: the educational concepts we deal with are complex constructs that often do not have an exact or universal definition, which makes the translation of these concepts into experiments to achieve causal relationships in education and social sciences complicated, to say the least. Biesta (2007) explains it clearly as follows

> the most important argument against the idea that education is a causal process lies in the fact that education is not a process of physical interaction but a process of symbolic or symbolically mediated interaction. If teaching is to have any effect on learning, it is because of the fact that students interpret and try to make sense of what they are being taught. It is only through processes of (mutual) interpretation that education is possible.(p. 8)

This is why, in social sciences, we should speak of situated knowledge, i.e. context-dependent, so that there are few universalities (Maxwell, 2019; Flyvbjerg, 2004). These cause-effects, the object of search from the positivist paradigm, are rarely found in social sciences, where,

as in the Paradigm War, as the interpretive paradigm proposed, they depend on the contexts, culture and the meanings we attribute to these cause-effects (Alcaraz-Salarirche, 2014; Pérez-Gómez, 2000; Bruner, 1990; Erickson, 1986; House, 1991; Mohr, 1996; Pawson, 2006; Sayer, 1992; Bhaskar 1989). In the words of Gage (1989, p. 5): "The effects on people's actions of their interpretations of their world create the possibility that people may differ in their responses to the same or similar situations".

This is why different authors (Maxwell, 2010, 2012; Korstjens & Moser, 2017; Lincoln & Guba, 1985; Tracy, 2021) point out that in social science we should focus on transferability, i.e. that by understanding complex processes and realities, issues can be found that can be implemented in different contexts by another researcher or practitioner (Flick, 2018).

However, and despite the criticisms that already motivated the Paradigm War in the 80s and 90s, for the "evidence-based" perspective, the claim of what the educational world should aspire to goes in the opposite direction (Denzin, 2009).

Although this conception of what science is about is equally controversial (Feyerabend, 2017), it has the advantage that it is closer to the idea of science that circulates in the social imaginary. Feyerabend (2017) argues that the idea that science must follow fixed universal rules is unrealistic and harmful, as it assumes a simplistic view of human creativity and the circumstances that drive it. Moreover, this idea harms both individuals and science itself, as it neglects the complex physical and historical conditions that influence scientific change.

Wrigley's reductionisms

As we have seen, there is a critique of the evidence-based perspective that goes back to those that positivism received in the Paradigm War. These critiques have become commonplace over time and whose new value with respect to the previous paradigm is represented by what Wrigley (2019) calls "reductionism" and which maintains the illusion that the evidentialist paradigm represents a solution to the unsolved problems of previous paradigms. According to Kuhn (2011), this illusion is crucial for a paradigm shift to take place.

These reductionisms can take many forms, but are basically defined as a loss of complexity that prevents an adequate understanding of real-

ity from one perspective. They can range from the inappropriate use of one scientific discipline to explain issues that require a different one, for example, trying to explain biological phenomena mainly through chemistry, or education as solely a learning process (Biesta, 2017), to one of the most frequent, that is, the omission of important causes of a multicausal situation.

In this sense, Wrigley (2019) identifies several of these reductionist simplifications that evidence-based education commits in order to address educational problems from its presuppositions, thus resulting in a reductionist understanding of education.

Experimental reductionism

In the first place, there is this reductionism, which we have already hinted at in previous sections and which has to do with the limitations of experimental methodology as a way of producing knowledge in the social sciences and especially in education.

The purpose of experiments is to simplify and artificially isolate a situation in order to make a relationship between study variables more visible. Experiments are designed to isolate or eliminate other relationships in order to observe the impact of the dependent and independent variable of the research. Reductionism becomes a danger when the experiment is assumed to reflect reality, rather than being a simplified and reduced model of very specific aspects in an isolated situation. In the words of Rose (2005):

> What happens in the test-tube may be the same, the opposite of, or bear no relationship at all to what happens in the living cell, still less the living organism in its environment. Reductionism is not enough when I come to try to interpret my own experiments (p. 79)

In this sense, to reduce the social world to the actions and decisions of individuals or groups is to fail to understand how social structures, although often not directly visible, are determinant in creating an understanding of causality. Reductionism, in this case, is to remove from the situation of study questions about how norms, even if tacit, regulate behaviour, how roles determine their effects, and that role relations

involve the establishment of emergent powers that cannot be reduced to those of individuals in isolation (Bruner, 1990). Despite all the efforts of positivists, it is difficult to maintain the belief that "army is just the plural of soldier and all statements about the army can be reduced to statements about the particular soldiers comprising it" (Jarvie, 1959, pp. 151 cited in Wirgley, 2019).

The reductionism of a certain hegemonic psychological perspective

On the other hand, there is the psychology of education perspective, which Wrigley (2019) explains as follows

> The history of 20th-century pedagogical theory can be written as a struggle against reductionism, a struggle which was itself seminal in its two leading figures, Dewey and Vygotsky. Reich et al. (2016) summarise Dewey's contribution as a 'constant struggle against behaviourism and instrumental reductionism... insistence on context', with behaviourism guilty of forgetting 'emotional, social and cognitive aspects of experience'. (p. 152)

The link with positivism is explained by Fernández-Navas and Postigo-Fuentes (2020, p. 55) referring to the influence of psychology in education: "A trend for which psychology is largely responsible - let us not forget that the "war of paradigms" was also a "war of disciplines" (Gage, 1989) - a field that has been configured during the 20th century as a fundamentally positivist science".

Thus, experimental sciences are gaining influence in the social and human sciences, for example, biologically based analyses and theories are increasingly present in psychology and sociology.

In order to simplify the problem of studying human behaviour and to ensure the control of variables through experimental reductionism, human behaviour is studied as the behaviour of a mammal. The whole cultural part, social structure or role is removed from this equation. What consciousness and psyche contribute to human behaviour is ignored. This problematic trend in psychology has already received a devastating critique from Bruner himself (1990) when he argues that the solution to the problem of universals lies in questioning a fallacy inherited from the 19th century, which suggests that culture is a "superimposed layer"

on biologically determined human nature. The author argues that the real causes of human behaviour are culture and the search for meaning within it, while the biological substrate is not a cause, but rather a constraint or condition.

Another reductionism of the psychological current that supports the evidentialist perspective is physicalism (Wrigley, 2019), i.e., the attempt to analyse the human mind in terms of brain functions. Thus, the mind is conceived of as just a functioning brain.

Examples of this way of understanding the human mind can be seen constantly in education: the conception of reading and writing as exclusively phonic correspondences, resorting to stimulus- response techniques; the rise of brain scans and derivatives based on the belief that they provide an adequate description of thinking, which has been criticised by Biesta (2017); or the idea associated with the possibility and accuracy of measuring learning, understanding it as reproduction and confusing information and knowledge (Pérez-Gómez, 2012).

Bruner (1990), who explains how psychology took a turn away from talking about meanings and began to talk about information processing in the computational metaphor, also makes a similar statement:

> Este nuevo reduccionismo proporcionó un programa sorprendentemente libertario para la ciencia cognitiva que estaba naciendo. Su grado de permisividad era tan elevado que incluso los antiguos teóricos del aprendizaje E-R y los investigadores asociacionistas de la memoria pudieron volver al redil de la revolución cognitiva, en la medida en que envolvieron sus viejos conceptos con el ropaje proporcionado por los nuevos términos del procesamiento de la información. No había ninguna necesidad de trapichear con los procesos «mentales» o con el significado. El lugar de los estímulos y las respuestas estaba ocupado ahora por la entrada (input) y la salida (output), en tanto que el refuerzo se veía lavado de su tinte afectivo, convirtiéndose en un elemento de control que retroalimentaba al sistema, haciéndole llegar información sobre el resultado de las operaciones efectuadas. En la medida en que hubiese un programa computable, había «mente». (pp, 23-24)

In contrast, Vygotsky's insistence on the connection of the individual mind to culture, history and society, together with the fundamental importance of active meaning-making through speech and other sign systems, lays the foundation for a wide range of pedagogies that are not limited to the reproduction and acquisition of pre-established facts.

Social class reductionism and academic performance

Another common source of reductionism that comments on the evidentialist perspective in order to address educational problems is often the relationship between poverty and underachievement.

Understanding this complex relationship requires drawing on many areas of knowledge and different paradigms within them. In this sense, having data is important, but data alone does not identify the underlying causes. Understanding them requires a systemic approach that includes complex issues such as mechanisms of exploitation or forms of circulation of financial capital. The same applies to the concept of the lower classes, which in the last decade has been blurred by the concept of precariousness, which normally includes the middle classes whose position in the economic world is defined by the fact that they do not own the means of production. This issue is further exacerbated by the globalisation of the economy (Castells, 2001).

Understanding these issues requires familiarity with deep theoretical understandings of the concept of social class, moving away from reductionisms such as lifestyle and recognising the strong influence of parental qualifications on children's performance, which is not to deny economics, but to recognise the cultural means by which economic advantage is transmitted between generations (Bourdieu and Passeron, 2018).

Reductionist interpretations of the relationship between social status and educational performance take many forms, but crucially omit key layers and causal relationships. (Wirgley, 2019). For instance, placing teacher responsibility for student underachievement at the centre ignores economic, cultural and psychological pressures.

Conversely, theories of genetically inherited intelligence represent a highly biased reduction from psychological and cultural to biological levels of explanation.

The 'lack of aspiration' argument and the demand for greater personal 'resilience' shift the burden onto the individual, forgetting that it is difficult to maintain high aspirations without appropriate opportunities or without taking into account the role of cultural capital (Bourdieu and Passeron, 2018).

The recent neoliberal reformulation of social justice as "social mobility" (and more recently the frequent calls for a "social lift") within a

supposedly fair meritocracy (Littler, 2018) is a denial of the power-maintaining structures of the higher social classes that holds the individual responsible for their failure, despite all the data from different research highlighting the reproduction and legitimisation of social classes that this meritocratic idea entails (Barragué, et al, 2022).

A non-reductionist attempt to "close the gap" must look both outside and inside the school. This would imply, on the one hand, actions at the societal level, as well as bringing together different educational and sociological analyses and theories.

On the other hand, it also requires taking into account pedagogical issues such as promoting perspectives away from the simplification of education, understood as the academic performance of students, the development of activities that allow students to build a value of knowledge use (Santos-Guerra, 2001) or making curricular issues more flexible and away from the bureaucracy and technocratic perspective.

Efficiency reductionism

Another one of the reductionisms necessary for this evidence-based perspective to generate the illusion of functioning has to do with the perspective that understands education as effectiveness.

School evaluation and school development are understood in many countries through the paradigms of effectiveness and school improvement. This has much to do, as we have seen, with the influence of a certain psychological perspective in education, a danger of which Gimeno-Sacristán (1982, p. 16) warned us about: "[e]l rendimiento cuantitativo se asoma ya al terreno pedagógico como en algún modo equivalente a cualidad o la calidad de la educación: Una concepción rentable y eficientista de la calidad de la educación."

This reductionism includes the tendency of neoliberal accountability systems to treat schools as isolated entities operating under the industrial metaphor, disconnected from the lifeworlds of learners, beyond school, society, economy or culture (Wrigley, 2019; Zeichner, 2022). The same applies to specific teaching areas in which evidentialism simplifies the objects of study and tends to ignore processes of learning.

The similarity of this reductionism of efficacy to another aspect of the evidentialist perspective we have already discussed is striking. This idea

that measurement becomes the objective, thus obscuring the appropriateness of objective and measurement. In the words of Gimeno-Sacristán (1982, p. 21): "La eficacia adquiere valor en sí misma, sin poner claramente de manifiesto *en orden a qué* es eficaz".

Research in the glass bell: the quality of research problems

Another one of the reductionisms that, for us, this evidence-based perspective raises is what Fernández-Navas (2022) calls *research in the glass bell* and which, in part, has much to do with what we have already discussed about experiments, causality and the need to isolate variables as a reductionism of reality that the evidentialist perspective requires.

But it also has to do with an intention to make education an objective matter, as was done (wrongly in our opinion) with psychology (Bruner, 1990), understanding that there are hierarchies between sciences and methods, where the experimental holds a privileged place and is associated with objectivity, although epistemologically, as we have seen, the field of study has other characteristics.

Under these premises, it is imperative to remove layers and layers of complexity from the problems to be studied so that they can fit into the experimental methodology: problems are simplified in order to measure them, because in this way they are more "objective", more "scientific", but in reality they are falling into experimental reductionism as we have seen. In trying to make educational problems quantifiable and experimental, they become so simplified that they no longer answer the questions initially posed in practice. An ad hoc reality is invented in which to quantify, to "study inside a glass bell", but when leaving this glass bell, the solutions found are no longer useful for practical problems, where the control of variables achieved in the experiment (by simplifying the problem) is no longer possible.

A mixture of these reductionisms that we have detailed so far can be clearly seen in much of the research on homework, research on reading and the use of digital media, or research comparing public and semi-private/private institutions. They tend to leave out any issues that are subject to social and cultural context or to the different interpretations of the subjects of the study. On the other hand, very different theoretical perspectives on the same concept are omitted, thus removing any complexity, richness and possibility of theoretical discussion. Moreover, these

issues are rarely made explicit in these studies, thus failing to comply with the criterion of transparency that all research should have (Tracy, 2021).

Only in this way is it clear that in most of them, the definitive measure for comparing what works and what does not is usually academic performance, despite the fact that the inference of cognitive processes and learning from this is a more than controversial issue in cognitive-behavioural psychology itself (Soderstrom and Bjork, 2015) and more than surpassed in traditions such as interpretative or critical psychology (Bruner, 1990; Pérez-Gómez, 2000; Alcaraz-Salarirche, 2014; Stenhouse, 1997, 2021a, 2021b); also, how social class reductionism occurs in which social class takes a second place to academic performance in homework research, despite the fact that, as mentioned above, it is necessary to understand all the social structures of power and oppression that influence performance and especially homework that is, by definition, done at home.

In the end, in this quest for *evidence-based* objectivity, the only way to make social science, and especially education, problems fit into their *scientific perspective and methods* is to reduce their complexity by removing cultural elements, connections, cues or structures from the problems.

In contrast to this perspective based on reductionism, authors such as Tracy (2021, p. 180) stand out, stating that what is important for good research is what she calls "valuable subject matter", which has to do with it being "relevant, timely, significant, interesting or evocative" and for this, among other things, complexity is sought in the problems to be investigated: contemporary controversies or issues that can provide keys to a deeper understanding of them, through situations of "educational authenticity" in the problems being investigated and whose complexity is considered an opportunity and a richness for research, as opposed to simple problems, which are the result of reductionism or which have had layers and layers of complexity removed. As Tracy (2021) puts it

> Las investigaciones que son contraintuitivas, que cuestionan supuestos dados por sentado o que desafían ideas bien aceptadas suelen ser valiosas. [...] Por eso son intrínsecamente interesantes los estudios sobre fenómenos poco conocidos o contextos evocadores. También por eso la gente se siente atraída por las investigaciones que dan un giro a los supuestos de sentido común. Cuando la investigación se limita a confirmar los supuestos existentes, la gente negará su valor aunque

> reconozca su verdad. En resumen, el público pensará "eso es obvio" en lugar del más codiciado "eso es interesante" (p. 180)

Understanding education as a technical matter: the re-emergence of the technocratic paradigm

Professor Gimeno-Sacristán (1982) said that education is not a technical matter, thus, he criticises those perspectives that try, within the paradigm of efficiency we have already mentioned, to reduce educational decision-making to a technical matter detached from any kind of underlying theory and ideology.

This represents a de facto impossibility, as Gimeno-Sacristán (1982, p. 64) puts it: "any technique and any practice cannot be considered apart from a certain knowledge base. Action is always guided by a thought, even if it is implicit for the one who executes", is produced with the intention of hiding the underlying theories for reasons that we will see later on and that Inglis (1985, p.40) already anticipates when he states that people who believe they lack theory "están atrapados por las teorías que los atan y los inmovilizan, porque no tienen posibilidad de pensar sobre ellas y por tanta de eliminarlas. No carecen de teoría; son teóricos estúpidos"

In this sense, the radical change we have witnessed in the type of professional that teachers should be is striking. Until around the 1990s, there was a whole current calling for the need for reflective professionals (Schön, 1987) and for teachers as researchers of their own practice (Elliott, 1993, 2022) whose argumentation linked the constitutive interests of Habermas' knowledge (1984) to differentiate what came to be called technical, practical and critical professionals established by Zeichner and Liston (1987) and which in our country was rescued by Professor Trillo-Alonso (1994). All these discourses arise as a response to the commercialisation of education and the bureaucratisation of the teaching profession through technical paradigms based on efficiency (Gimeno-Sacristán, 1982). These were the high points of what came to be called "pedagogy by objectives". The flourishing of the endless programmed teachings that Gertrúdix (1999, p. 22) qualifies as "an absolutely diabolical instrument".

The criticism of this paradigm is addressed by Contreras-Domingo (1990) through what he calls "proletarianisation of teachers", referring to the subversive mechanisms by which, with this pro- efficiency vision of education, teachers lose their autonomy and become technical professionals, applying methods designed by others. Trillo-Alonso (1994) defines this as:

> Al técnico le preocupa el cómo: cómo hacer lo que le dicen que haga. El qué hacer no es cosa suya, le viene dado […] El técnico es, por lo tanto, muy jerárquico, y asume sin cuestionar su condición: la más baja, según él (o ella) en el organigrama de cuantos tienen que ver con el currículum. Reproduce así, sin saberlo, la clásica división entre lo intelectual y lo manual (que supondría aquí la puesta en práctica). En el reconocimiento de que «es un mandado», hay cierta resignación, pero también cierto alivio; la responsabilidad no es suya: «Que hagan bien las cosas» los otros… (pp. 70-71)

In this sense, a number of issues stands out: the abandonment, as we said about these discourses, of the type of professional that teachers should be, along the lines of a critical, reflective professional who is conceived as a researcher of his or her own practice; the resurgence of Bloom's famous (and old) taxonomy as the star element of current curriculum design, which indicates that the latest educational policies and laws have turned towards this efficiency paradigm that Gimeno-Sacristán already criticised in 1982; the bureaucratisation of teaching and the proletarianisation of the teaching staff that we were talking about; and the claim of evidence-based education that, in the words of Ferrero (2018) "No es convertir al maestro en investigador. El maestro es maestro. El maestro tiene que enseñar. La investigación se deja para los investigadores".

Everything seems to reflect that the new competences and the policies derived from them have brought back old paradigms. This is far from being a step towards the development of reflective and critical teachers, who are masters of their professional knowledge and who see themselves as researchers of their own practice, what Biesta (2017) calls wisdom understood as "virtuosity in making educational judgements".

This issue was already anticipated by Gimeno-Sacristán in 2008 when he asked "Educating by competences, what's new?" and explained that it is common for languages and metaphors to appear that rename what is

known in an apparently new way. This situation may generate perplexity and enthusiasm, but these new languages may be necessary to address new realities or they may be created to serve specific interests of powers and bureaucracies, or to express the conceptions and proposals of experts with greater precision and to maintain their privileges.

In this situation, teachers find themselves trapped in this avalanche of bureaucracy and new languages that very effectively produce their "de-professionalisation". Evidence-based research is a "raft of oil" that offers reassurance and less accountability under the false paradigm of simplicity. At the same time it blocks criticism against the evidentialist perspective itself. In the words of Wescott (2022):

> In a post-truth paradigm, dismissal of research claims is akin to scientific scepticism, a betrayal of intellectual ethics of teacher practice, placing teachers in an impossible bind where the evidence, despite questions about its efficacy, is protected by a discursive paradigm that makes it impossible to question (p. 15)

It whispers in teachers' ears that they should not think, but only execute what others design, but this, as Han (2020) has already pointed out, is only a modern form of self-exploitation that also represents a serious problem for the purposes of education. The feedback from teachers' reception of and demand for these kinds of findings is discussed in the introduction to this paper, and its link to education policy is discussed in the next section.

Conclusions: Making 'evidence-based' policy decisions and house of cards. From honest concern for educational improvement to the construction of narratives

Throughout this work we have seen how one of the dangers of the new democracies in societies as complex as today's is, according to Innerarity (2020), their simplification. In this sense, what the same author calls dataism appears, which produces an idea of credibility, objectivity and, therefore, demand for data as unquestionable scientific truth. It is in this context that evidence-based education and research have become relevant.

Following on from this idea, we have tried to raise issues related to epistemology to then delve into what Wrigley (2019) calls the reductionisms that this evidentialist perspective must assume in order to be able to deploy its theories and research.

Finally, we have connected how this perspective implies the resurgence of an old vision of education as a technical matter, on which we have delved into its inconsistencies and difficulties.

One might ask, then, at this point: where does the policy interest in evidence-based research in education come from? Or in short, *evidence-based education*.

Wrigley (2019) says that we may also find ourselves in a predisposed political situation, with a certain rush to find quick answers and simple solutions to complex problems. This, together with the dissolution of public discussion on philosophical and substantive issues in today's democracy itself (Innerarity, 2020), produces:

> In their eagerness for a bargain, in their zeal to explain too much too fast, scientists and philosophers...underestimate the complexities, trying to skip whole layers or levels of theory in their rush to fasten everything securely and neatly to the foundation. (Dennett, 1995, p. 82 citado por Wrigley, 2019)

Our view is that this policy interest in the evidentialist perspective has to do, rather than with an honest concern for improving education, with a political function of reforms (Sola, 2004) in the sense that Lakoff (2017) understands the creation of new languages and mental frameworks.

Thus, the culture of *dataism* coupled with the political legitimation framework provided by language is much better induced when advocating that policy decisions are made *on the basis of evidence*. These languages activate a mental framework in society and education professionals that has to do with "certainty", "objectivity" and "science", issues that are highly desirable to be associated with certain policy positions.

We have had an example of this approach with the COVID, where in every governmental appearance this language of evidence-based decision making, or the continuous references to the expert committee, specifically surfaced.

The evidentialist perspective simplifies life for the political narrative, as it provides data and languages that allow the framework of political legitimisation to be projected from the objectivity and responsible,

professional and scientific decision-making of the party in power, producing perverse effects on the research that is promoted (Fernández-Navas, Alcaraz-Salarirche and Pérez- Granados, 2021; Fernández-Navas et al, 2020) and which, in the words of Wescott (2022, p. 5), "Policymaking reliance on evidence-based rhetoric also precludes the possibility of problematizing evidence, and rejects research that does not comply with its methodological prescription".

All this explains the concern expressed by Gimeno-Sacristán (2005) about the discourses of educational reforms.

> En las discusiones sobre las reformas educativas se favorecen muy poco los debates que traten temas trascendentales, como por ejemplo: para qué queremos el sistema educativo y de qué conviene ocuparse dentro de él. En cambio, se invierten sumas ingentes de esfuerzos y de recursos en debatir problemas menores, impuestos por los lenguajes esotéricos de algunos expertos al servicio de políticos, que en ocasiones también prefieren el lenguaje opaco de los tecnicismos, en vez de desarrollar el que debería serles más propio. El discurso pretendidamente técnico es una coartada para evitar la discusión pública sobre dilemas más sustanciales. (p. 69)

This is not acceptable if we want to improve education. This evidence-based perspective of education falls far short of offering quality answers to the problems of education. Because, besides, we have already been there. The main problem that started the paradigm war as we have seen at the beginning of this paper was Barrow's (1984, p. 213) critique of the positivist paradigm in education, which had been shown to be "inadequate to tell us anything secure and important about how teachers should proceed in the classroom".

The return to this starting point is as Gimeno-Sacristán (2008) announced when talking about the reasons for the emergence of new languages in education: "creaciones de expertos en búsqueda de fórmulas para expresar sus concepciones y propuestas con más precisión, pero también con la finalidad de mantener sus privilegios."

What is needed is what Wescott (2022) calls for:

> In order to achieve a greater harmony between policy initiative implementation and the valuing of teacher knowledge, the impenetrable reverence for evidence-based policy and clinical rationalities needs to be dismantled. Critique of these paradigms should not be aligned with a post- truth condition that has witnessed the rise of research denialism

and scientific scepticism, but might instead be seen as the practice of informed critique in the spirit of intellectual rigour and democratic engagement (p. 16)

This leaves open the question that most educational research continues to be carried out in the academic environment, where the meritocratic system and the prevalence of publications in indexed journals perpetuates the hegemony of the positivist paradigm. This produces the idea of what Herzog et al. (2015) call "de-subjectivisation", which can be summed up in the question of whether art is art because it is in a museum, or whether it is in a museum because at a previous moment it was already art. This concept could be extended to the question of whether the quality system of journals favours experimental articles, as recent research in our country shows (Fernández-Navas, Alcaraz-Salarirche and Pérez-Granados, 2021; Fernández-Navas et al, 2020).

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Strengthening research use in education policy: International landscape

Reforzar el uso de la investigación en política educativa: Panorama internacional

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Abstract

Using evidence well and systematically is fundamental for improving the learning experience and outcomes of all students and ensuring equity in education. Despite enormous effort and investment to reinforce the quality, production and use of education research, using evidence in policy and practice remains a challenge for many countries and systems. This paper reports on the findings of an OECD study that mapped actors and mechanisms facilitating the production and use of research in education systems. Data was collected from ministries of education in 37 systems representing 29 countries through a survey and follow-up interviews. This paper focuses specifically on research use in policy making. Findings depict a wide range of actors that facilitate research use. While respondents reported various research mobilisation

mechanisms, these focus primarily on linear research transfer and relationship building. Only a minority of countries have a systems approach. Based on an analysis of reported actors, mechanisms and barriers, the paper concludes that in many systems the current set of mechanisms is not sufficient to achieve a systematic use of evidence in policy. What seems to be missing is an acknowledgement of the complexity of evidence systems and an appropriate system-level coordination of this.

Resumen

Utilizar la evidencia educativa de manera correcta y sistemática es fundamental para mejorar la experiencia de aprendizaje de todo el alumnado y garantizar la equidad en educación. A pesar de los enormes esfuerzos e inversiones para reforzar la calidad, producción y uso de la investigación educativa, el uso de la evidencia en políticas públicas y la práctica escolar sigue siendo un reto para muchos países y sistemas educativos. Este artículo presenta las conclusiones de un estudio realizado por la OCDE en el que se han identificado los actores y mecanismos que facilitan la producción y el uso de la investigación en los sistemas educativos. Los datos se recopilaron de los ministerios de educación de 37 sistemas que representan a 29 países a través de una encuesta y entrevistas de seguimiento. Este artículo se centra específicamente en el uso de la investigación en la elaboración de políticas educativas. Los resultados muestran un amplio abanico de agentes que facilitan el uso de la investigación. Aunque los encuestados informaron de diversos mecanismos de movilización de la investigación, estos se centran principalmente en la transferencia lineal de la investigación y el establecimiento de relaciones entre los actores. Solo una minoría de países aplica un enfoque sistémico. A partir del análisis de los agentes, mecanismos y obstáculos señalados, el documento concluye que, en muchos sistemas, el conjunto actual de mecanismos no basta para lograr un uso sistemático de evidencia en políticas públicas. Lo que parece faltar es un reconocimiento de la complejidad de los sistemas de evidencia y una adecuada coordinación holística.

Introduction

Using research more systematically to improve public services has become a policy imperative in the past two decades (Powell, Davies, & Nutley, 2017).

In education, a thoughtful and systematic use of evidence is fundamental for improving the learning experience and outcomes of all students and ensuring equity. It is also critical to ensure that education remains relevant for societal needs and that education systems are efficient.

In 2000, the OECD's Centre for Educational Research and Innovation (CERI) highlighted that the rate and quality of knowledge creation, mediation and use in the education sector was low compared with other sectors (OECD, 2000). CERI's work on knowledge management and educational R&D also showed generally low levels of investment in educational research as well as in research capacity, especially in quantitative research. Links between research, policy and innovation were judged as weak in many OECD systems (OECD, 2003).

In the 2007 OECD volume *Evidence in Education*, experts and politicians formulated a number of challenges to stronger evidence use in decision making, including:

- the lack of relevant and accessible research for policy and the conflicting timeframes of political cycles and research production

- the lack of appropriate processes to facilitate the interpretation and implementation of evidence by decision makers

- the difficulty of ensuring sustainability and stability of funding (OECD, 2007).

With the spread of the evidence-informed movement in education, three main trends can be observed in the past two decades.

First, many countries have invested in research itself. Although public spending on educational research and development (R&D) is still limited compared to other sectors such as health (OECD, 2019), significant funding has gone into experiments, systematic reviews and other forms of education research (OECD, 2007). Second, there has been growing investment in initiatives intended to facilitate the use of research. These include establishing dedicated brokerage institutions designed to mediate research for policy and practice (OECD, 2007), and making research more accessible to users through funding research syntheses, toolkits and various initiatives that aim to strengthen engagement with research. Third, research on evidence-informed policy and practice has also been expanding. Early conceptualisations of knowledge transfer as a linear process have evolved into an understanding of research ecosystems that recognise

complexity (OECD, 2016; Boaz & Nutley, Using evidence, 2019; Best & Holmes, 2010). There are a growing number of studies looking at various brokerage initiatives, with some recent efforts exploring how these initiatives work and can be improved (Oliver, Hopkins, Boaz, Guillot-Wright, & Cairney, 2022; Gough, Maidment, & Sharples, EPPI-Centre, 2018).

Despite widespread investment since the early 2000s, to date, there is no strong evidence about how we can effectively strengthen the use of research in decision making. The positive trends mentioned above, coupled with a continuing dissatisfaction of many actors about the unfulfilled promise of evidence-informed policy and practice, call for establishing a state of the art in this matter. Exploring countries' strategies to facilitate research production and use, and the barriers policy makers, researchers, practitioners and other actors are still facing in integrating evidence into educational policy and practice is a first step. Understanding how these strategies work and what impact the various brokerage efforts are making would be the second step, and a fundamental piece towards improving evidence use.

This paper[1] reports on the findings of a recent OECD survey conducted in CERI's *Strengthening the Impact of Education Research* project[2]. We first present the research questions and methodology, and then provide an analysis of the landscape of actors and mechanisms that facilitate research use in policy in OECD systems. We conclude with a short discussion of the findings and future areas of research.

Research questions and methodology

The first step in addressing the questions above is to map existing mechanisms, actors and challenges across systems. In particular, we will investigate the following questions:

- How can we characterise the actors that facilitate the use of education research in policy?

- How do education systems facilitate the use of research in policy?

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[1] The paper draws on analyses published in the volume "Who Cares About Using Education Research in Policy and Practice" (OECD, 2022), adding new data, analyses and insights to it.

[2] https://www.oecd.org/education/ceri/education-research.htm

■ What are the main barriers to using education research in decision making?

The OECD conducted a policy survey from June to September 2021 to collect data on various aspects of facilitating research use in countries/systems. It consisted of three parts: 1) aspects of facilitating research use in policy, 2) aspects of facilitating research use in (school and teaching) practice, and 3) aspects of research production. In this paper, we analyse data on actors and mechanisms with respect to research mobilisation in policy making (part 1 of the survey) and reflect on these mechanisms in light of literature on knowledge mobilisation.

The survey consisted of different question formats, including single and multiple choice (selecting one or several from a number of options), Likert scale (5-point), ranking and open-ended questions. The survey allowed for a wide and flexible interpretation of key concepts such as "research", "policy maker", "facilitating research use" and "activeness". The choice of not setting narrow definitions was made to capture broad perceptions of respondents. As a follow-up to the survey, six countries[3] were selected for further data collection through semi-structured interviews. The interviews confirmed certain differences in interpreting concepts (e.g., who policy makers are, whether research refers primarily to large scale data, experimental designs or is considered more broadly). Therefore, comparisons between systems should be made with caution. Nevertheless, the range of interpretations are all relevant to knowledge mobilisation and thus valid when discussing actors, mechanisms and barriers.

Overall, 37 education systems from 29 countries[4] have responded to the survey. Responses represent the perspective of ministries of education at the national or sub-national (state, province, canton, etc.) level. Thus, data reflects the perceptions and personal realities of personnel within these ministries. It is important to recognise that this is limited perspective of the actors and mechanisms that operate in the research

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[3] Japan, New Zealand, Norway, Portugal, Slovenia, South Africa.

[4] OECD member countries: Austria, Belgium (Flemish and French Communities), Canada (Quebec, Saskatchewan), Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, Hungary, Iceland, Japan, Korea, Latvia, Lithuania, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland (Appenzell Ausserrhoden, Lucerne, Nidwalden, Obwalden, St. Gallen, Uri, Zurich), Türkiye, United Kingdom (England), United States (Illinois). Non-member countries: Russian Federation, South Africa.

production, mediation and use space, as well as of the barriers to increasing research use. Nevertheless, this perspective is fundamental to understanding the use of evidence in policy making.

The survey targeted the highest level of decision making in education (ministry/department of education). In federal systems, this corresponds to the state (province, canton, etc.) department, although some such systems, such as Austria and Spain decided to respond at the federal (national) level. Ministries were asked to coordinate the response across departments. The follow up interviews revealed that ministries of education had various definitions of policy makers. Interviewees most commonly associated the term with high-level ministry officials such as Directors, Deputy Directors and Director Generals. There was overall a high degree of recognition that policy makers are those with influence over the policy process, rather than those tasked with implementation of policies. Some systems however took a broader view, considering all those working at the ministry of education, as well as individuals in the executive and legislative branches of government. As a result of the different understandings, comparisons between systems in policy survey data should be made with caution.

Conceptual framework

The evidence-informed policy and practice movement gave rise to a rich field of study looking into the dynamics of knowledge. Terms such as knowledge management, knowledge-to-action, knowledge translation, transfer, mobilisation, brokerage and mediation consider the dynamics of knowledge from different angles (Levin, 2008). A major development in conceptualising the interplay of research production and use is an evolution *from linear to system* models. Best and Holmes (2010) describe the three models of knowledge mobilisation in a nested perspective:

- *Linear models* focus on disseminating research evidence to users such as teachers and policy makers, who are seen as passive recipients of knowledge.

- *Relationship models* incorporate linear models but focus on strengthening the relationship among stakeholders through

partnerships and networks to facilitate the link between research and practice/policy. Here, knowledge can come from multiple sources (research, theory, policy, practice).

■ *Systems models* build on linear and relationship models but recognise that agents are embedded in complex systems and the whole system needs to be activated to establish connections among its various parts (Best & Holmes, 2010).

In both the relationship and systems models, a strong emphasis is placed on mediation, i.e., intermediary actors and processes that bridge the gap between communities of research producers and users. Intermediary actors include organisations (e.g., brokerage agencies) and individuals (e.g., translators, brokers, gatekeepers, boundary spanners and champions). While each actor is important in a systems view, this view implies that all actors together shape the research ecosystem through their interactions, feedback loops and co-creation (Campbell, Pollock, Briscoe, Carr-Harris, & Tuters, 2017).

This development should not be seen as a simple shift from one model or strategy to another. Linear processes of knowledge transfer are not outdated; rather, they are embedded in more complex dynamics and remain key building blocks of research use. Relationships are fundamental elements of a systems view but it is not sufficient to only consider and foster partnerships. Strengthening the dynamics of research production and use is not simply about transferring and translating a narrow set of "codes" from one community to the other. The research presented in this paper is built on an embedded understanding of the linear, relational and systems approaches (Figure I).

The systems view recognises the complex interactions not just between multiple actors, but also multiple sources and types of knowledge (Langer, Tripney, & Gough, 2016; Van De Ven & Johnson, 2006). These include formal research knowledge as well as practitioners' and policy makers' professional knowledge, such as their understanding of the context (e.g., of a classroom, policy processes) and how various elements interact within this. Recent conceptualisations see evidence use as "thoughtful engagement with research" (Rickinson, Walsh, Cirkony, Salisbury, & Gleeson, 2020), through which research evidence is combined with other sources of knowledge. In addition, research and other sources of evidence are often not used directly but they shape attitudes and ways of thinking in indirect and subtle

FIGURE I. Embedded models of knowledge mobilisation with examples

SYSTEM

Creating
incentives

Creating
infrastructure and
mechanisms

Rewarding
impact

RELATIONAL

Strategic
leadership

Building professional
partnerships, networks

Building skills and
capacity

LINEAR

Disseminating and
communicating research

Facilitating access
to research

Commissioning research
for policy/practice
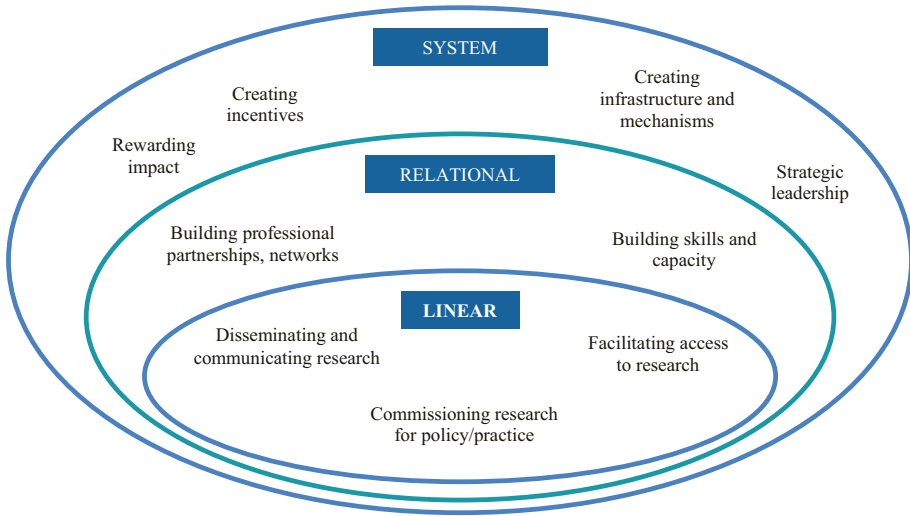
Source: Adapted from (Boaz, Oliver, & Hopkins, 2022).

ways (Nutley, Powell, & Davies, 2013). While recognising the above complexities, this research focuses on the actors and mechanisms that facilitate the integration of formal research knowledge (or evidence – these terms are used interchangeably in this paper) in processes of policy making.

Facilitating research use – also referred to as research mobilisation in this paper – is understood broadly to comprise linear, relational and systems mechanisms and activities (as exemplified in Figure I) that support the use of research evidence in policy. Though important for a deep understanding of knowledge mobilisation, a discussion on the nature of research (its quality, methodology and inherent assumptions that may sometimes be political and ideological) and its production (drivers, actors, processes) is beyond the scope of this paper. Similarly, the paper does not discuss research mobilisation in school and teaching practice. For these analyses, see OECD (2022).

To operationalise these models in light of the research questions, we have focused on mapping actors that can play a role in the evidence ecosystem, key elements of relationships, and mechanisms and barriers. While the analytical framework for the policy survey includes a

more comprehensive set of dimensions developed based on an extensive review of the literature (OECD, 2022), this paper focuses only on organisational actors and mechanisms that facilitate research use.

Who facilitates research use in policy? The landscape of organisational actors

The first question of this paper asks how we can characterise the actors that facilitate the systematic use of education research in policy. This section first discusses the density and overall activeness level of actors facilitating research use in policy across OECD systems. It then delves into the role of various organisational actors and provides some qualitative analysis of the profiles of brokerage organisations.

In the early years, literature on knowledge management in education focused on three main groups: researchers, policy makers and practitioners. However, education systems are complex systems in which a multitude of actors interact at multiple levels (Burns, Köster, & Fuster, 2016). Beyond the traditional actors, relevant stakeholders include funders of research, textbook publishers and EdTech companies, think tanks and networks of researchers and practitioners, the media and students (Burns, Köster, & Fuster, 2016). These actors may all potentially play their parts in knowledge mobilisation.

To reflect this complexity, the survey asked respondents how active various actors (from a list of 17 actors altogether) were in their systems on a scale from 1 to 5 – not active at all, slightly active, moderately active, active and very active – in three areas: producing research, facilitating research use in policy and facilitating research use in practice (these last two also referred to as "research mobilisation").

Survey data revealed that a large number of different organisations are seen as active to some degree in all three areas in each of the respondent systems (Table I). However, education systems vary in terms of their overall levels of activity (Figure II).

Most systems reported a relatively high number of organisations with high activity level on average, with Finland being the most extreme (top right quadrant). Spain is also in this quadrant, reporting 12 organisations active, one (universities) very active and one (teacher education institutions) moderately active (Table V). Some reported a high number

FIGURE II. Number and average activeness of organisations that facilitate research use in policy making
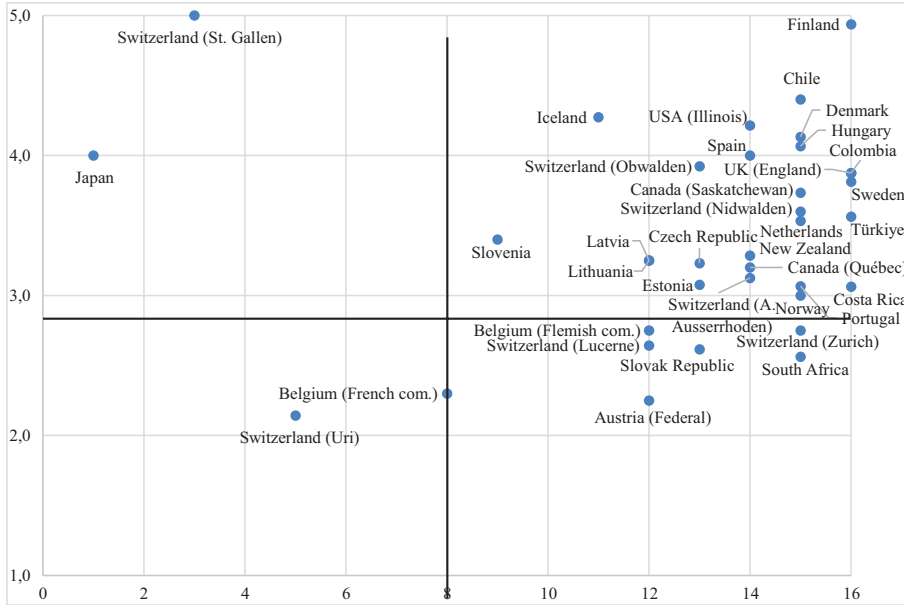
Note: The X axis shows the number of organisations that are perceived as at least slightly active in facilitating research use in policy. The Y axis is the average activeness of these organisations.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

of organisations that facilitate research use in policy, but overall less actively (bottom right quadrant). This was the case for South Africa, the Slovak Republic, Austria and Switzerland (Zurich) for example. The concentration of systems on the right end of the chart suggests that research mobilisation is highly decentralised in most countries. In some of these systems, the ministry perceives research mobilisation as strong overall (high level of activeness), in others slightly weaker (medium to low activeness).

Only very few systems reported a significantly lower number of organisations. This is the case for Japan, where the Ministry of Education is the only actor reported. The follow-up interview helped clarify that while the Ministry perceives its own role as central in seeking out the research

evidence they need for their policy processes, other actors also support evidence-informed policy. Notably, the National Institute for Educational Policy Research conducts research that supports policy planning and implementation. In Switzerland (St. Gallen), research mobilisation seems to occur between the ministry and teacher education institution(s) – the two actors reported to be very active. Finally, Switzerland (Uri) reported a low number of organisations (5) that are overall not perceived to be highly active (bottom left quadrant), but the ministry and the government funding agency play a central role. These systems may reflect a centralised approach to research mobilisation, in which the ministry itself – with or without one or two agencies – retains the mobilisation function for its own processes. However, it is also possible that the ministry is not aware of other organisations' role in this field or does not have connections to them and therefore their role in facilitating research use in policy remains limited.

Overall, the data shows that it is not possible to separate research producers, brokers and users: most types of organisations have multiple functions. Research and policy organisations are the most prevalent actors that facilitate the use of research in policy (Figure III). Universities (faculties of education) and the ministries of education themselves were seen as the most active organisations in both the production and mobilisation of education research across the systems (see Table I). The prominent role of research organisations in knowledge mobilisation is not surprising given that policy makers likely perceive them as the most credible research producers and turn to them when they seek out evidence for policy purposes. On the other end of the scale, the media and businesses are not perceived as very active in research mobilisation in most systems, although some have recognised their intermediary roles. This might be because these are not primarily educational actors and may not be seen as main sources of evidence. Although fewer, a number of systems see some of the more practice-oriented organisations, such as teacher education providers and teacher unions, as active in facilitating research use in policy making as well.

With respect to **policy organisations**, the key actor is the ministry itself. Some scholars have found that departments and ministries of education are quite weak in knowledge mobilisation (Levin, 2013; Cooper, 2014). However, the presence of "in-house" brokerage units that support particular ministries in research gathering, translation and communica-

FIGURE III. Perceived activeness of actors in facilitating research use in policy

Note: Size reflects the number of systems reporting that the given actor is active or very active in facilitating research use in policy making. See Table I in the Annex for the data on actors seen as very active or active (henceforth "active") in each of the three areas.
Source: OECD *Strengthening the Impact of Education Research* policy survey data.

tion efforts has been reported for some time (OECD, 2007). This type of internal brokerage has become more prominent over the past decade, and in certain national administrations also more formalised through the establishment of strategic intelligence units in ministries of education (Gough, Tripney, Kenny, & Buk-Berge, 2011). Qualitative data confirmed the presence of these research and analysis units in several systems, such as Slovenia, Norway, the Netherlands and Belgium (Flemish community).

Brokerage organisations are not limited to formal brokerage agencies. Data shows that other types of organisations, such as consultancies, think tanks and university-school partnerships also play an intermediary role in a number of systems. **Formal brokerage agencies** (i.e., agen-

cies with an explicit mission to support the use of research in policy/ practice) were reported to exist in 18 systems and were seen as being active to some degree in 16 systems. Only one system (England) reported this agency to be the most active organisation across research production and mobilisation in policy and practice. England has a particularly well-developed brokerage system. In the other 15 systems, such formal agencies often received much lower overall activeness ratings.

Brokerage agencies vary greatly in terms of their profile across systems. Some systems report them to be *multi-functional*, i.e. active in producing research and facilitating its use in both policy and practice. This was the case for six systems (Costa Rica, Chile, Finland, Norway, Portugal and UK [England]). Others see them as more *narrowly-focused*: active in only one or two areas. This was the case in seven systems (Columbia, Denmark, Hungary, New Zealand, Sweden, Switzerland [Obwalden] and Türkiye). New Zealand for example reported them as only active in facilitating the use of research in practice. Interestingly, five systems reported the presence of brokerage agencies, but the ministry perceived them as mostly or entirely inactive in producing research or facilitating its use (Austria, South Africa [Pretoria], Switzerland [Lucerne], Switzerland [Zurich], Switzerland [Appenzell Ausserrhoden]).

Qualitative data collected about formal brokerage agencies revealed a number of additional differences between these. They differ in key organisational characteristics, such as size and funding sources (e.g., charity, government). Brokerage agencies also have different target groups and interlocutors. Some target and interact with the traditional educational stakeholders (e.g., teachers, schools and decision makers). Others have a much broader mandate to build bridges between education, politics and society as a whole. Importantly, they facilitate evidence use through a variety of different functions and activities. Some still focus on linear mechanisms such as the dissemination of evidence in accessible formats on their websites, whereas others actively build relationships and networks.

Another important difference between them is the type of evidence they focus on. There are agencies that carry out and disseminate research syntheses to support the use of research by practitioners and policy makers. These include the long established "What Works" centres, such as the English EPPI-Centre and the Education Endowment Foundation (EEF), and some more recent agencies such as the Knowledge Centre for Educa-

tion, established by the Norwegian Ministry of Education and Research in 2013. These organisations usually reflect on the robustness of evidence, sometimes establish evidence standards (e.g., EEF), and usually have a strong focus on research that study the effectiveness of various interventions. Conducting secondary research, in particular systematic reviews and meta-analyses, is one of their core activities, but some also conduct primary research.

There are also many brokerage agencies that focus on system-level, large scale educational data, and provide statistical services and access to data. For example, Statistics Finland produces statistics for the entire education system from pre-primary to adult education. Some brokerage organisations produce regular reports on the state of education. These usually consist of the analysis of national and international student assessments and teacher surveys (e.g., PISA, TALIS), as well as administrative datasets. Considering data as the primary source of evidence-informed decision making is not unique to certain formal brokerage agencies. Many of the analytical units within ministries also interpret evidence in this sense, rather than as education research more broadly.

Overall, the landscape of organisational actors is highly diverse in the field of research mobilisation. To understand how these organisations facilitate research use in policy, we will now explore some of the mechanisms.

What does research mobilisation consist of? The landscape of mechanisms

The second question of this paper asks how education systems facilitate the use of research in policy. This section discusses the presence of various mechanisms in OECD systems according to the Best and Holmes (2010) models introduced above. It then gives further information on certain aspects of all three approaches: research dissemination, capacity building, and monitoring and evaluation.

Mechanisms that facilitate research mobilisation can be characterised in various ways. They vary according to the different levels at which they act: individual, organisational and system (Nutley, Walter, & Davies, 2009). Knowledge mobilisation activities can also be classified based on the three conceptual approaches described by Best and Holmes (2010): linear, relational and systems. The framework used in this study (Table I) builds on Humphries and colleagues' (2014) typology of factors devel-

oped in relation to the healthcare sector, which represents the variety of levels in the research production and use system, and incorporates linear, relational and systems approaches. This typology has been adapted and enriched with the work of other authors to ensure applicability in the education sector (see Table II and Table III).In the survey, respondents were asked to indicate which mechanisms exist in their system (from a list of 10). Further details were asked for a number of these mechanisms if the respondent indicated their presence. Given that the study explores mechanisms of the education system, the items were not referring to any specific individuals or organisations but were formulated in generic terms referring to the system.

Overall, education systems reported an average of 4.7 mechanisms that facilitate research use in policy with a strong dispersion across systems (Table IV). Some systems reported all or most of these mechanisms in place (e.g., Türkiye, the Netherlands, Finland and Sweden), while others only declared one or two mechanisms (e.g., the Swiss cantons of Uri and Nidwalden, the Czech Republic and the Slovak Republic). Spain reported four mechanisms: systematically identifying research gaps, disseminating research findings in user-friendly formats, programmes encouraging interactions and providing targeted funding for research (Table VI).

None of the mechanisms are omnipresent in education systems (Figure IV). Over two thirds of systems (70%) provide targeted funding for research on specific topics, which is the most common mechanism. We must note that the classification of this mechanism as a systems approach is debatable. Targeted funding can be seen as a systemic incentive for linking research production and use through encouraging the production of research that is based on policy (or practice) needs. However, it can also be interpreted as a linear view in which research is produced and made available for users. In reality, funding incorporates a large number of actors (e.g., private, public, national, international funders) and factors (e.g., criteria and timeframes for funding) that influence research production and mobilisation. Unfolding this mechanism – or rather, multiple and complex mechanisms – is an endeavour worthy of a separate discussion and further attention from the research community.

Clearly, linear and relational mechanisms dominate the landscape of research mobilisation in policy making. If the provision of targeted funding is considered as a linear approach, then this is overwhelmingly true. Interestingly, more systems reported commissioning research based on

FIGURE IV. Mechanisms used to facilitate research use in policy by type
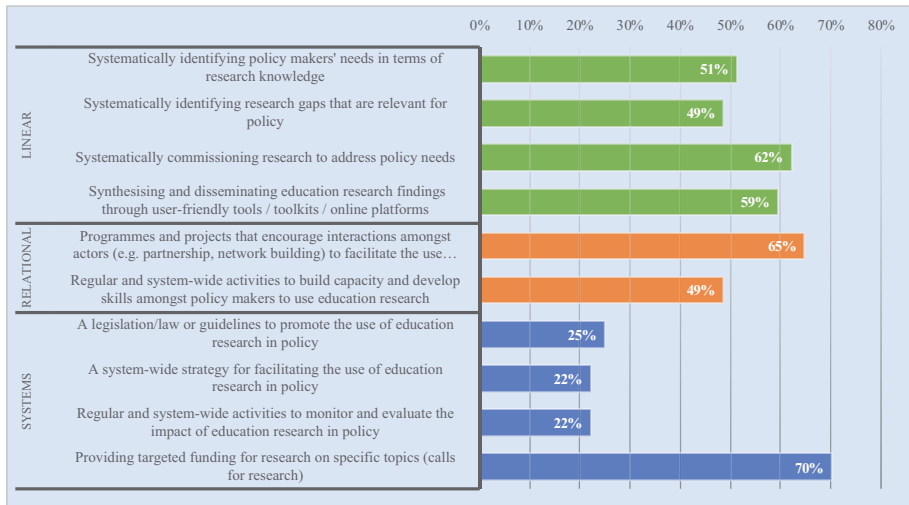
Note: Data refers to percentage of systems reporting the existence of a given mechanism, by type. N=37. Source: OECD *Strengthening the Impact of Education Research* policy survey data.

needs than systematically identifying research needs. This suggests that commissioning research is based on ad-hoc needs at least in some systems. Nevertheless, approximately half of respondent systems identify research needs and research gaps systematically, although only 38% do both.

Disseminating research findings through user-friendly tools is the most traditional way of research mobilisation. Yet over 40% of systems do not have this basic linear approach. Those who do, reported a range of platforms and formats through which research findings are disseminated (Figure V). The most common ones are short fact sheets and infographics, executive summaries, policy briefs and reports of systematic reviews.

In terms of relational mechanisms, two thirds of systems have projects or programmes that encourage interactions among actors, while about half of them reported mechanisms which systematically build policy makers' capacity to use research. Capacity building includes both formal learning opportunities such as the provision of training and

FIGURE V. Prevalence of different formats in which research is disseminated to policy
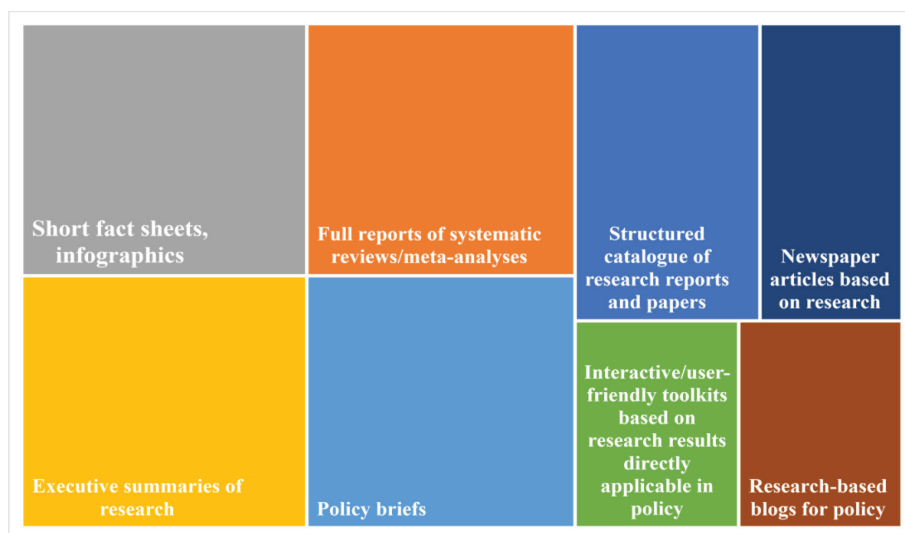
Note: Size reflects the relative proportion of the number of systems that reported using the given format. N=22 (systems that reported having any kind of dissemination format).

Source: OECD *Strengthening the Impact of Education Research policy* survey data.

workshops, continuing specialist support and secondment programmes in research organisations, and informal ones, such as sharing good practices and offering resources (Figure VI). Informal mechanisms are more common.

Systems approaches are clearly the weak link in research mobilisation for policy. One single country (Türkiye) reported having all four mechanisms classified as systems approach. Only one in four education systems reported having legislation, laws or guidelines promoting the use of research, while one out of five systems have a system-wide strategy for facilitating research use in policy. With respect to the latter, interview data revealed that some countries that have an education research strategy, which is primarily focused on research production, did not report this as a research use strategy. For example, Norway's research strategy – not reported for this survey question – includes elements with respect to knowledge mobilisation even though produc-

FIGURE VI. Formal and informal learning opportunities that build policy makers' capacity to use research
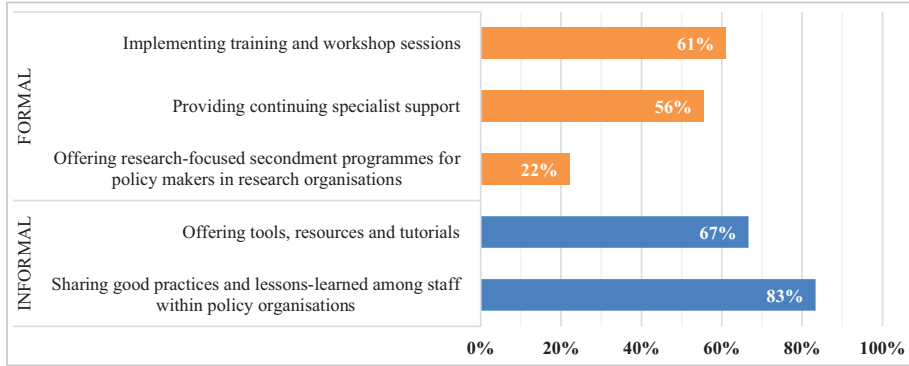
Note: Percentage of systems reporting that the given mechanisms exist in their systems from among those that reported the presence of capacity building mechanisms. N=18.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

tion is a key focus. Systems that have a system-wide strategy reported a significantly greater number of mechanisms on average than those without (7.6 versus 3.8), which may indicate the effectiveness of such strategies in some respect. Similarly to system-wide strategies, very few systems (22%) reported regularly monitoring or evaluating the impact of educational research across the system. Systems that monitor impact tend to do this in multiple ways, with Switzerland (St. Gallen) and Türkiye using all four forms of monitoring listed in the survey:

- Developing indicators to measure the impact of education research on policy

- Monitoring and evaluating the effectiveness of organisations that mediate education research towards policy

- Monitoring and evaluating the extent of research use in policy

- Monitoring and evaluating the impact of research use on decision-making in policy (e.g. on policy design).

System-wide strategies to facilitate research use and monitoring the

impact of research should ideally be connected. Yet only two countries, Finland and Türkiye, reported having both these mechanisms.

What are the barriers to improving research use?

The third question of this paper asks about the barriers education systems are facing in facilitate the use of research in policy. This section presents the relative importance of various barriers in OECD systems and briefly discusses the relationship between mechanisms and barriers along the Best and Holmes (2010) framework.

Respondents were also asked about what they perceive to be the main barriers to improving research use and rank three to six out of a dozen suggested options in order of importance (Figure VII). While systems factors are most commonly mentioned as barriers, an important proportion of education systems still face major barriers with respect to the availability, accessibility and quality of education research (i.e., linear factors). Lack of time to engage with research and the conflicting timeframes of

FIGURE VII. Barriers to increasing and improving the use of education research in policy
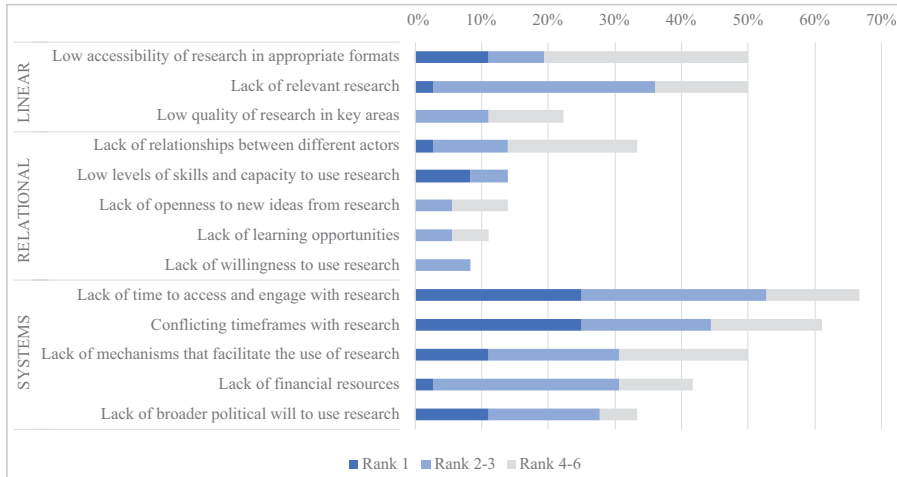
Note: Data shows the percentage of systems ranking the given barrier, by type and rank range. N=37.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

research and policy making are the top barriers. The former may indicate a lack of appropriate incentives for policy makers.

Reported mechanisms and barriers are only partially consistent. Systems mechanisms exist in few education systems, and such barriers were correspondingly highly reported. However, many systems that reported having various linear mechanisms, still reported linear factors – notably, the accessibility of research in appropriate format – as an important barrier. Similarly, while most countries have projects encouraging interactions among actors, still about one third of these countries reported the absence of relationships between actors. This suggests that such projects do not yet fully fulfil their mission. Perhaps the most remarkable gap is that some countries reporting the lack of mechanisms facilitating the use of research as a major barrier also reported a higher number of mechanisms on average. This could imply that systems consider existing mechanisms to be insufficient in facilitating research use.

Overall, data suggests that while countries do report a number of ways in which they facilitate research use, these mechanisms do not ensure the systematic use of evidence in policy making. In the next section, we discuss some initial explanations of this problem.

Discussion

The findings from the survey beg for examining the effectiveness of mechanisms that education systems have in place to facilitate research use in policy. While this study did not directly investigate effectiveness, knowledge mobilisation literature helps gauge at least some elements.

Modern conceptualisations of knowledge mobilisation recognise that the evidence production and use system is complex (Maxwell, Sharples, & Coldwell, 2022). Complex systems cannot be driven solely by linear mechanisms that assume that making research accessible will imply its use. Establishing relationships between actors has been proven to be fundamental to strengthen engagement with research and facilitate the production of relevant research (Langer, Tripney, & Gough, 2016). The findings presented above demonstrate that there are a large number of actors that play a role in producing and mobilising research evidence. While most systems today invest in fostering interactions between actors, this may not be enough. We have seen that even in systems where various

programmes and projects facilitate interactions, missing relationships still hinder research use. This points to the importance of a systems perspective: some relationships may need to be created more strategically through mapping the actors and finding the "structural holes" (Burt, 1992).

In addition, research has shown that the impact of certain mechanisms on research use is stronger in combination with others (Langer, Tripney, & Gough, 2016). For example, building relationships between actors will only foster evidence use if the actors have the right competences to understand and engage with research, as well as to understand and appreciate other types of knowledge. Yet, systems tend not to complement relationship building with capacity-building activities and learning opportunities.

Ensuring a systematic use of research at the level of the entire system requires strategies that drive the dynamics of the whole system (Best & Holmes, 2010). What mechanisms are effective in facilitating the dynamics of the evidence ecosystem remains largely uncharted territory in the literature. In recent studies, strategic leadership, mechanisms that reward research impact and engagement, and creating infrastructure and positions in organisations specifically to foster research use have been emphasised (Oliver et al., 2022). A mapping of over 500 brokerage initiatives in a variety of sectors has shown that such mechanisms are rare (Oliver et al., 2022). The OECD survey confirmed this finding for education.

System-wide coordination, that ensures the connection between interventions and aligns action to a system's context – including its actors and resources – and goals, is necessary for effectively governing complex education systems (OECD, 2016). While countries do report various initiatives to facilitate research use, system-wide strategies to coordinate these only exist in a handful of countries. The lack of coordination between initiatives can prevent them from fulfilling their potential impact and can be a barrier to using evidence in policy systematically. In addition, monitoring and evaluating the impact of the various initiatives, and providing appropriate incentive structures for all actors, including but not limited to funding, are also drivers of the entire evidence ecosystem. Yet, such systems approaches are still largely missing. For example, the dominant performance indicator for university-based researchers in most countries is publishing in academic journals, a format which clearly impedes their engagement with policy makers and other actors.

As shown in the embedded model of approaches to knowledge mobil-

isation, systems approaches will not be possible without relational and linear components. But some education systems still lack the basic foundations for research use: high-quality, relevant and accessible research itself. Mechanisms that would help ensure these foundations, such as identifying actors' needs, fostering research production aligned to these needs and disseminating research findings are also not yet omnipresent.

In sum, while this data cannot tell us much about the effectiveness of each of the mechanisms, the overall picture of actors, mechanisms and barriers clearly indicates that in many systems the current set of mechanisms is not sufficient to achieve a systematic use of evidence in policy. What seems to be missing is an acknowledgement of the complexity of evidence systems and an appropriate system-level coordination of this.

Conclusions, limitations and future directions

This paper set out to investigate how education systems facilitate the use of research in policy making, who the actors are in this landscape and what barriers still exist to using evidence systematically and well. The OECD survey data has demonstrated that the landscape of actors and mechanisms is highly diverse across systems. While many systems have various mechanisms and a large number of actors that facilitate research use in policy, they also face important barriers. Overall, it seems that conceptual development in the field – an evolution from linear to systems approaches – has not yet fully translated into action. Just like the entire education system, the evidence system is also complex and requires governance approaches that consider this complexity. Countries first need to have a good understanding of existing actors, their functions and relationships, as well as the existing mechanisms of and barriers to research mobilisation. A systems approach could then involve creating a system- wide strategy that is adapted to the context and state of the art, establishing systemic incentives and ensuring strategic leadership.

While findings presented here point to some current challenges and initial paths to address these, the study also has a number of limitations. First, it reflects the perceptions of only one set of actors, that of policy makers, which may be a biased and narrow view of the evidence system. In the future it will be important to collect data from other actors, such as intermediary organisations and practitioners. Second, some quantita-

tive information needs to be complemented by more qualitative data. For example, some countries reported to have system-wide strategies to facilitate research use. Exploring the content and implementation of such strategies would provide valuable information on governing knowledge mobilisation. Third, the study did not allow for gauging the relationships between the various dimensions, notably between actors and mechanisms. There remains a research gap with regard to how different organisations actually perform their research mobilisation functions and how they engage with or are affected by other mechanisms that exist in the system. Fourth, understanding how the evidence system can be improved requires understanding the impact of existing mechanisms, which this data could not map. The evaluation of intermediary efforts is a missing piece in general, and thus literature on their impact is scarce.

To address these limitations, future efforts should be aiming to map the functioning of intermediary actors, collect information directly from these actors to explore their activities, relationships and the challenges they are facing. Although assessing the impact of such initiatives is highly complex, the field should be moving towards understanding their effectiveness. The OECD *Strengthening the Impact of Education Research* project is therefore currently developing a new round of data collection from intermediary actors.

The diverse nature of evidence systems, both in terms of actors and mechanisms, suggests that a simple and unified approach to strengthening research engagement may not exist. However, this diversity also indicates that there is the potential for a large amount of knowledge exchange and shared learning between the different models. There is currently a strong momentum to increase and improve research use in education policy and practice. This special edition is an example of that, but we could also name recent manifestos [e.g., (Coe & Kime, 2019; Bofill Foundation, 2021)], investments both by NGOs and governments, and the strong interest from countries in international efforts such as that of the OECD. We must seize this momentum by bringing together the academic, policy and practice communities, as well as the various intermediary actors to collectively reflect on what works in "what works" and bring about the change needed for a more systematic and high- quality evidence use.

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Annex

TABLE I. Number of systems reporting organisations to be active in facilitating the use of education research and in research production

	Universities/ Faculties of Education	Ministry of Education	Teacher education institutions	Other public research organisations	Academic or research networks	Government funding agencies	University - School networks	PD providers for teachers	Other professional groups	Policy networks	Education consulting firms	Teacher unions	Brokerage agencies	Think tanks	Media	School networks	Businesses
Facilitating research use in **POLICY**	32	32	17	20	21	18	17	12	14	11	13	13	8	10	11		6
Facilitating research use in **PRACTICE**	24	21	21	17	13	16	14	19	13	10	9	12	10	4	2	12	7
Producing education **RESEARCH**	30	26	22	20	22	21	14	13	5	10	8	4	9	6	6	7	4

Note: 1. Data was collected at national and sub-national levels. 2. School networks did not feature as an option when ministries were asked about facilitating research use in policy. This was building on the assumption that school networks are not focused on increasing the use of research in policy. 3. "PD providers" refers to professional development providers. 4. In some countries, Teacher education institutions and Faculties of Education may overlap, which implies limitation to the correct interpretation of data.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

TABLE II. Typology of factors influencing research use

Type	Definition
Information	Existence and quality of relevant research evidence, its availability, accessibility and format; and its channels of circulation and dissemination.
Interaction	Contact, collaboration and flow of information between researchers, practitioners and policy makers through formal or informal relationships; the characteristics of these relationships, such as trust and mutual respect.
Individual characteristics	Researchers' understanding of the policy and practice processes and context; Practitioners' and policy makers' skills and capacity to use research; related learning opportunities in formal and informal education and training. Similar characteristics of other actors influencing the use of research evidence.
Structure and organisation	System and organisational support for the production and use of research, manifested in formal structures (e.g., provision of time, funding, learning opportunities, formal training) and/or processes (e.g., presence of guidelines and financial incentives).
Culture	Researchers', practitioners' and policy makers' priorities and their alignment; Actors' attitudes towards research and willingness to use it; System and organisational values, principles, beliefs, and valorisation of research production and use.

Source: Adapted from Humphries, S. et al. (Humphries, Stafinski, Mumtaz, & Menon, 2014).

TABLE III. Factors influencing research use by type of approach in the OECD *Strengthening the Impact of Education Research* policy survey

Type of approach	Barriers	Mechanisms
Linear	• Low quality of research in key areas • Low accessibility of research in appropriate formats • Lack of relevant research	• Systematically identifying relevant research gaps • Systematically identifying needs in terms of research knowledge • Systematically commissioning research to address needs • Synthesising and disseminating ed. research findings through user-friendly tools
Relationships	• Lack of willingness to use research • Lack of learning opportunities • Lack of openness to new ideas from research • Low levels of skills and capacity to use research • Lack of relationships between different actors	• Regular system-wide activities to develop capacity/skills to use ed. research • Projects encouraging actors' interactions to facilitate the use of ed. research

(*continued*)

TABLE III. Factors influencing research use by type of approach in the OECD *Strengthening the Impact of Education Research* policy survey *(continued)*

Type of approach	Barriers	Mechanisms
Systems	• Lack of broader political will to use research • Lack of financial resources • Lack of mechanisms that facilitate the use of research • Conflicting timeframes with research • Lack of time to access and engage with research	• Regular system-wide activities to monitor/evaluate the impact of ed. research • System-wide strategy for facilitating the use of ed. research • Legislation/law or professional guidelines that promote ed. research use • Offering resources (e.g. financial, human) to support research use • Providing targeted funding for research on specific topics

TABLE IV. Number of mechanisms facilitating research use

COUNTRY	IN POLICY MAKING	IN PRACTICE
Türkiye	10	10
Netherlands	9	10
Finland	9	10
Sweden	9	9
Hungary	8	7
Canada (Saskatchewan)	7	8
Slovenia	7	7
Belgium (Flemish community)	7	5
Switzerland (St. Gallen)	7	5
Norway	7	5
Canada (Quebec)	7	4
Switzerland (Appenzell A.)	6	9
United Kingdom (England)	5	8
Switzerland (Lucerne)	5	7
Chile	5	4
Latvia	5	3
Belgium (French community)	5	3
Spain	4	6

(continued)

TABLE IV. Number of mechanisms facilitating research use *(continued)*

COUNTRY	IN POLICY MAKING	IN PRACTICE
Austria	4	6
Estonia	4	5
Iceland	4	2
Switzerland (Obwalden)	4	2
New Zealand	3	7
Denmark	3	5
Lithuania	3	3
Colombia	3	3
Japan	3	2
South Africa	3	2
Switzerland (Zurich)	3	1
United States (Illinois)	2	5
Costa Rica	2	3
Portugal	2	3
Switzerland (Uri)	1	2
Switzerland (Nidwalden)	1	2
Czech Republic	1	1
Slovak Republic	-	1

Note: Maximum number is 10.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

TABLE V. Actors in research production and mobilisation in Spain

Actor			
Pro. devt. providers for teachers			
Brokerage agencies			
Teacher education	Moderately active	Active	Moderately active
Media	Active	Active	Active
Businesses	Active	Active	Active
Think tanks	Active	Active	Active
Education consulting	Active	Active	Active
University - School networks	Active	Active	Active
School networks	*	Active	Active
Teacher unions	Active	Active	Active
Policy networks	Active	Active	Active
Academic or research	Active	Active	Active
Other public research organisations	Active	Active	Active
Government funding agencies	Active	Active	Active
Ministry of Education	Active	Active	Active
Other professional groups	Active	Very active	Active
Universities/ Faculties of Education	Very active	Active	Very active

Note:* School networks did not feature as an option when ministries were asked about facilitating research use in policy. Spain did not report the presence of brokerage agencies and professional development providers.

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

TABLE VI. Mechanisms and barriers reported by Spain

Mechanisms	Barriers (in order of relevance)
• Systematically identifying research gaps relevant for policy • Programmes encouraging interactions amongst actors to facilitate research use in policy • Synthesising and disseminating education research findings through user-friendly tools for policy makers (Full reports of systematic reviews or meta-analyses, short fact sheets and infographics, executive summaries of research, policy briefs, newspaper articles based on research) • Providing targeted funding for research on specific topics (calls for research)	1. Lack of relevant research for policy needs 2. The conflicting timeframes of policy and research (e.g. research is too slow to address policy needs when needed) 3. Low quality of research in key areas 4. Lack of financial resources

Source: OECD *Strengthening the Impact of Education Research* policy survey data.

International Organizations and Evidence-based Education Policy: Their evident relation

Organismos Internacionales y Políticas educativas basadas en evidencias: la evidente relación

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Abstract

This article aims to demonstrate the close relationship between international organizations and evidence-based education policy. It begins by showing the impact of the proposals of three international organizations (UNESCO, the OECD, and the European Union) on education systems (*soft policy*) through an example: lifelong learning. The aim is to illustrate how the discourses of international organizations become educational trends. It describes how three international organizations with great influence on educational trends (UNESCO and OECD in their global perspective and the European Union in its regional perspective) have been crafting a discourse over the last several decades in favor of evidence-based educational policies. Then, by applying the analysis of supranational education, it compares the views of these three international organizations, seeking out their common ground by gathering perspectives from programs and documents that justify and highlight this matter. Subsequently, recently published OECD (2022) and European Union (European Commission, 2021) reports on the state of education are analyzed, sorting out the kind of indicators used to evaluate education systems. These indicators are

considered a tool for decision-making characteristic of evidence-based education policy. Finally, the article concludes by presenting a critical reflection on evidence-based education policy, noting that the indicators used in the reports assume an economistic view of education, in which future employability conditions the evaluation of education systems. The article calls into question the quantitative view in the evaluation of education systems as "objective truth" without considering other explanatory and reflective elements such as the context or the humanistic vision of education itself.

Keywords: educational policy, international organizations, Supranational Education, evidence, educational indicators, educational improvement.

Resumen

Este artículo trata de demostrar la estrecha relación entre los Organismos internacionales y la política educativa basada en evidencias. Para ello comienza mostrando el impacto de las propuestas de tres Organismos Internacionales (UNESCO, OCDE y Unión Europea) en materia de educación sobre los sistemas educativos (*soft policy*) mediante un ejemplo: el aprendizaje permanente. Se pretende ilustrar como los discursos de los organismos internacionales se convierten en tendencias educativas. Se describe cómo tres Organismos Internacionales con gran influencia en las tendencias educativas (UNESCO y OCDE en perspectiva global y Unión Europea en perspectiva regional) han ido glosando a lo largo de las últimas décadas un discurso en favor de las políticas educativas basadas en la evidencia.Para terminar, y aplicando el análisis propio de la educación supranacional, contrasta las tres visiones de esos organismos internacionales procurando alinear el hilo conductor que las atraviesa recogiendo las visiones y perspectivas de programas y documentos que justifican y sitúan el foco en el tema que nos ocupa. Posteriormente, se realiza un análisis de los informes sobre el estado de la educación publicados recientemente por la OCDE (2022) y la Unión Europea (Comisión Europea, 2021), identificando los indicadores que utilizan para evaluar los sistemas educativos. Unos indicadores que son considerados una herramienta para la toma de decisiones característica de la política educativa basada en evidencias. Finalmente, las conclusiones del artículo presentan una reflexión crítica sobre la política educativa basada en evidencias, Fruto de esa reflexión se ha observado que los indicadores utilizados en los informes asumen una visión economicista de la educación, en la que la empleabilidad futura condiciona la evaluación de los sistemas educativos. Se cuestiona la visión cuantitativa en la evaluación de los sistemas educativos como "verdad objetiva" sin considerar otros elementos explicativos y reflexivos como el contexto o la propia visión humanista de la educación.

Palabras clave: política educativa, organismos internacionales, Educación Supranacional, evidencias, indicadores educativos, mejora educativa.

Introduction: International Organizations and supranational trends in education

The influence of international organizations on national educational trends and reforms is undeniable, with many of their recommendations being taken up by the countries themselves (Matarranz and Pérez Roldán, 2016; Valle, 2012,2013). Indeed, as Valle (2015) notes, one of the tasks of these organizations is to set up transnational frameworks for interpreting the educational reality. In this globalized world, their proposals often play a decisive role in efforts at harmonizing elements among educational systems.

Spanish educational legislation itself is a clear example of how national educational systems take to these frameworks. Its laws have long been citing the educational approaches proposed by international organizations. This can be seen in the following excerpts taken from the last two organic laws of the education system. First, the preamble of the 2013 LOMCE makes several references to the OECD and its data, such as those obtained with PISA, which are used to justify reforms in the education system:

> However, the current system does not make progress towards improving the quality of education, as evidenced by the poor results obtained by students in international assessment tests such as PISA (Programme for International Student Assessment), the high dropout rates in education and vocational training, and the small number of students who achieve excellence (LOMCE, 2013, p.6).

Second, in the recent LOMLOE (2020), recommendations from UNESCO and the European Union are also considered as reference points for the education system:

> The years that have passed since the approval of the LOE make it advisable to review some of its measures and accommodate them to the current challenges of education, which we share with the objectives set by the European Union and UNESCO for the decade 2020/2030 (LOMLOE, 2020, p. 122870).

There are paradigmatic examples that illustrate how the most globally widespread trends in education have arisen precisely from proposals put

forth by international organizations for a *soft policy* (Diestro and Valle, 2015) that has a direct impact on national laws. One of them is representative of how international organizations have brought about trends that are materialized in the policies and measures proposed by nations: lifelong learning.

Lifelong learning

The lifelong learning concept is closely intertwined with the development of competencies in education, this approach being understood as the one that best represents the need to know, to know how to do, and to know how to be throughout life. The impact of lifelong learning and, therefore, the commitment to a competency-based approach, on national education affirms that these perspectives have largely been accepted as realities in education systems.

By as early as the 1970s, UNESCO began publishing various reports whose central theme was "*Lifelong Education*" (Lengrand, 1970; Faure et al. (1973); Dave, 1975; Lynch, 1977). Interest continued over the years, and lifelong education (which can also be called lifelong learning[1]) became a point addressed in a report published by UNESCO "*Learning: The Treasure Within*", which is still a reference today:

> It is the idea of lifelong education that must be both reconsidered and expanded, because in addition to the necessary adaptations related to the mutations of professional life, it must be a continuous structuring of the human person, of his knowledge and aptitudes, but also of his faculty of judgment and action. It must enable him to become aware of himself and his environment and invite him to play his social role at work and in the city (Delors, 1996, p.15).

The 2030 Sustainable Development Goals are currently at the heart of many political and educational dialogs, debates, and reflections. In terms of the educational goals within them, Goal 4 is the best proof of the consideration of lifelong learning: "*Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*". This lifelong learning perspective is a key element of the goal from its very

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[1] The evolution of the term lifelong learning and its use by UNESCO and other international organizations can be found in the document published by UNESCO (2020).

wording. In the Incheon Declaration, which structures the framework for action of SDG4, the commitment is clear:

> We commit ourselves to promoting quality lifelong learning opportunities for all, in all contexts and at all levels of education. This includes increased and equal access to quality technical and vocational education and training, higher education and research, with due attention to quality assurance. (...) We further commit to ensure that all youth and adults, especially girls and women, achieve relevant and recognized levels of excellence in functional literacy and numeracy and acquire life skills, as well as be provided with adult learning, education and training opportunities (UNESCO, 2016, p. 8).

Further evidence of the emphasis given to lifelong learning is the existence of a specific institute dedicated to this matter: the *Institute for Lifelong Learning* (created in 1951 as a foundation, it became a UNESCO institute in 2006). Its main lines of work arelifelong learning policies, adult learning and education, literacy and basic skills (UNESCO Institute for Lifelong Learning, n.d.), as well as the publication of the report *Reimagining Our Futures Together* (UNESCO, 2022a).

In 1973 a document entitled "*Recurrent education: a strategy for lifelong learning*" was published, the seed of what is known today as lifelong learning. Since then, the OECD has been unflagging in its efforts to support lifelong learning policies that ensure competency development as workers. As Valle (2018) rightly points out, the OECD assumes a competency-based perspective of education linked to lifelong learning because of the relationship it establishes between employability and economic growth.

> Lifelong learning is key if individuals are to succeed in labor markets and societies shaped by megatrends, such as increases in life expectancy, rapid technological changes, globalisation, migration, environmental changes and digitalisation, as well as sudden shocks such as the COVID-19 pandemic. In a fast-changing and uncertain world, lifelong learning can help individuals adapt and become resilient to external shocks, lowering their vulnerability. (...) This calls for evidence on the best ways to support lifelong learning journeys so that individuals can "learn how to learn" (OECD, 2021, p.23).

This excerpt from the report *OECD Skills Outlook 2021: Learning for Life* explicitly shows how the OECD links lifelong learning to the labor

market. The report analyzes which policies and measures are key to enhancing the skills as a way to continue advancing in lifelong learning.

According to Ríos (2006), lifelong learning in the European Union has gone through a number of different stages. In the first stage (1950-1972) lifelong education was associated with the literacy of the population, vocational training, and the training of workers in the workplace. In the second stage (1993-1995), a new idea of lifelong education was developed, understanding it as a necessity in the face of a changing world and the need for citizens to adapt rather than being limited to literacy, vocational training, and workers' training. In the third stage (1996-1999), lifelong education became consolidated in the European Union (EU). And finally, in the last stage, lifelong learning has taken on great importance as its repercussions for the future of the EU begin to be argued. This stage, which runs from 2000 to 2020, is referred to by Matarranz et al. (2020) as the Strategic Programs stage. The Lisbon Council (2000) was the first step in a series of reports, proposals, and recommendations that steadfastly adopted the goal of improving their citizens' skills in order to improve the economy. Thus, lifelong learning was put forth as the way to face a changing world and society. The Lisbon Council resulted in the Work Strategy 2000-2010 (E&T 2010), the *Council Resolution on Lifelong Learning (2002*) and the *Recommendation of the European Parliament and of the Council on Key Competences for Lifelong Learning* (2006).

However, the year 2007 is particularly noteworthy since from that year until 2013 the first Lifelong Learning Program was developed, considered the first EU macro- program (Matarranz et al., 2020). Subsequently, in the development of the Framework for European Cooperation in Education, one of the strategic goals set in the 2010-2020 work strategy was "Making Lifelong Learning and learner mobility a reality". In the European Council Resolution on a strategic framework for European cooperation in education and training for the European Education Area and beyond (2021-2030), one of the strategic priorities is making *lifelong learning and mobility a reality for all*. Indeed, lifelong learning is reflected as one of the educational pillars of the EU:

> "Lifelong learning permeates the overall vision and objectives of education and training in the EU and encompasses all levels and types of education and training, as well as non-formal and informal learning, in a holistic manner" (2021, p.5).

Evidence-based education policy and international organizations

The previous section showed how some discourses of international organizations create educational trends whose impact takes on global dimensions. The next objective is to show that evidence-based education policy is also one of these discourses and to demonstrate that it has been promoted by international organizations, which are themselves responsible for providing much of the "key" evidence to the states themselves. In addition, an analysis will be made of the indicators contemplated in reports that the agencies themselves claim are a suitable source of consultation of evidence, and common and divergent points will be identified.

First, however, the matter of the polysemy of the term evidence must be addressed. Its multiple meanings become more complicated depending on what is considered evidence when referring to educational policies. However, within the line of evidence- based policies, evidence acquires the *status* of hard and fast knowledge, true and generalizable knowledge; a highly questionable claim in the field of education (Thoilliez, 2017). Given the influence of international organizations on the educational agenda, of interest here is finding out the role evidence and educational policies play in their discursive framework.

The discourse of international organizations on evidence-based education policies

This section revisits documents and programs published by the specific and most relevant international organizations on the study of evidence-based education policy.

UNESCO and evidence-based education policies

In the case of UNESCO, the steps regarding evidence-based policy are illustrated in the configuration of its programs and projects.

First comes *the Management of Social Transformations* (MOST) *Program*. This intergovernmental program, which began in 1994, focuses on improving the link between knowledge and action. Specifically, it seeks

to ensure that policy formulation is based on evidence and research results with a social perspective in which human rights and interculturality are defining characteristics of the program. Its main mission is thus stated in the Comprehensive Strategy document for the MOST Program, 2016-2021:

> MOST's specific mission is to support Member States in improving participatory policy-making processes on the basis of intercultural dialogue through a strengthened research-policy interface that uses science-based knowledge focused on human needs and human rights, primarily from the social sciences and the humanities, to contribute to the establishment of a culture of evidence-informed decision-making policies (2016, p.5).

The Mahatma Gandhi Institute for Peace and Sustainable Development conducts the *International Science and Evidence-based Education Assessment* (ISEE). The purpose of this measure is to conduct a scientifically rigorous assessment to inform policy formulation at all levels.

> The ISEE Assessment is a first of its kind for the education sector, attempting to identify a way forward for education and learning according to an evidence based multidisciplinary assessment of the state of education across the globe (UNESCO, 2022b, p.17).

The OECD and evidence-based education policies

Many of the milestones in the OECD discourse on evidence-based policy can be found in the period 2004-2006. During those years, the Centre for Educational Research and Innovation (CERI-OECD) held a series of seminars with researchers and policymakers from OECD countries to discuss methods, costs, advantages, and disadvantages of how educational research, and specifically the evidence thereof, can be used to address the educational challenges countries face (OECD, 2007). These seminars and meetings are the prelude to the publication *Evidence in Education: Linking Research and Policy* (2007).

That article confirms the OECD's perspective on the need to combine education and research, basing educational policy on evidence from

studies. It is the most explicit on the subject, providing framework for this way of understanding education policy.

As mentioned at the beginning of this section, excerpts from the publication can shed light on the OECD's discourse on evidence-based policy. It begins with the executive summary itself:

> There is increasing pressure across OECD countries for greater accountability and effectiveness in education policies and systems. Still, available information often does not provide the elements necessary for decision-making, either because the rigorous research relevant to policy needs has not been conducted, or the research that is available does not suggest a single course of action.... It discusses what constitutes evidence for research in education, how that evidence can best be utilised (OECD, 2007, p.9).

This extract identifies the *effectiveness* of education systems as one of the justifications for the implementation of evidence-based policies (evidence that must be rigorous), together with the increased interest in educational outcomes.

> Key factors underlying this change are a greater concern with student achievement outcomes; a related explosion of available evidence due to a greater emphasis on testing and assessment; more explicit and vocal dissatisfaction with education systems, nationally and locally; increased access to information via the Internet and other technologies; and resulting changes in policy decision-making. These are accentuated by broader issues to do with the perceived legitimacy of policy- making in general. (...)Today there is a mounting preoccupation with what happens as a result of these investments and activities (...) In other words, policy makers are increasingly interested in what education actually delivers - and therefore with what educational research can tell us about that. A consequence of this has been the explosion of evidence of different kinds resulting from the enormous increase in testing and assessment. A significant force behind this orientation to outcomes has been the greater interest shown by treasuries and finance ministries in the effectiveness of educational expenditure, as a major component of public expenditure generally. (...). The challenge is to gather evidence which is both appropriate and convincing. This is especially the case where the request is that impacts and effectiveness be given monetary values (OECD, 2007, p.17).

The OECD adopts a discourse in which justification for evidence-based policies is based on set of both student and system outcomes for policymaking that act as accountability mechanisms from an economic point of view. Therefore, the implementation of more tests and assessments that provide the data (evidence) necessary for decision-making is also justified. The most widely covered example, since it has also gained the media spotlight, is PISA. PISA is the most faithful representation of a globalizing effort to assess competencies in more than 65 countries (Calero and Choi, 2012).

The European Union and evidence-based education policies

The emphasis on the defense of evidence-based education policy has also been very present in the European Union over the last 20 years. In *the Communication from the Commission to the Council and the European Parliament "Efficiency and equity in European education and training systems"* (2006), the idea of evaluation for obtaining solid data to help understand and monitor education systems is expressed. Indeed, accountability has become a central issue in the global educational agenda (Parcerisa and Verger, 2016).

> Education and training systems need a culture of evaluation. To be effective in the long term, policies need to be based on sound data. For Member States to understand what is happening in their systems and to be able to monitor them, they must have channels for relevant research, with a statistical infrastructure to collect the necessary data and mechanisms for evaluating progress in policy implementation (European Commission, 2006, p.4).

Similarly, and continuing along the same lines, the Council of Europe (2009) stated its position clearly on a strategic framework for European cooperation in the field of education and training (E&T 2020):

> High quality will only be achieved through the efficient and sustainable use of resources, both public and private, as appropriate, and by promoting evidence- based policy and practice in education and training (Council of Europe, 2009, p. 4).

However, one of the turning points for the EU in its advocacy for evidence-based policy is the creation of two projects: *Evidence-based Policies in Education Project* (EIPEE) (2010-2011); and the *Evidence-based Policies and Practices in Education in Europe Project* (EIPPEE) (2011-2013). Both projects were funded by the European Commission Directorate for Education and Culture, within the Education for Life strategy towards 2020. One of the goals of these projects was to promote evidence-based policies and measures and was featured as an outcome of the EIPPEE NETWORK (EIPPEE, 2011). Thus, the following excerpt shows the vision on evidence:

> Although it is widely recognized that education policy and practice should be evidence-based, not knowing how to use research does not allow many to take full advantage of it. The definition of evidence is quite broad and can include expert knowledge, statistics, stakeholder consultations, evaluations, internet sources, as well as research-based evidence (EIPPEE, 2011).

The last publication to highlight here is the Eurydice report "*Support Mechanisms for Evidence-based Policy-Making in Education*" (2017). This report maps support mechanisms that can be used for evidence-based policymaking, describing procedures and practices that justify evidence-based policymaking in countries of the Eurydice network. The EU justifies evidence-based education policy from an economic and social perspective, deeming that such evidence will help in allocating sufficient resources to education as well as in improving educational practices themselves.

The evidence that matters in international organizations

A look through the websites of international organizations shows specific sections about evidence that stands out as decisive in political decision-making. The aspects featured on the web pages are understood to be ones that, in today's society, are meant to disseminate the lines of action that define each organization's work.

On the OECD website, in the areas on education, there is a section called "measuring results" (OECD, n.d.). This section states the following:

"*Decisions on education policies should always be based on the best possible evidence*". This description is followed by links to different reports on standardized assessments that provide statistical indicators (PISA, Education at a Glance, International Early Learning and Child Well-Being Study, The Survey of Adult Skills (PIAAC), Study on Social and Emotional Skills, Higher Education Policy, Measuring Innovation in Education). Therefore, it may be said that the evidence that the OECD considers to be decisive for taking policy measures amounts to statistical indicators. In other words, a quantitative and outcome-based view is assumed as the starting point for policy making.

At the European level, the European Commission in its Education section defends quantitative (statistical) data for the development of evidence-based policies. To that end, it takes as an example the results of its own reports and those of other organizations such as the PISA data (OECD):

> Statistics are a fundamental tool used by policy makers, researchers, journalists, citizens and businesses in their work and daily lives. The availability of reliable, high-quality data is essential to support evidence-based policy making and effective evaluation and monitoring of European Union (EU) policies.

> Reliable statistics also play a crucial role in countering the spread of misinformation in public and political debates. The EU institutions, including the European Commission, produce a wide range of statistics on the policy areas in which the Union and its Member States are active (European Commission, n.d.).

Moreover, they state the advantages of statistical data collected for making comparisons between regions and countries and for making future recommendations. In short, the agencies consider the indicators taken from statistics to be the evidence par excellence that can be used for educational policy decisions.

The next step is therefore to determine which indicators are featured in the reports from international organizations. To that end, a compilation will be made here of the indicators of education systems covered in the latest reports by international organizations. Following this compilation, similarities and divergences are found resulting from the comparison between them.

In the case of UNESCO, although it has an extensive bank of statistical data[2] , it no longer presents global comparative reports[3] of education systems as it used to do until a decade ago within the framework of the *Global Education Digest* series. Starting in the 2000s, it began the *Global Monitoring Report* series, but these reports focus on very specific topics that make it difficult to monitor specific indicators historically. Thus, the focus here will be on the OECD and the European Union as the international organizations that currently have the most complete reports overall, comparatively, on education systems. The objective here will be to determine which elements of analysis each of these two organizations use through their most recent reports.

The OECD: "Education at a Glance 2022"

This report analyzes the state of education in OECD countries and other partner economies. It is one of the OECD's flagship publications in the field of education. The OECD defines it as the authoritative source of data on the state of education worldwide. It is an annual publication that presents information on the structure, performance, and resources of education systems in OECD countries. The following table (Table I) shows a list of the chapters and indicators included in the latest report, published in 2022.

As can be seen in the table, the indicators addressed are structured into four chapters:

- The results of educational institutions and the impact of learning

- Access to education, participation and progress

- Financial resources invested in education

- Teachers, the learning environment and the organization of schools.

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[2] http://uis.unesco.org/

[3] The history of the reports can be accessed on the *Supranational Education Library* (SEL) page of the Research Group on "Supranational Education Policies" (GIPES) of the Universidad Autónoma de Madrid.

TABLE I. Indicators of the "Education at a Glance" report (2022)

CHAPTER	INDICATOR
The output of educational institutions and the impact of learning	Indicator A1. To what level have adults studied?
	Indicator A2. Transition from education to work: Where are today's youth?
	Indicator A3. How does educational attainment affect participation in the labor market?
	Indicator A4. What are the earnings advantages from education? What are the earnings advantages from education?
	Indicator A6. How are social outcomes related to education?
	Indicator A7. To what extent do adults participate equally in education and learning?
Access to education, participation and progress	Indicator B1. Who participates in education?
	Indicator B2. How do early childhood education systems differ around the world?
	Indicator B3. Who is expected to graduate from upper secondary education?
	Indicator B4. Who is expected to enter tertiary education?
	Indicator B5. How many students complete tertiary education?
	Indicator B6. What is the profile of internationally mobile students?
Financial resources invested in education	Indicator C1. How much is spent per student on educational institutions?
	Indicator C2. What proportion of national output is spent on educational institutions?
	Indicator C3. How much public and private investment in educational institutions is there?
	Indicator C4. What is the total public spending on education?
	Indicator C5. How much do tertiary students pay and what public support do they receive?
	Indicator C6. On what resources and services is education funding spent?
Teachers, the learning environment and the organization of schools	Indicator D3. How much are teachers and school heads paid?
	Indicator D4. How much time do teachers and school heads spend teaching and working?
	Indicator D6. What are the pathways to becoming a teacher and a school head?
	Indicator D7. How extensive are professional development activities for teachers and school heads?
	Indicator D8. What is the profile of academic staff and what is the student-academic staff ratio?

Source: Compiled by author based on Education at a Glance (2022).

The level of education for the OECD is noteworthy from the point of view of employers who perceive qualifications as proof of skills and knowledge. It is also understood that the higher the level of education, the higher the social commitment and the better the employment and income rates. In the indicators associated with the performance of educational institutions and the impact of learning, the relationship between education and the labor market is key.

With respect to access to education, participation and progress, although the indicators are mostly from higher education, early childhood education is also considered because of the benefits to children's cognitive development, emotional development and well-being, and as the report also notes, because children who learn well at an early age are more likely to do well when they grow up. In regard to upper secondary education, the OECD states that enrollment rates have been rising because the skills acquired are increasingly in demand in the labor market.

The chapter on resources is justified by the need to know how, where and which economic resources are allocated to education. It is assumed that an increase in the resources allocated to education is of economic benefit to societies insofar as the training of their citizens has an impact on the system of production.

Finally, with respect to the indicators about teachers, it is considered that the working conditions of teachers and school principals are relevant in attracting, developing and retaining them in the educational system. This demonstrates a point made at the beginning of this article: the importance of teachers for the proper functioning of educational systems and student achievement, and the dissemination of this idea by supranational educational policies, especially those of the OECD.

European Union: Education and Training Monitor (2021)

While there are several publications on specific educational topics by Eurydice (on the teaching profession, early childhood education or equity, among others), the European Commission periodically prepares its *Education and Training Monitor* (2021), which reports on the evolution of education systems and global data on them. The data are used to monitor the progress countries have made toward the goals proposed within the strategic framework for European cooperation in education and

training with a view to the European Education Area 2025 and beyond (2021-2030). Although country-specific reports are available, this article will refer to the general report.

The following table (Table II) shows the indicators organized by chapter in the report.

The indicators are divided into three chapters:

- Education and well-being.

- Seven EU-level targets towards the European Education Area and beyond (2021- 2030).

- Investment and quality of spending on education and training.

Student well-being is defined as "a general state of mental and physical health, strength, resilience and fitness that enables them to perform well

TABLE II. Education and Training Monitor Report Indicators (2021)

CHAPTER	INDICATOR
Education and well-being	What we know about well-being before COVID-19: an analysis of data from PISA 2018 and TIMSS 2019.
	Students' perspective: PISA data on student feelings and bullying
	Teachers' perspective and the role of school governance in shaping well-being
Seven EU-level targets towards the European Education Area and beyond (2021-2030)	Underachievement in basic skills
	Low achieving eight graders in digital skills
	Participation in early childhood education and care
	Early leavers from education and training
	Tertiary level attainment
	Work-based learning
	Adult learning
Investment and quality of expenditure in education and training	Total expenditure on education and training
	Public expenditure on education and training
	Public expenditure by education sector and category
	Financing education and training in the context of COVID-19
	The Recovery and Resilience Facility

Source: Compiled by the authors based on the Education and Training Monitor (2021).

in school and in their personal lives" (European Commission, 2021, p.11). This well-being is decisive to their development in the education system. The European Commission addresses student well- being by collecting data before the global pandemic of COVID-19 and afterwards. The indicators considered in this section are taken from non-EU sources such as PISA (OECD) and TIMSS (International Association for the Evaluation of Educational Achievement) data. PISA is a reference source for the EU in terms of student achievement in competencies. It should be recalled that the EU and the OECD share the competency- based approach to education. The second chapter, *Seven EU-level targets towards the European Education Area and beyond (2021-2030)*, considers EU targets and their level of achievement by countries. Raising performance in selected skills (language, mathematics, science and digital) is one of the key challenges for the EU. Each country is scored based on data taken from PISA. Improving performance in these skills is seen as a prerequisite for active participation in society as well as for enhancing personal and professional opportunities.

Improving enrollment in early childhood education is also a goal for the EU. This target is justified by the OECD's approach, which argues for the importance for social and emotional well-being of reducing the likelihood of early dropout and its contribution to good performance and better jobs. The EU member states' concern to reduce early school dropout is clear. Their aim is to ensure that all students can develop their potential, since citizens who do not acquire basic training suffer more from disruptions in the labor market. The percentage of students in tertiary education is an indicator that is explained by its impact on the construction of inclusive and progressive societies, without forgetting the more personal side of the social and economic benefits to those who choose to pursue degrees in higher education. Work-based learning is seen as beneficial because it enables the acquisition of job skills that help the student transition to the labor market and are highly valued by employers.

Finally, adult learning is necessary for a society undergoing technological and ecological transformation and multiple changes associated with the new times.

In the chapter on financial resources, emphasis is placed on the importance of having enough resources available to keep education systems running and ensure equal opportunities. Emphasis is placed on increasing attention to the effectiveness and efficiency of education system resources and the impact of the resources invested.

Conclusions

This section on conclusions begins by laying out the similarities and differences observed in the reports presented by the OECD and the EU. This will reveal their where they stand through the indicators they offer and the evidence they consider should be a source of political decision-making. Accordingly, inferences can then be made about the approaches behind them and the conceptions on which they are based.

The headings that structure both publications and articulate their respective indicators are different, except for the one on investment and spending on education, to which both the OECD and the European Commission give great weight. Both organizations are cognizant of the importance of having global and comparative data on education spending and investment to provide information for making policy decisions in this regard. Educational investment is a *sine qua non* condition for the development and functioning of a country's education system.

However, while the OECD gives an overview of the education system without assessing achievements on pre-set goals, the European Commission makes its educational objectives the backbone for the construction of the report. This approach clearly shows that political integration of Europe is now definitely also based on a rapprochement of its education systems. Harmonizing education within the framework of the European Union stopped being taboo ever since the beginning of the 21st century, when the EU's strategic frameworks for educational action were established and designed by decade (2000-2010, 2010-2020, etc.). The report thus plays a decisive role in assessing, with evidence, the progress made on the targets set for all the educational systems in the Union.

Among the divergences between the two publications, one salient aspect considered in the *Education Monitor* (EU) is the well-being of students and other educational actors, which, although mostly taken from PISA, is not analyzed in "*Education at a Glance*" (OECD), which does not address the students' own perceptions. There are also differences in how higher education is treated, since, as stated above, the OECD takes it as one of its main topics, while the *Education and Training Monitor* report considers it as being at the same level as any other.

Many indicators are justified in both organizations by their repercussions on employability or by their impact on the preparation of future workers, thus considering the education system as somehow dependent

on the productive economic system and answerable to the labor market. However, the OECD underscores this economics-oriented discourse much more sharply.

The analysis presented warrants thorough discussion of the findings. It is telling that when the international organizations refer to *evidence,* they do so mainly by referring to quantitative data and final results.

This merits two reflections. The first is that by understanding evidence to mean only quantitatively measurable aspects, it leaves out evidence that can only be measured with qualitative techniques, such as the processes that give rise to the results and contextual elements that are difficult to detect. In this sense, Tiana (2010) rightly states that although international assessments yield very relevant information for countries, they sometimes have limited explanatory power due to the lack of contextualization of the data, which require combining them with other types of analysis.

This leads to the second reflection, which has to do with the artificiality with which some indicators are sometimes "constructed". The algorithm that defines some of them, based on categories that are themselves debatable, or the decisions on how to conceptualize them (of which adult education rates or early school dropout rates are prime examples) largely determine the results. In other words, different conceptualizations of these indicators can provide very different data. This implicitly implies the possibility of "altering" or "perverting" the original meaning of a result depending on how we define the conceptualization of the data through which we intend to show it.

On the other hand, apart from the criticism that indicators are only quantitative, it is worth reflecting on the ones that are most important. It has become evident that the economistic element is very present in what is constructed as evidence for decision- making in education. However, since this is a radical matter of the welfare state and in view of an inalienable fundamental right as defined in the Universal Declaration of Human Rights, some of the concepts used as "evidence" are almost detrimental to an approach to education based on Human Dignity.

In any case, if evidence is only quantitative, it should never be taken as valid, universal knowledge that in education justifies any political action, because the risk of the "dictatorship of numbers" can lead to decisions that fit within the logical framework of quantitative efficiency, but not within the framework of a humanistic vision. To give an example, the

measurement of the effectiveness of higher education studies in a given degree in a given population cannot be left only to a criterion of economic viability, because there are elements for some university studies that, beyond being "profitable" or not, represent a value in and of themselves as part of the cultural heritage of the species that must continue to be preserved and transmitted. In the same way, in rural contexts, the effectiveness or otherwise of a road cannot be measured only in terms of its costs, but also in terms of the services it offers (beyond its profitability), due to the right of all people to have access to certain services.

Evidence-based policies should look much more closely at processes and contexts. In fact, humanistic educational perspectives focus much more on processes than on outcomes, but it is logical that it is more complex to do so in "macro" comparisons than in small educational ecosystems.

Be that as it may, evidence-based policy also perpetuates a hegemony of quantitative research, which in the social sciences ought not exclude more qualitative approaches. If applied, for example, to the evidence provided to address teacher-related issues, the conclusions from the aggregate data often preclude a careful look at the role of many teachers whose working conditions are conditioned by contextual variables. This is something that cannot be analyzed by policymaking based on quantitative evidence.

In short, international organizations, as clear advocates of these "macro" types of proposals based on quantitative evidence, should work in greater depth on the complementarity of these data and promote "micro" case studies and analyses of good practices. This would undoubtedly make the evidence in fields such as education much more powerful.

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Radiography of a decade of Spanish educational scientific journals (2011 - 2020)

Radiografía de una década de revistas científicas de educación españolas (2011 – 2020)

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Abstract

Spanish scientific journals on education have shown an extraordinary evolution in recent decades, which has been consolidated since the 1980s with the exponential growth of these publications. Since the University Reform Law (LRU, 1983), the evaluation of research through published scientific production has become the reference for the professional development of university teaching and research staff, with research merits being measured based on the impact of articles published in indexed scientific journals, mainly in the two international reference databases: Social Science Citation Index (WoS) and Scopus (Elsevier).

This article aims to analyze the evolution of Spanish scientific journals on education based on several indicators: impact and indexing, international collaboration, distribution by year, language, subject, authors' origin, funding, descriptors, and citation. Using a descriptive methodology, these indicators are analyzed for the eight indexed Spanish scientific journals only in the 'Education' category by the Scimago Journal Rank of Scopus with permanence from 2011 to 2020. The results show an upward evolution of the impact, measured in citations and the indexation of the journals under study. The increase in international collaboration stands out, especially between Latin American countries, with a more significant presence of articles in English. Regarding the content reflected in keywords, topics such as inclusion, citizenship and coexistence, educational assessment and school results, competencies, teacher training, and educational technology stand out, based on contextualized research mainly in higher and secondary education. On the other hand, there is a high frequency of keywords that are too generic and do not clearly identify the research they represent. These results raise several challenges that Spanish scientific journals in education will face in the immediate future.

Keywords: scholarly publishing; educational research; scientific communication; research visibility; academic productivity, research impact.

Resumen

Las revistas científicas de educación españolas han mostrado en las últimas décadas una evolución extraordinaria, que se consolida a partir de la década de los 80 con un crecimiento exponencial de estas publicaciones. A partir de la Ley de Reforma Universitaria (LRU, 1983), la evaluación de la investigación a través de la producción científica publicada se convirtió en la referencia para el desarrollo profesional del personal docente e investigador universitario, midiéndose los méritos de investigación a partir del impacto de artículos publicados en revistas científicas indexadas fundamentalmente en las dos bases de datos internacionales de referencia: *Social Science Citation Index* (WoS) y *Scopus*. El objetivo de este artículo es analizar la evolución de las revistas científicas de educación españolas durante una década significativa a partir de varios indicadores: impacto e indexación, colaboración internacional, distribución por años, idioma, tema, procedencia de autores, financiación, descriptores y citación. Con una metodología descriptiva, se analizan estos indicadores para las 8 revistas científicas españolas indexadas únicamente en la categoría 'Education' del *Scimago Journal Rank* de Scopus con permanencia desde 2011 al 2020. Los resultados muestran una evolución ascendente del impacto, medido en citas, y de la indexación de las revistas objeto de estudio. Destaca el aumento de la colaboración internacional, especialmente entre países de Iberoamérica, junto a una mayor presencia de artículos en inglés. En cuanto al contenido reflejado en las

palabras clave, destacan temas como inclusión, ciudadanía y convivencia, evaluación educativa y resultados escolares, competencias, formación del profesorado y tecnología educativa, a partir de investigaciones contextualizadas principalmente en la educación superior y en la secundaria. Se evidencia una importante frecuencia de palabras clave demasiado genéricas, que no identifican bien las investigaciones que representan. Estos resultados plantean diversos retos a los que deberán enfrentarse en el futuro inmediato las revistas científicas de educación españolas.

Palabras clave: publicación científica; investigación educativa; comunicación científica; visibilidad de la investigación; productividad académica; impacto.

Introduction

The generation of knowledge in education inevitably relates to the efforts made throughout history to delve deeper into the educational experience, systematise it, understand it better, generate evidence about it and advance in the creation of a scientific corpus on the relevant educational problems. In other words, the generation of knowledge relates to the rigorous research and analysis of innovation. To this end, the dissemination of these findings through the publication of monographs, articles in scientific journals, edited technical reports, congresses, as well as informative publications in the press, in professional journals and in digital resources is key. Researchers have experienced how this ecosystem of scientific communication has been increasingly gaining more relevance, not only in terms of the rapid development of science but also about the impact that different channels have on their own recognition and professional development. Thus, scientific journals have become the main communication channel for research, which is mostly due to the evaluation policies and the recognition of research, as well as the scientific output of institutions and their researchers (Alperin & Rozemblum, 2017).

In this context, it is worth posing questions on the state of scientific production in the field of education in our country, Spain: Has the dissemination of knowledge been shaped by international and national science policies in recent decades? What role have scientometrics, the large editorial groups with international influence and the so-called "hard" science paradigm played? What effects has all this had on the production and professional development of researchers? Has there been a response

to the dynamics and demands of scientific dissemination? It is relevant to consider this set of questions in order to be able to understand the evolution of scientific communication in Spain in general and, especially, the evolution of scientific journals in education. The introduction of this work provides some data on the questions posed above, which provide the context for this paper, whose general objective is to analyse the evolution of scientific journals in education in a key decade. In greater depth, the 8 journals that have remained the longest in the *Scimago Journal Rank (SJR)* by Scopus for the period 2011 - 2020 are analysed on the basis of a set of indicators.

The evolution of Spanish science policy and its influence on the generation of scientific knowledge in education

Scientific production has been connected to university institutions, through which, for centuries, scientific societies have been created to promote areas of knowledge and projects, obtain resources and debate and disseminate their advances in recognised journals. Examples of this are the *Deutsche Akademie der Naturforscher – Leopoldina (1652)*, the *Royal Society* in London (1660) and the *Académie des Sciences* in France (1666). These institutions promoted the first scientific journals, which are similar to current-day ones, but with much less dissemination (Ruiz-Corbella, Galán & Diestro, 2014). It was not until the end of the 19th century and the beginning of the 20th that there began to be an expansion of universities, institutes and scientific societies with the objective of identifying and responding to new problems, demands and social challenges. At the same time, governments began to promote and recognise the relevance of science for development, which, in Spain, happened through the creation of the *Junta para Ampliación de Estudios e Investigaciones Científicas (JAE)* in 1907, which was chaired by Santiago Ramón y Cajal. This institution developed the first authentic "science policy" by promoting an extensive and varied activity that boosted research in Spain in the first third of the 20th century (Bernal & López, 2007). Linked to this movement are the *Boletín de la Institución Libre de Enseñanza* (1877 – 1936) and the *Revista de Pedagogía* (1922-1936), with both being references in the dissemination of pedagogical science based on and connected with the pedagogical renewal movements outside the country

(Mérida & Gamarro, 1992). As a result, Spain began to take note of the importance of science policy. In the words of Aguirre, "one of the greatest institutional discoveries of modern states, an essential part of general policy, as important as economic, educational, international or defence policy" (Aguirre et al., 1980, n.p.).

Continuing with this succession of reaching milestones in scientific policy that have affected science in education, the creation of the *Spanish National Research Council (CSIC)* in 1939 (a continuation of the *JAE*) stands out for being a driver for science policy based on European models. The *Instituto San José de Calasanz de Pedagogía,* which focused its activity on the research of educational themes and training, became part of the CSIC. This institute carried out its activity in close relationship with the Chair of Pedagogy at the Complutense University of Madrid, which promoted the creation of the *Revista Española de Pedagogía* (1943). Two years prior, the Ministry of National Education had created the *Revista Nacional de Educación*, whose name was changed in 1952 to *Revista de Educación* and has remained to be so until today (Vilanou et al., 2017). The journal is currently publishing its 400th issue in commemoration of this monograph. The *Sociedad Española de Pedagogía* (1949) was also linked to the above-mentioned institute and aimed to bring together professionals from the world of education. In this same year, it began to publish its journal, *Bordón*. *Revista de Pedagogía*, with the aim of allowing all specialities in which research is produced to exchange experiences and share perspectives.

In line with the growing importance that the State Administration was giving to research, the Ministry of National Education was renamed the Ministry of Education and Science in 1966. Regardless of where science was situated in the administrative structure, the important fact is that science and technology policy was consolidated as a state policy, which included the policies which were established by the Autonomous Communities after their creation. As such, in the 70s, the first national plans for the development of research projects were established. However, the fundamental milestone was the enactment of the Spanish Constitution (1978), which includes "the right to literary, artistic, scientific and technical production and creation" (Art. 20.b) and established in Article 44 that "The public authorities shall promote science and scientific and technical research for the benefit of the general interest", which resulted in significant progress in the orientation and provision of science policy.

In 1983, the Ministry of Education and Science created the *Centre for Educational Research and Documentation (CIDE)* [successor to the *National Institute of Education Sciences (INCIE* 1978- 1982, formerly the *National Research Centre for the Development of Education (CENIDE*)], promoting and managing different actions such as the National Prizes for research and innovation, having recognised results in terms of knowledge transfer to the education system and creating a foundation on which to develop consolidated research lines and groups.

In 1986, in accordance with the Articles established in the Spanish Constitution (1978), the first *Law for the Promotion and General Coordination of Scientific and Technical Research* was approved, which definitively positioned science on the Spanish political agenda, establishing the foundations for the promotion, management and funding of national research plans and their coordination between the State and the Autonomous Communities. One year later (1987), the Ministry of Education and Science created the *Interministerial Science and Technology Commission*, which played a significant role in the intersectoral approach to research activity. The above- mentioned law was followed by other laws and new bodies and agencies were created to promote, fund, and evaluate it.

In this context, the Ministry of Science and Innovation created the *Spanish Foundation for Science and Technology (FECYT)* in 2001, whose objective was to link science and society and promote the Spanish scientific culture and the transfer of knowledge. From the different actions carried out, the support for the professionalisation and internationalisation of Spanish scientific journals stands out. Thus, since 2005, it has been promoting the recognition of journals that follow international quality criteria. To this end, the *ARCE Programme* was launched in 2007 through the *Call for the Evaluation of the Editorial and Scientific Quality of Spanish Scientific Journals,* which periodically awards the *FECYT Quality Seal* in recognition of editorial and scientific quality, celebrating its 8th edition in 2022. There has been great effort made by the editorial teams to achieve the standards and this has increasingly resulted in successive calls for proposals (Figure I).

The European Union's successive multiannual framework programmes for research and innovation have led to unprecedented progress in the funding and internationalisation of research in general and also progress in educational research in particular in Spain, occasionally compensating for budget reductions or preventing the suspension of projects in periods of crisis in the national economy.

FIGURE I. Data for the scientific journals submitted to the calls for proposals Evaluation of the Editorial and Scientific Quality of Spanish Scientific Journals, 2007 – 2020, FECYT.
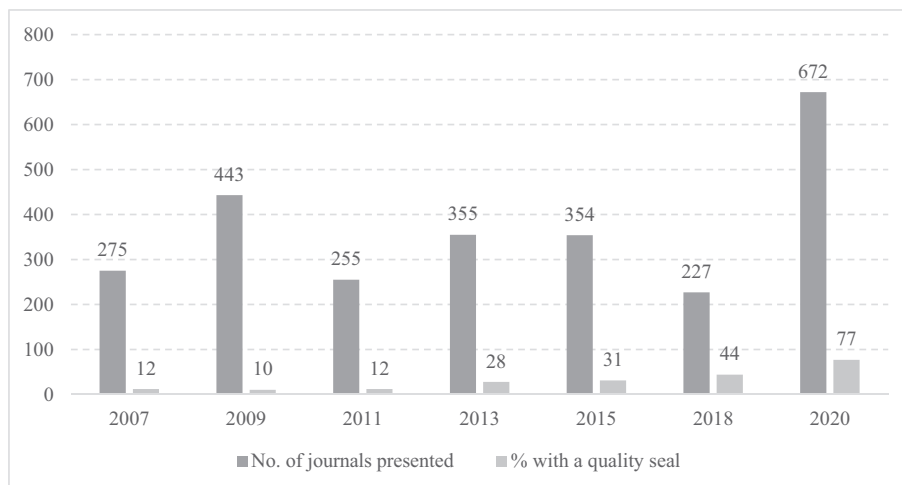
Note: Own contribution from the FECYT (2022).

The role of scientometrics, editorial groups and the "hard" science paradigm

The analysis of the Spanish scientific production collected on the *Web of Science (WoS)* for the period between 2011-2020, shows that the field of Social and Legal Sciences contributes 23.08%, compared to Experimental Sciences or Medicine, which double or triple this proportion. However, the behaviour of this area in the same decade shows a slow and sustained increase over time. Another interesting aspect is the emergence of the *Emerging Sources Citation* Index (ESCI) by the WoS, which is a database without an impact factor, in which the presence of Spanish journals in Social Sciences and Law skyrocketed. In 2020, it represented 47.96% of all Spanish journals in this field (IUNE Observatory, 2022), with the opposite happening in the *Social Science Citation Index (SSCI)*, where there is a low representation of Spanish journals. In this context, the ESCI is a way to alleviate the deficient coverage of national journals, which present significant (emerging) scientific trends and progress. This

makes them eligible to be indexed in the *SSCI* or in *Arts & Humanities (AHCI)* (Ruiz- Pérez & Jiménez-Contreras, 2020). This theoretical functioning of the ESCI as a "journal incubator" was well received by the scientific community, despite not having, as was expected, been able to include journals in the *premium* collections.

This situation has meant that Spanish scientific education journals have seen an unprecedented evolution in the past twenty years. Firstly, they adopted the necessary formal and technical indicators (which were more focused on the form than on the content) typical of international scientific journals (Diestro et al., 2017). Secondly, complete attention was given to the impact, rather than other ways of assessing quality, thus responding to the criteria for assessing scientific productivity emanating from the CNEAI (ANECA) and the systems of recruitment and promotion of teaching staff. In short, the impact factor became the cornerstone of the science evaluation system (Delgado López-Cózar, 2017).

We are still far from having other national (Dialnet Metrics, MIAR or the FECYT Quality Seal) or international (Google Scholar Metrics or the new almetrics) metrics that are recognised at the same level as the "big two" databases, to obtain a positive evaluation for research period applications or accreditations. In turn, *Clarivate Analytics* developed the *Journal Citation Indicator (JCI),* which includes the ESCI and AHCI, introducing another wider metric that complements its famous JIF impact indicator. *SCOPUS* created *CiteScore,* which is easier to calculate and is more regularly updated than the SJR. In short, it is a true spiral of metrics that generate different ways of measuring the same reality: the impact of research. However, the criticism about the use of these rankings for the evaluation of researchers is increasing, as indicated in the DORA statement.

The effects of Spanish scientific and university policy on the production and dissemination of knowledge and in the professional development of researchers

The *University Reform Act (LRU, 1983)* expressly recognised research as one of the key functions of university professors, considering for the first time its evaluation as a necessary link in the process of managing scientific activity (Cabezas-Clavijo & Torres-Salinas, 2014). From this point

onwards, the evaluation and recognition of university professors were centred primarily on the assessment of their scientific production, while teaching was consigned to second place, with well-known consequences. The evaluation and remuneration of individual scientific production were regulated by Royal Decree 1086/1989 (Art. 4.1), with this being the precursor of the current research periods or six-year periods established in the Order of 2 December 1994. The evaluation was managed by the *National Commission for the Evaluation of Research Activity (*CNEAI, 1989), an entity that, in 2015, was integrated into the *National Agency for Quality Assessment and Accreditation (ANECA)*. In short, the five best research contributions published over a period of six years by the person applying were evaluated. While initially the evaluation was created as a support for individual productivity, with the successive regulatory development, it has become an essential tool for the professional development of academics, given that the six-year period,

> ... entails benefits such as career advancement, access to positions of power and resources for research. However, it should be noted that the six-year periods do not measure excellence, but rather only research sufficiency. Mangas Martín (2011) states that the accumulation of the maximum number of periods should not be considered an indication of excellence, but rather, at most, it is an indicator of perseverance (Cabezas-Clavijo & Torres-Salinas, 2014, p. 15).

In accordance with these authors, in a first stage (1989-1995), the evaluation criteria for the research results were limited to generic guidelines: publications in books, articles or technical reports, among others, were considered valid contributions, without specifying their inclusion in databases or publication rankings. In a second stage, from 1996 to the present day, the increasingly exhaustive regulation of quality criteria in each field of knowledge began. Specifically, "Education" was included in "Field 7 - Social, Political, Behavioural and Education Sciences", which consisted of a broad spectrum of knowledge areas. In this context, the Resolution of 25 October 2005 was published, which specified the criteria for recognising the quality of research contributions, outlining that only research articles would be evaluated and there would only be consideration of their inclusion in the two citation indexes (*Social Science Citation Index* and *Science Citation Index*), whose tool for calculating impact is the *Journal Citation* Reports (JCR), which is a reference for

measuring the quality of journals. The first direct reference to the field of "Education Sciences" appears in this Resolution.

The university community, especially in the field of social and legal sciences and, within this, in the field of education sciences, has been critical of the criteria required for the positive evaluation of research activity, both for its insufficient objectivity and transparency and for not responding differentially to the context of each field of knowledge, especially in broad fields such as the one that included education sciences (Field 7):

> It is shown that the criteria are not particularly specific and there is no objective scale that can be referenced when evaluating the merits provided by the applicants. This situation leads to an enormous failure rate in absolute terms and in comparison with other areas (Galán & Zych, 2011).

The Resolution of 14 November 2018 brought with it a new subfield 7.2, with more clearly defined criteria and its own evaluation committee for education.

This economic productivity incentive progressively became a key indicator for the professional development of university professors (affecting academic career progression or limiting the teaching load of productive researchers, among others). Moreover, the decision to prioritise the scientific articles indexed in exclusive international databases determined both the content and methodologies of the research and the form of publication. Although initially, for the awarding of a six-year period, articles from journals indexed in different national and international databases were valued, these journals must now be included in one of the databases from which the reference impact indices are calculated: *Clarivate Analytics' Journal Citation Reports (WoS)* and *Elsevier's Scimago Journal Rank (SCOPUS).* Likewise, the indexing demand has increased over the years in such a way that the contributions must be published in journals positioned in the first or second quartile of the aforementioned databases, the result of which has led quantitative objectivity to become the reference for evaluation (Cabezas-Clavijo & Torres-Salinas, 2014).

The evaluation and its criteria have undoubtedly managed to orientate and increase scientific production and the internationalisation of Spanish research, with there being a greater presence in international databases and, of course, they have also resulted in an enormous effort being made to improve Spanish scientific journals in education. However, this evalu-

ation policy has also had a negative effect on the overall recognition of the work of university professors as prestigious national databases have not been considered or have ceased to exist due to a lack of funding, or because the Quality Seal awarded by the *FECYT* has not been sufficiently valued, not to mention the comparatively lower impact for the professional development of other important tasks such as disciplinary study, teaching and academic management (Torrado & Duque-Galvache, 2023).

This situation has led to there being an obsession from the beginning of an individual's academic career to publish solely and quickly in the type of journals that ensure professional promotion, such as those indexed in the first quartiles (Repiso, Merino-Arribas & Cabezas-Clavijo, 2021), which in turn has led to an increase in malpractice. We are referring to relegating the creation of teaching resources, yielding to topics and research methods that are prioritised in certain journals with the resulting disregard for problems and methodologies that are relevant to research in education and in the Spanish context, even accepting the "economic tax" of certain well-indexed journals to accept manuscripts. In short, these are practices that are derived from policies that erroneously make significant inferences, in which the quality of an article is assumed almost exclusively on the basis of the journal that publishes it, which is not always a correct assumption, as can be seen further in this present study with the number of citations received by some articles or their transfer. In other words, this logic results in a greater value being put on the form rather than the content, since the evaluation is centred on the journal rather than on the article itself, which happens due to trust being placed in peer reviews, in journal indexing procedures, in the editorial policy of the journals and in the ethical behaviour of all the agents involved, although this trust is not shared by all.

> "When medium (publishing) becomes an end in itself, when research is considered to be publishing, it is normal that individuals end up publishing for the sake of publishing..., or they suffer for the sake of publishing, which is much worse given all the undesirable effects that this culture entails" (Delgado López-Cozar & Martín-Martín, 2022, pp. 24-25).

In this line, and irrespective of what is regulated in other fields, it must be recognised that the *Draft Law on the University System* (*LOSU*, 2022) attempts to foresee and correct these biases to begin to evaluate databases

specific to the Spanish science system, identify quality indicators for the content of the published articles and highlight the importance of knowledge transfer in scientific production. Moreover, it is only fair to recognise the significant and effective effort that the editorial teams of Spanish scientific journals in education made over the years to achieve the quality indicators required and select the most specialised reviewers, which has led to, despite the scarce human and financial resources, an increase of interest for the context and their competitiveness in the national and international context and being indexed in the most recognised databases.

Scientific journals in education in the Spanish context

A particular characteristic of scientific journals in the field of education is diversity in the areas which constitute it. An example of this is the fact that many journals include, as part of their field of study, disciplines from other fields. As such, using the 2020 list of Spanish education journals positioned in the Scimago SJR ranking as a reference, the '*Education*' area includes publications that share this field of education with other thematic areas, such as *Arts and Humanities, Business, Computer Science, Health Professions, Mathematics, Medicine, Psychology and Social Sciences.* Of the 67 Spanish journals indexed in 2020, only 26.87% adhere exclusively to the '*Education*' category, while the remaining 73.13% incorporate 2 or more categories (Figure II). These data show the thematic dispersion or breadth of education journals, showing the complexity, complementarity, and richness of the education sciences. There are specific journals pertaining to the field of education, however, many others share it as a secondary category. Examples of this diversity can be seen with titles such as *Monografías de Traducción e Interpretación, Intangible Capital, Revista Internacional de Estudios Ingleses* and *Siglo Cero,* all of which are indexed in the *Education* category in SCOPUS but have their main area of knowledge in Literature, Economics, English Philology or Intellectual Disability. This dispersion has led us to focus our analysis on the journals that are declared as exclusively being in the 'Education' category in selective international databases.

As shown in Figure III, the emergence of Spanish scientific journals in education began in 1980. Scientific production in education moved from being centripetal and regional to expanding beyond Spanish borders and

FIGURE II. Percentage distribution of Spanish education journals by number of thematic categories
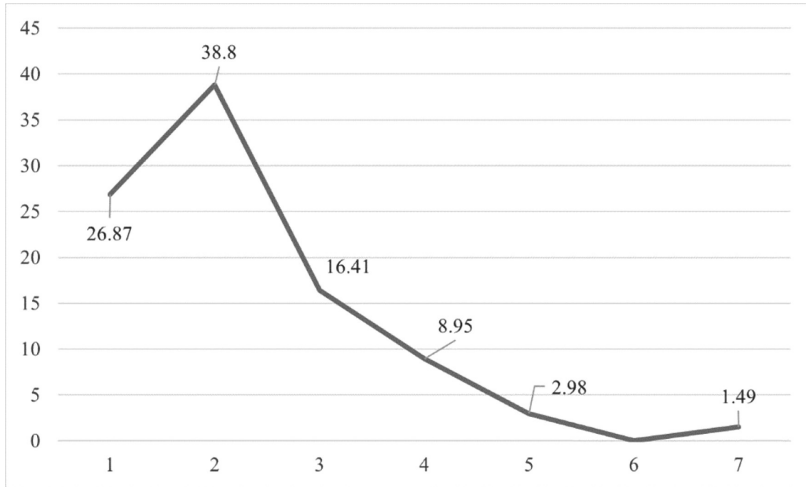
Note. Own contribution using the Scimago Journal Rank (2020).

FIGURE III. Evolution of the number of newly published scientific journals in education in the Spanish context
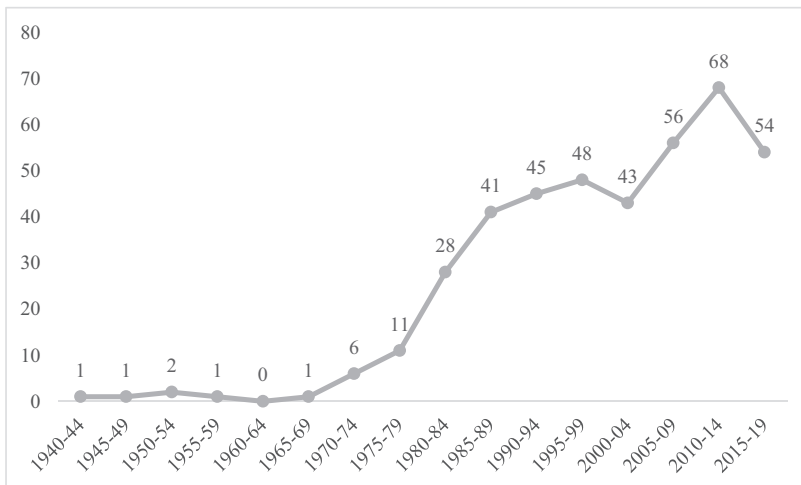
Note. Own contribution from the Directorio Latindex (2022).

cooperating with other sciences, which is positive. The number of works published in English is also increasing, with the number of authors per article and the number of international collaborations also increasing, from 40.99% in 2011 to 52.68% in 2020. The percentage of papers having only one author decreased from 26.40% in 2011 to 16.31% in 2020, while the percentage of national collaboration remained at 32% (IUNE Observatory, 2022).

This increase, which has been occurring since 1980, can be attributed to several reasons: the diversity of specialities in the field of education and the creation of scientific associations and societies with their own journals; the mass access to university studies, which brought the increase of teaching and research staff with it; the approval of the University Reform Act (1983), which led to the creation of new universities, both public and private, in all the Autonomous Communities, with new Faculties of Education starting their own local journals; the high demand to publish, as a result of the strengthening of the evaluation culture for teaching and research staff; the boom of the internet and, in particular, that of the Open Access movement, which facilitates the publication of these publications - eliminating printing and distribution costs on paper - and, in particular, their dissemination and accessibility. However, according to Díaz Nosty (2017), it is worth questioning whether the current number of journals and the constant appearance of new ones is excessive and unsustainable.

Despite the effort made by editors, not all journals are able to make their way into international databases. This is due, among other reasons, to the high number of scientific journals that exist at the global level. The thematic specialisation of each journal also has an effect, which in many cases is either already covered by other journals, or has a difficult-to-predict impact when the content is only of interest to those academics from certain communities and regions, which makes it extremely difficult to attract citations from researchers outside these communities and regions. Language is another difficulty for internationalisation since many countries still have limitations that prevent them from publishing in English or translating their manuscripts and journals do not have the financial resources to publish bilingual works. In addition to all this is the lack of professionalisation and funding in publishing management, which is one of the biggest challenges for the future, alongside the professional recognition of publishers, who often combine their work with teaching, research, and university management.

This has led to Spanish journals having quickly joined the Open Access movement and offering their content for free online. In addition to the fact that access to knowledge is understood as a right in a learning society, open-access content allows for access and thus the potential for increased citation. In this regard, there are interesting data: of the 67 Spanish scientific journals in education included in SCOPUS in 2020, 60 (89.55%) offer their content in open access. However, of the 769 European journals in education, only 217 (28.22%) do so. This disparity leads us to reflect on the "business model" that exists in the dissemination of science at the international level.

Methodology

In order to analyse the evolution of educational scientific journals in a key decade (2011-2020), a search in the SCOPUS database [November 2022] was carried out, given that it contains a greater number of Spanish scientific journals in education, using the following criteria:

- Firstly, the selection of journals was limited to those that were only indexed in the *Education* category, discarding journals that are also present in other categories.

- Secondly, the time period analysed was limited to the period between 2011-2020. Therefore, only those journals that were indexed in Scopus in 2011 and continued to be indexed in 2020 were considered, to provide a reasonably long period of time and complete data.

- Thirdly, the journals were filtered by "type of document", with only articles being considered. Other documents such as editorials or reviews were excluded.

Eight source journals that meet the above criteria were identified: *Educación XX1, Enseñanza de las Ciencias, Estudios Sobre Educación, Revista Complutense de Educación, Revista de Educación, Revista Española de Pedagogía, Teoría de la Educación* and *RELIEVE*. These eight journals published a total of 2340 articles for the period under study. The eight journals are analysed below in accordance with a set of indicators: institutional affiliation, evolution of impact and international collabora-

tion, as well as the articles published in them in this period (distribution by year and by journal, language, authors' origin, funding, keywords and citation).

Results: radiography of the scientific contribution of education journals (2011 - 2020)

Analysis of journals by indicator

Seven of the eight journals are edited by universities (Autonomous University of Barcelona, Complutense University of Madrid, University of Granada, International University of La Rioja, University of Navarra, National Distance Education University and University of Salamanca), except for the *Revista de Educación*, which is published by the Ministry of Education and Vocational Training. Figure IV shows the SJR indicator values, which measure the scientific influence of journals through the number of citations received and the importance or prestige of the journals from which said citations are provided. A clear positive trend can be seen for the set of data, especially for *Educación XX1* and *Revista de Educación*.

This same trend can be seen in the different quartiles that the journals occupy. Figure V shows that since 2016 there has been an increased presence in Q2, which has led to a shift away from the bottom quartile (Q4).

Moreover, it is noteworthy that four of the eight journals were indexed in 2011 in JCR's SSCI and continue to be indexed today (*Educación XX1, Enseñanza de las Ciencias, Revista de Educación* and *Revista Española de Pedagogía*), with an impact index that has also shown a positive evolution.

Regarding the levels of international contribution, Table 1 shows a positive trend for most articles coming from other countries (especially from Latin America, specifically Chile, Mexico and Colombia). This progress can be noted from 2016 onwards, with the journals *Enseñanza de las Ciencias* and *Estudios sobre Educación* standing out in this indicator.

FIGURE IV. Evolution of the impact of Spanish journals in the SJR Education category (2011 - 2020)
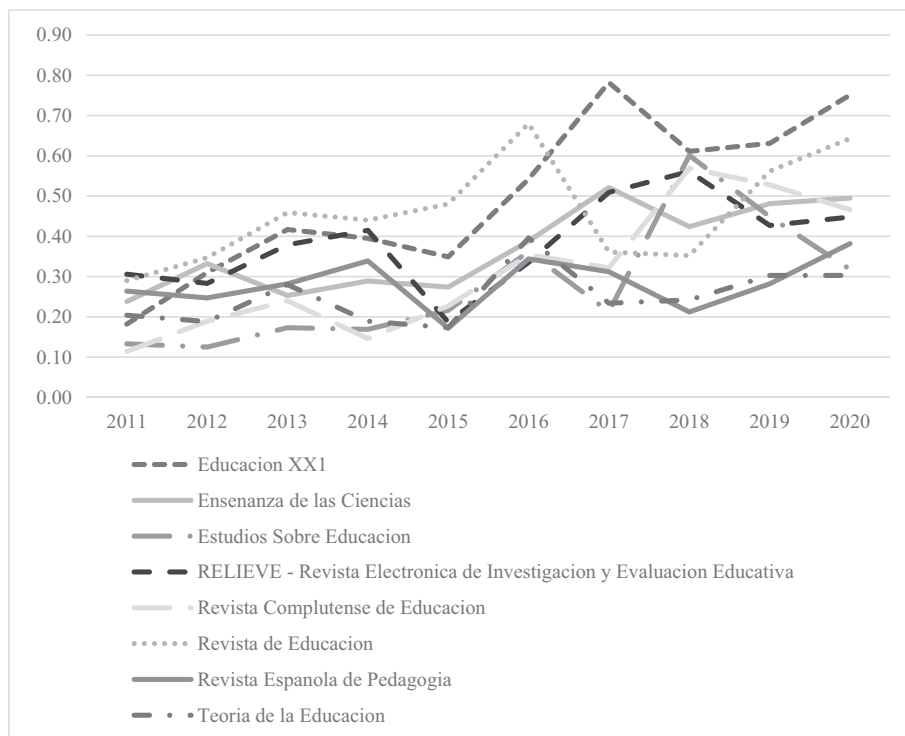
Note. Own contribution using the Scimago Journal Rank (2022).

TABLE I. Evolution of international authorship

Journal / year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Educación XXI	0	11.11	8	17.65	11.43	5.71	10.26	11.32	13.33	12.5
Enseñanza de las Ciencias	15.63	7.69	11.63	12.33	21.57	21.88	15.15	22.58	16.13	19.35
Estudios sobre Educación	4.76	4.76	14.29	5	0	21.05	16.67	16	10.53	19.23
RELIEVE	0	0	21.43	0	16.67	11.76	9.09	18.18	0	11.11
Revista Complutense de Educación	0	8.33	0	8	12.73	5.97	6.58	12.99	3.03	12.77
Revista de Educación	3.85	5.36	3.96	6.52	2.94	9.09	19.44	17.65	17.86	2.78
Revista Española de Pedagogía	0	0	0	0	0	11.54	14.29	11.54	11.54	4.17
Teoría de la Educación	7.14	5.88	10	4.55	0	4.76	3.33	10.71	5.56	13.04

Note. Own contribution using the Scimago Journal Rank (2022).

FIGURE V. Evolution in the quartiles of Spanish education journals in SJR
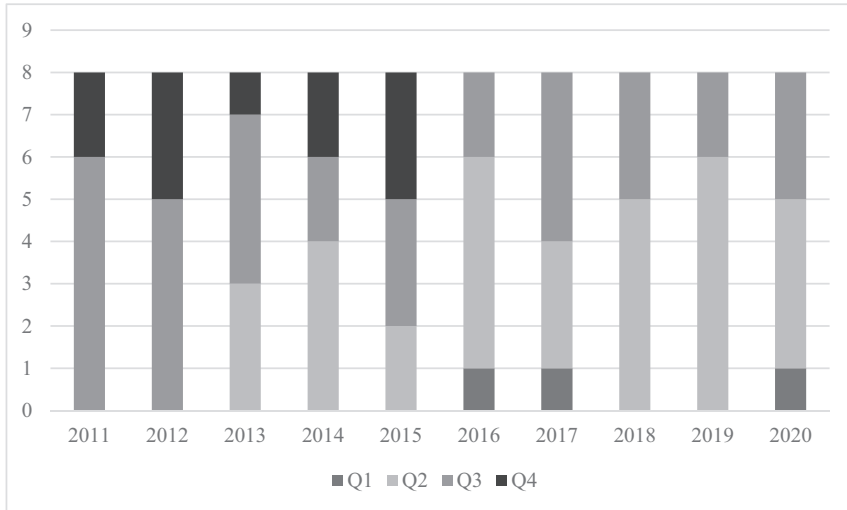
Note. Own contribution using the Scimago Journal Rank (2022).

Analysis of articles

Between 2011 and 2020, the eight journals published a total of 2340 articles that, when analysed by year, show the stability of the production, with between 200 and 250 articles being published per year, except for 2013, in which a journal published an extraordinary number of more than 60 articles, which was an increase of more than 40% (Figure VI).

Moreover, the distribution of articles per journal was rather heterogenous, with the journals with the most works being *Revista Complutense de Educación*, with 465, and *Revista de Educación*, with 460, while *Teoría de la Educación* published 186, and *RELIEVE* published 149, making them, comparatively, the journals with the least articles published.

Regarding language, 1432 articles were published in Spanish, 568 articles in a bilingual Spanish-English edition (a growing trend in recent years), 330 articles were published in English and 10 articles in other European languages.

The institutions to which the authors were attached were mostly based in Spain (n=1982), although also other countries such as Chile (n=94), Mexico (n=89), Colombia (n=58) and the United States (n=55) were also

FIGURE VI. Number of articles published every year between 2011-2020
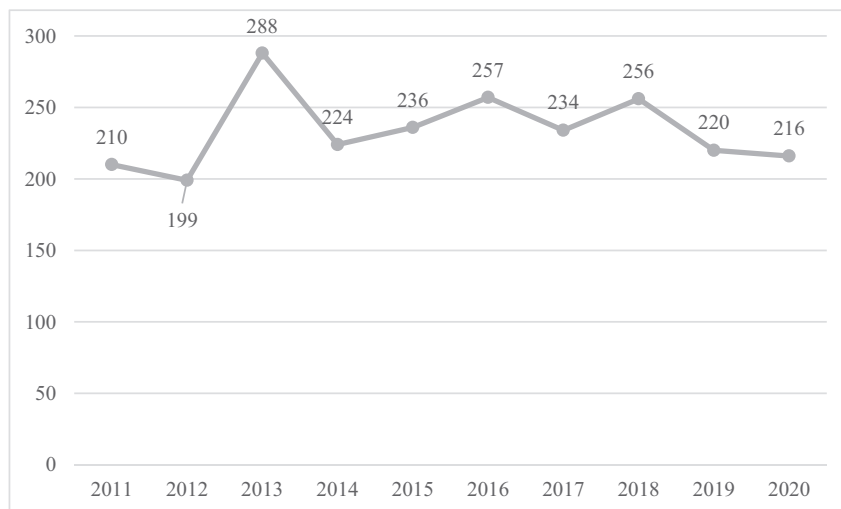
Note. Own contribution using the Scimago Journal Rank (2022).

found. The origin of the authors was very diverse: those from universities such as Complutense University of Madrid (n=172), University of Valencia (n=138), University of Seville (n=133), National Distance Education University (128), University of Granada (n=120) and Autonomous University of Barcelona (n=105) stand out.

Another interesting result is that only 179 articles (7.64%), which is a particularly low figure, formally stated the institution funding the research (among which the Ministry of Economy and Competitiveness stands out, followed by the Ministry of Education, Culture and Sport and the Ministry of Science, Innovation and Universities, as well as other institutions such as the European Regional Development Fund, the State Research Agency and the Spanish Federation of Rare Diseases).

To identify the content, the keywords selected by the authors to tag their articles were analysed. For the 2340 articles, a total of 5790 descriptors were included, of which *higher education (237), secondary education (128), education (120), primary education (87)* and *university (63)*, stand out. From this, it can be deduced, firstly, that the educational stage in which the study is carried out appears recurrently as a descriptor, with

higher education standing out in particular; and secondly, that generic descriptors such as *education* are widely used, which does not give the work any identity. Similarly, the lack of accuracy when generating keywords creates other problems such as the difficulty in retrieving the article and being cited. Moreover, 140 keywords that appeared in at least 10 articles were identified, contributing globally to the total with 3171 descriptors (54.76%). These descriptors were categorised through an inductive procedure supervised by two pairs of researchers, resulting in 16 categories, with 1 to 3 subcategories per category. Based on the most recurrent descriptors, themes such as *inclusion, citizenship and coexistence, educational assessment and school results, competences, teacher training and educational technology* were found to be predominant.

This analytic framework offers an important map to explore the reality of scientific production in the journals and years under study, which is shown in Figure VII by showing the analysis of co- occurrences between descriptors using the VOSviewer tool (Van Eck & Waltman, 2010). The prominence of the circles and texts in each cluster represents the strength of co-existence with the other keywords, while the distance between the elements and the lines shows the relationship and link between each keyword. Figure VIII shows the main keywords (larger size and higher frequency) and the ratio or distance of the nodes. With a threshold of 15 occurrences, we identified 79 keywords from the 5790 total occurrences, that is, 79 keywords appear at least 15 times. From these data, a total of 7 clusters were found (matching colour indicates grouping in the same cluster), showing the interrelation of predominant descriptors:

- *Higher education, university, competence, inclusive education* (yellow)

- *Education, learning, academic performance, gender* (red)

- *Secondary education, primary education, teacher training, ICT* (dark blue)

- *Educational research, educational policy, intercultural education, qualitative research* (green)

- *Assessment, PISA, evaluation, questionnaire* (purple)

- *Academic achievement, university students, mathematics* (orange)

- *Teachers, students, initial training, early childhood education* (light blue)

FIGURE VII. Keyword co-occurrence network by topic distribution
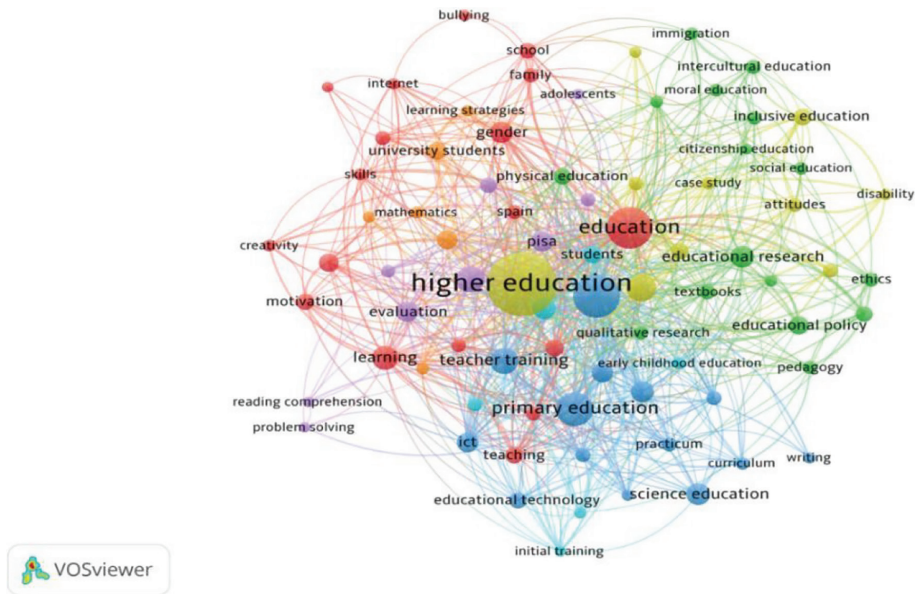
Note. Own contribution from the VOSViewer (2022).

Table II shows the 10 main keywords, including frequencies (occurrences) and link strength.

TABLE II. Main keyword co-occurrences of the publications under analysis

Keyword	Occurrence	Link Strength
Higher education	238	227
Secondary education	128	127
Education	120	111
Primary Education	87	90
University	63	83
Assessment	57	74
Learning	51	69
Teachers	44	68
Students	32	64
Educational innovation	42	54

Using an overlay visualisation, it can be noted that the highest correlations between descriptors were found between 2015 and 2016, with there being varying nuances (Figure VIII).

FIGURE VIII. Keyword co-occurrence network by trending topics over time

Note. Own contribution from the VOSViewer (2020).

Finally, an analysis of the citations referencing the articles was carried out. From the total 2340 articles, 258 (11%) received no citation and 72 (27%) of those not cited were published in 2019 and 2020. Considering that the period under study finished in 2020, it seems reasonable to assume the difficulty with being cited in such a short time, however, 139 of the articles that were not cited (54%) were published between 2011 and 2016. In contrast, we identified 557 articles with at least 10 citations and a total of 154 articles with more than 20 citations. An overall analysis of the most cited articles shows that Revista de Educación published 41 of the 100 most cited articles and, if we limit our consideration to the 20 most cited articles, this journal published 13, including research on higher education and, especially, on topics such as educational technology, teacher training and competences.

Discussion

Research in education in recent decades has unquestionably had a positive evolution, which is largely due to the efforts made by the public administrations, the European Commission, universities and the work of university professors, with the collaboration, in many cases, of schools, teachers and professionals from different sectors. It is clear that there has been an exponential increase in the number of scientific journals in education, as well as a new way of managing them. However, the consideration of articles as an almost unique reference for the evolution of research activity and the changes in how researchers disseminate research linked to professional development are also, without doubt, important factors. The aim of this study was to analyse the evolution of Spanish scientific journals in the field of education by using the 8 scientific journals indexed in Scopus between 2011 and 2020 in the category *Education*, as well as their 2340 articles, as a reference.

A positive evolution of these journals in terms of impact and indexation can be seen with the better position in the SJR quartiles in 2020 compared to 2011. The distribution of the articles by year was stable, even though there was variability in the number of papers published.

Moreover, the origin of the authors was mostly focused on Spanish university institutions. These results are in line with the study by Fernández-Cano and Fernández-Guerrero (2022) in their analysis of Spanish educational production in the SSCI in the period 2010-2020. However, in this study, which is framed by Scopus, international collaboration takes place mainly with Latin America, while Fernández-Cano and Fernández-Guerrero (2022) found that international collaboration happens mainly with the United States and England. In any case, the inclusion of the 8 journals analysed in international databases is far from the still limited participation of foreign authors in these publications.

Regarding the publication language, Spanish is the most frequent, although, in recent years, there has been a greater increase in the number of articles in English, which is mainly a result of bilingual Spanish-English editions and the introduction of XML language, which helps international dissemination. This trend can be said to have grown over the last decade when compared to the 4.64% of articles published in a language other than Spanish reported in the bibliometric analysis of Spanish education journals included in the JCR in the period 2001-2010 (Fuentes, Luque &

López-Gómez, 2012). The greater internationalisation that English provides may contrast with what Fejes and Nylander (2017) have called "*anglophone bias*". In other words, an anglophone bias in research may lead to notable situations, such as researchers from non-English-speaking countries publishing in English in journals edited in their countries, whose readers, paradoxically, are mostly non-English- speaking.

Another interesting result is that only 7.64% of the articles analysed formally state the funding source of their research, although the percentage of funded research could be higher if we were sure that all authors complied with the requirement to make this source explicit. However, this percentage is higher than the figure reported by Fuentes, Luque and López-Gómez (2012), which may indicate progress, whether that be in funding or the detailing of it.

The analysis of the keywords shows the concentration on seven major thematic groups, which is a particular contribution of this work. The analysis allows for the conclusion that more relevant and specific descriptors should be included in articles. Keywords such as *education, pedagogy,* and *research* are frequently used in the articles under study, despite them hardly providing the articles with any identity. Similarly, it seems important to also avoid using recently created or not very generalised terminology, unusual abbreviations and specific jargon (Uddin & Khan, 2016). The relevance of the descriptors, as well as the careful creation of the title and abstract, are essential for articles to be found by database search engines and for potential readers to reach them, ultimately increasing citation by other authors.

Finally, the percentage of articles that are not cited, excluding those in 2019 and 2020, is similar to those that have more than 20 citations, which shows that the impact of the journal may depend on citations that are concentrated in a handful of articles, which lead to the permanence and growing impact of these journals in the databases, despite the number of articles that do not receive any citations.

This study is not without limitations. Firstly, the study references a set of 8 articles that were selected using the criterion that they continued to be present in the Scopus education category between 2011 and 2020; it, therefore, offers a partial radiography, which restricts the generalisation of its results to the base, indicators and period studied. It is therefore advisable that research continue on this topic to be able to compare the results of other databases and widen the analysis indicators, using a

more extensive time frame. Secondly, the analysis of the research topics came from the keywords of the articles selected by the authors. However, it would be interesting to use other analytical approaches to better infer the content, such as text mining or machine learning.

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Educational Practices and Teaching Styles in Twentieth-century Spain. Reflections in the Revista de Educación

Prácticas escolares y estilos pedagógicos en la España del siglo XX. Reflejos en la Revista de Educación

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Abstract

Educational historiography over the last few decades, supported by the profound changes in the world of education, has focused its interest on the study of school as a social space that has been built with its own culture. The interplay of interactions between the three dimensions that make up this school culture (theory, rules and practices) has defined a set of beliefs, values, habits, ways of doing and organizing the processes that, together with the influence of socio-political contexts, explain the meaning reached by the school practices and teaching styles of each historical moment. In this cycle of more than half a century, the *Revista Nacional de Educación* (National Journal of Education, RNE), from January 1941, then under the title of *Revista de Educación* (Journal of Education, RE), from 1952 on, has been an important witness to the evolutionary genealogy of contemporary Spanish education, since not only has it only served to support and disseminate educational and cultural content, but has also played a prominent role in the generation of knowledge. The objective of the paper, in the context of the celebration of the 400th issue of the *Revista de Educación*, focuses on proposing a re-reading of the models of school practices and teaching styles developed in twentieth-century Spain, by looking at the pages of the *Revista*. It is a look outlined in two directions: on the one hand, school practices, together with teaching styles, leaving aside discourses and regulations, and on the other hand, being aware of the impossibility of exhausting the story of such an extensive period, it prioritizes a review of the key moments that are marked by the evolution of these teaching styles in the twentieth century.

Keywords: Education, school practices, teaching styles, Revista Nacional de Educación, Revista de Educación.

Resumen

La historiografía pedagógica de las últimas décadas, apoyada en los profundos cambios del mundo educativo, ha focalizado su interés en el estudio de la escuela como un espacio social que se construye con una cultura propia. El juego de interacciones entre la trilogía de dimensiones que conforman dicha cultura escolar (teorías, normas y prácticas) va concretando un conjunto de creencias, valores, hábitos, formas de hacer y organizar los procesos que, junto a la influencia de los contextos sociopolíticos, explican el significado alcanzado por las prácticas escolares y los estilos pedagógicos de cada momento histórico.

En este ciclo de más de medio siglo, la *Revista Nacional de Educación*, desde enero de 1941, y bajo la cabecera de *Revista de Educación*, desde 1952, se presenta como un testigo de excepción de la genealogía evolutiva de la educación española contemporánea, por cuanto no solo ha servido de soporte y difusión de contenidos educativos y culturales, sino que ha desempeñado un papel destacado en la generación de conocimiento. El objetivo del trabajo, enmarcado en la celebración del número 400 de la *Revista de Educación*, se centra en proponer una relectura de los modelos de prácticas escolares y estilos pedagógicos desarrollados en la España del siglo XX, desde una mirada a las páginas de la *Revista*; una mirada acotada en dos direcciones: por una parte, en las prácticas escolares, junto a los estilos pedagógicos, dejando al margen los discursos y las normativas; por otra, conscientes de la imposibilidad de agotar el relato de un periodo tan extenso, prioriza la revisión sobre los momentos clave que vienen marcados por el devenir de estos estilos pedagógicos del siglo XX.

Palabras clave: Educación, prácticas escolares, estilos pedagógicos, Revista Nacional de Educación, Revista de Educación.

Introduction

The educational historiography of recent decades, supported by the profound changes experienced in the world of education, has focused its interest on the study of school as a social space that has been built with its own culture, capable of reinterpreting the influence of exogenous factors and explaining much of the organization of its internal structure. The heuristic approach defined as "school culture" has been consolidated as a set of tools aimed at redirecting focus towards "the school inside" (López Martín, 2001), as a renewed dimension of hermeneutic analysis of the logic of its functioning. In this context, school practices, that compendium of interventions and didactic activities that surround the exercise of "teaching and learning", interdependent of the teaching style that gives

it its identity, is presented as the final embodiment of the whole process of the determination of the curriculum.

The practical work carried out in our schools is explained, in large part, by the interplay of interactions established between the dimensions through which school culture is configured: the account of pedagogical ideals marked by expert theoretical reflection, normative regulation and administrative prescriptions promoted by the managers of the system, and the reality of the school practices developed by teachers. The agreements and disagreements (Escolano, 2000), reconciliations and ruptures between the trilogy of official logic approaches (theory, rules and practices), have been building a set of beliefs, mentalities, values, habits, ways of doing and organizing the processes that, together with the influence of socio-political contexts, explain the meaning reached by the school practices and teaching styles at each historical moment.

If the arrival of the Franco dictatorship, after the Civil War of 1936, would bury the efforts made by the Republic to imbue school work with technical pedagogical principles, under the teaching style of an education inspired by the hope for school improvement, post-war national-Catholicism would appeal to religion and patriotism as the new central ideas of school life (Canales and Gómez, 2015). The appearance of the 1953 National Surveys, together with the first signs of political openness and economic recovery, was to start the path towards a technocratic teaching style, where school life is valued for its search for effectiveness and performance, clearly moving away from the ideological adaptation of the regime (Viñao, 2014). The end of the dictatorship and the arrival of democracy, specified in the 1978 Constitution, would understand school as a learning workshop at the service of democratic co-existence; a comprehensive school belonging to and for everyone. The coming to power of the Partido Socialista Obrero Español (Spanish Socialist Workers' Party, PSOE) moved towards the first major reform of our system, the Organic Law on the General Organization of the Education System, (LOGSE) in 1990, in which the cognitive teaching theories of constructivism would find their place, with a school model focused on the importance of cross-curricular values.

Furthermore, throughout this historical cycle of more than half a century of changes in models of school practices and teaching styles, the *Revista Nacional de Educación* (National Journal of Education, RNE), from January 1941, and under the title of *Revista de Educación* (Journal of Education, RE), from 1952 on, has been presented as a special witness

to the evolutionary genealogy of contemporary Spanish education, in that it has not only served to support and disseminate educational and cultural content, but has played an outstanding role in the generation of knowledge, in the aforementioned three dimensions of school culture.

The objective of this paper, in the context of the celebration of the 400th issue of the *Revista de Educación*, far from being a bibliometric study of its well documented contributions, inappropriate of the limits of an article of these characteristics and the real capacities of its author, is to focus on proposing a re-reading of the models of school practices and teaching styles in twentieth-century Spain, from looking at the pages of the *Revista.* It is a view outlined in two directions: on the one hand, limiting the focus to the thematic analysis of school practices, together with the teaching style that legitimizes them and leaving aside the discourses and regulation of the teaching guidelines, and, on the other hand, being aware of the impossibility of exhausting the story of such an extensive period of our history, it prioritizes the key moments or relevant historical milestones marked by the evolution of these teaching styles.

The post-war school. The National Journal of Education

The long-awaited end of the Civil War would give way to the birth of the "New State" framed in the context of deep economic precariousness and a necessary - for some - and unjust - for others - ideological cleansing. The school of National-Catholicism would make its way between *material poverty* and *spiritual abundance*, between the scarcity of means and resources for teaching, and the guiding of its ideological work towards the defense of patriotism and the Catholic religion, eliminating any liberal past from the previous Republican period (López Martín, 2017). The appeal to the enjoyment, playfulness or natural activity of the child, among other codes of the Republican school, had to be reversed, supplanted, by an education centered on the willpower, sacrifice, discipline, and ascetic life of the "new Spain."

The RNE (1941-1951), both in the content of its editorials and in the pieces published in the various sections in its structure[1], is a faithful wit-

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[1] During this first stage (1941-1951), with 103 issues published under the heading of the *National Journal of Education*, practically all of its sections show adherence to the principles of the regime: "Signs of the Falange", "Spanish Thought", "University", "Notes from Abroad", "Columns" and "Legislative Documentation" are, among the permanent ones, the most outstanding.

ness to the ideological context of Spain at the time. If the opening page of the first issue contained a full-page photograph of *El Caudillo* (The Leader), the second, under the same circumstances, would have that of José Antonio (Primo de Rivera). Moreover, the first issue, the "Carta della Scuola" (Letter on Education), an educational manifesto of Italian fascism, was published[2] and on the other hand, it was not until 1949 that we find one or various contributions by the minister himself, Ibáñez Martín[3], as opinion articles, beyond references to and praises of the speeches or acts related to the work of the ministry. Likewise, in this way of exalting the values of the "New Spain", it is important to highlight the selection of articles in the "Notes from Abroad" section focusing, preferentially on Italian culture and the education of German youth[4].

In the first issues in the *Revista*, the member of the Falangist party, Laín Entralgo, in an article dedicated to the Spanish Teaching Service (SEM), would echo the ideals of the new school: "Religion and the military," he writes, "are the only two complete and serious ways of understanding life"[5]. In the "Columns" section, under the title of "Escuela Azul" (Blue School), the task of schools is described:

> To take advantage of all schoolwork by giving it a deeply Catholic and national syndicalist sense and direction. To guide children, according to the style of our revolution, in such a way and with such intensity that their Catholic and national syndicalist training lasts until adulthood. To incorporate youth into our rich and original fatherland culture (…) To incorporate the meaning and value of the imperial destiny of our people into children's consciousness. To aim for the full and total spiritual,

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[2] Bottai, G. (Minister of Public Instruction, Italy), "Trabajo y trabajadores en la Carta de la Escuela", RNE, 1 (1941) 7-15.

[3] According to the theme at hand, among the most important: "El sentido político de la cultura en la hora presente", RNE, 22 (1942) 7-28; "Meditación ante el milenario de Castilla", RNE, 32-33 (1943) 7-31; "La nueva ley de protección escolar", RNE, 45 (1944) 7-15; "La lengua hispánica", RNE, 61 (1946) 9-17; "Símbolos hispánicos del Quijote", RNE, 74 (1947) 9-23 y 24-34; "El padre Suárez o la cultura peninsular del Siglo de Oro", RNE, 82 (1948) 11-31. In addition to the numerous speeches, he highlights his almost annual collaboration on the work of the Higher Council for Scientific Research.

[4] By way of example, Petersen, G., "La pedagogía en la Nueva Alemania", RNE, 1 (1941) 82-92; Romojaro, T., "Orientación y sentido de la educación alemana", RNE, 4 (1941) 95-99; "El Consejo Nacional de la Educación de las Ciencias y de las Artes de Italia", RNE, 14 (1942) 83-91 y "Los trabajos prácticos en la escuela en Italia", RNE, 16 (1942) 103-104. From minister himself, Ibáñez Martín, "La confluencia de las culturas germana e hispana", RNE, 6 (1941) 7-13, transcription of his speech at the opening of the Institute of German Culture.

[5] Laín Entralgo, P., "Educación del ímpetu. Revisión de un ensayo de Ortega y Gasset", RNE, 4 (1941) 7-26, citation taken from p. 16.

intellectual, and physical development of pupils (…) To keeping in mind the positive and negative characteristics of schoolchildren (know the child), taking advantage of them and exploiting them to achieve maximum performance"[6].

The new guidelines that would direct school practices are set out in the Primary Education Act 1945. The editorials of that year[7] praised the service of schools to "the Christian, patriotic and intellectual education of childhood", for which it had to "dig deep into our traditions for all the religious spirit that saturates the field of teaching in the best imperial centuries". In the words of the minister, in the face of "dark pedagogy and impiety", Spanish school "must be, above all, at the service of Religion and the Fatherland"[8]. School life, therefore, was marked by activities aimed at the training of the National and Catholic spirit: the "patriotic readings", which, as Onieva writes, are energizing since they "stir our consciences and keep the patriotic ideal tense"; the "commemorative lessons", which sought to exalt outstanding characters and moments of our history; the "historical story" by way of example, where discipline, sacrifice or respect for authority shine with their own light; the making of "wall-length posters" alluding to great episodes of the Spanish Empire; or the "class diaries", in which teachers and students had to reflect on what is happening in pious school life[9]. To all this, we must add, a series of practices and activities proposed by the Falange Movement, of a marked aesthetic nature, which complemented the educational work of the youth. These were more present during the first moments of the dictatorship and were not without friction between the different factions that made up the group in power.

The traditional absence of guidelines prescribed by the administration, from the very gestation of the education system - an unfulfilled promise restated in the 1945 Law, art. 38º-, made possible, in the best case, a school universe marked by a routine nature and textual dependence on the guild

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[6] RNE, 3 (1941) 109-112. References to work in schools are frequent, for example, Valls, M.R.D., "Una mañana en la escuela primaria española", RNE, 68 (1947) 61-64.

[7] RNE, 54 (1945) 5-9 and 55 (1945) 7-10.

[8] Ibáñez Martín, J. (1945), "Entorno a la nueva Ley de Enseñanza Primaria", RNE, 55, 11-34. The article includes the speech of the minister in the presentation of the text of the Law to the Courts.

[9] Laín Entralgo himself, in the article cited (see note 4) exhorts teachers to use stories based "on our beliefs in the Fatherland and in God", as well as "wall posters referring to the heroic and exemplary events of our Revolution". "The teacher", he writes in the conclusions of the article, "before the class arranged in view of the poster, should tell an exciting, enthusiastic story, in tune with our poetic style and with the soul of the child, about what is represented by it."

tradition of the teaching profession itself. The teaching profession, deprived of all methodological support, would entrust the practice of its office to the texts and encyclopedias of the time, together with the notebooks for the preparation of lessons, now obligatory since the Ministerial Order of 1939. Supplements in the professional press such as *Magisterium Español* (Spanish Magisterium), *Escuela Española* (Spanish School) or *Mandos* (Journal of the Youth Movement), where lessons are planned and set out to be applied in the classroom were published, becoming guides for practical activities.

A. Maíllo (Mainer and Mateos, 2011), a faithful contributor to the *Revista*, denounces the absence of the promised Surveys, which he describes as "an innovation worthy of all praise". The then Central Inspector of Teaching Practice understands that these Surveys must be completed "through Didactic Guides, published by the Ministry, which duly guide teachers in the development of the lessons and exercises indicated in the Guides, and which must then be given provincial nuances in the appropriate Programs"[10]. Methodological reflection undoubtedly already heralded a new stage in school practices and teaching styles.

The School of Technocratic Modernization. The *Revista de Educación*

In January 1952, the *Revista de Educación*, underwent a profound transformation, not only in its main title, but in its entire structure.

> "The *Revista Nacional de Educación* - as read in C. Lascaris'[11] column - has not been, until today, a journal of education, but rather, leaving aside its title, a cultural, literary, artistic magazine, etc., that has relegated the topic of education to the meager space given to current affairs, inaugurations, etc."

However, in the future, as its new permanent sections revealed[12] and the first editorial states, "it aims to cover the range of problems posed by Spanish education, not only from an organizational and administrative

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[10] Maíllo García, A., "Problems of Primary Education", RE, 3 (1952) 257-263.

[11] RE, 1 (1952) 66.

[12] The first would address relevant and current educational issues; the second, what happens abroad on education; the third important events in the educational field and legislative references; the fourth review of professional journals; the fifth news of interest in the Spanish press; finally, a section would alternate aimed at offering bibliographic information, with another aimed at foreign legislative texts (RE, 1, 1952, 7).

point of view but also from a didactic point of view". Undoubtedly, the *Revista* also criticizes the end of the post-war authoritative stage and the beginning of an initially timid opening process that, following political changes and new economic scenarios, would lead to the need to introduce criteria of pedagogical rationality into the school environment. The Church and the Movement would give way to science and technology to support the political legitimization of the regime; schools would now seek the effectiveness and performance of their processes, in a clear move from the ideological adaptation of Francoism (López Martín, 2005: 242-47).

In this "sepia-colored" Spain of "chiaroscuros", in other words, that was to take us from the black and white postwar to the colorful tones of the sixties, the new section "Education in Journals" is especially interesting[13], where "articles and studies published in Spain on topics of organization and politics of teaching" were brought together. Likewise, another novelty is the dedication of some editions published to specific topics, as monographs, from 1953 on.

> "*La Revista de Educación* - reads the editorial - has so far addressed teaching topics, which are its own subject, in a dispersed and unfocused way. With this issue, a different method is being tried: taking a discipline from the table of subjects and studying it from all points of view"[14].

The *National Surveys for Primary Education* (1953)*,* the first official document on school history in Spain that regulated teaching activities (Rodríguez Diéguez, 1990: 259), show us a faithful reflection of that time of chiaroscuro by incorporating more modern approaches into primary school, as a guide for school activity, where each lesson "must end with a series of activities or exercises", without this being an excessive criticism of the traditional models of past eras. They meant, in part, the possibility, which was not always exercised, as highlighted by A. Maíllo[15],

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[13] According to the first report that appeared in the issue that opens the new stage, the main specialized journals and professional press on first teaching analyzed for the development of this ranges of references are: *Atenea, Bordón, Consigna, El Magisterio Español, Escuela Española, Estudios Pedagógicos, Gerunda, Revista Española de Pedagogía* and *Revista de Pedagogía Española* (RE, 1, 1952, 69-75).

[14] RE, 10 (1953) 117. The first, on the occasion of the promulgation of the Law on Secondary Education of 1953, is dedicated to the teaching of philosophy.

[15] Maíllo, A., "Elaboración, elección y utilización de manuales en la escuela primaria" (Ginebra, 1959), RE, 109 (1960) 41-47. The text, included in the "Columns" section, is an account of his participation in the Geneva International Conference. Particularly interesting are his brief comments on Piaget's inaugural lecture.

co-author in the development of the Surveys, for the teacher to overcome dependence on manuals and encyclopedias or to move away from individualistic criteria based on experiential knowledge[16], when planning and executing his or her teaching work, now composed not only of instructional lessons ("pieces of the textbook to memorize" or "simple set of ideas to explain"), but of practical training activities[17].

This defense of the configuration of more active methods compared to verbal and memory teaching had a wide-reaching impact on the *Revista*, aimed at highlighting the need to specify the Surveys in school programs[18]. The teaching body is challenged on the need to use the development of the programs for each year, even for each school day, as a guarantee for the planning of activities. Fernández Huerta's definition should not be forgotten: "I understand by program the set of personal experiences that can and should be guided from school"[19]. The truth is that we find concrete evidence of the resistance to incorporating modern programming methodologies under the pretext, in Maíllo's words[20], of being foreign invasions: "The centers of interest," he writes, "the projects, the objective tests and the percentiles are instruments that pedagogical progress gives us and it would be stupid for us to deny ourselves them, using the excuse that they are not of national origin." Furthermore, in this work of promoting the teaching values of more active methodologies, of the effort of curricular rationalization, the *Revista* would pay special attention to its development in the small one-teacher schools[21], mainly in rural environments and still very numerous in the Spain at that time.

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[16] There are numerous pieces collected in the *Revista* on the dependence/comfort of the teaching body when it comes to entrusting the result of daily work to what is suggested by school manuals. Sanz Barrionuevo, H., "Libros y documentación en la enseñanza", RE, 72 (1958) 1, is an example. This author denounces the comfort of the teacher by becoming a simple "lesson-taker", which is a "plague of teaching, since the lesson is not given or taken: it is 'built' by the students in collaboration, guided, oriented and helped by the teacher".

[17] Dirección General de la Enseñanza Primaria (1953), *Cuestionarios Nacionales para la Enseñanza Primaria*, Madrid, Ministerio de Educación Nacional, "Introducción" (pp. 9-15).

[18] By way of example, Romero Marín, A. "El método activo en la enseñanza", RE, 106 (1959) 25-33.

[19] Fernández Huerta, J., "El programa escuela", RE, 102 (1959) 10-13 and 103 (1959) 37-41.

[20] Maíllo, A., "Los problemas de la educación popular (II)", RE, 12 (1953) 11-16, we cite p. 14. It is a series of 4 articles: (I), RE, 11 (1953) 256-261; (III), RE, 15 (1953) 13-17 and (IV), RE, 16 (1953) 83-87.

[21] Among other references, mention should be made of the Course on Complete Unitary Schools, developed under the direction of CEDODEP, in collaboration with UNESCO (Iglesias Marcelo, J., "Curso sobre Escuelas Unitarias Completas", RE, 116, 1960, 66-70). Of the more than a hundred interventions of pedagogical figures of the time (Mª. A. Galino, Raquel Payá, Fernández Huerta, Arturo de la Orden, Maíllo himself, López del Castillo, C. Borreguero, Esteban Villarejo, etc.), the *Revista* would collect a significant number of them.

In any case, clear signs of progress or technical-pedagogical rationalization cannot be denied: together with an increase in school attendance in Spain in the mid-fifties and sixties, promoted by the creation of the Central Board of School Constructions, in January 1957[22], we must cite the creation of the Didactic Orientation Center in 1954[23], the celebration of the First National Congress of Pedagogy[24], the re-establishment of the Centers of Pedagogical Collaboration (1957), the birth of the Documentation and Didactic Orientation Center of Primary Education, (CEDODEP) (1958), in charge of the "technical improvement of this level of teaching" or the publication of the journal *Vida Escolar*, as a means for the expression of administration and exchange of experiences among all schools in Spain[25].

This process of modernization would culminate in the sixties, under the technocratic pedagogical approach (Cuesta et al, 2011) which would have remarkable consequences in school practice: the use of the notion of "school year" as a measure for the distribution of school work times and global curricular strategy for the design of teaching objectives, according to Order 22-IV-1963, this would allow the ordering and rationalizing of the organization of school life; the establishment of the "Minimum Levels" to be achieved in each of the disciplines, according to the Resolution of 20.04.1964, with the design of knowledge, habits and skills, and would regulate the course years. Finally, the Primary Education Reform Law of 1965[26] would promote a school model that exalted the technical approach as a driver of effectiveness and performance[27], shifting the

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[22] It is a recurring theme; either in the section of "Columns" or in "Educational Current Affairs", there is no number that does not echo this theme. Overall, RE, 233-234 (1974), monograph "Construcciones Escolares".

[23] Among other references and presences of the Center in the *Revista*, it is worth highlighting: Maíllo, A., "Los Centros de Orientación Didáctica y el perfeccionamiento del Magisterio", RE, 131 (1961) 52-59, where he reviews his work as "one of the most qualified technical elements and advisors" of the Ministry.

[24] At this congress, Maíllo, A referred to., "Algunos males de nuestra pedagogía", RE, 30 (1955) 192-201

[25] The speech of the Minister to the Plenary of the National Council of Education offers details about these creations ("La Educación Nacional Española, 1957-1961", RE, 134, 1961, 60-69).

[26] The "Columns" section includes the speech of the Technical Secretary General of the Ministry of National Education in defense of the opinion of the National Commission on the reform of the law (Tena Artigas, A., "Reforma de la Enseñanza Primaria", RE, 177, 1966, 177-185). Also, the traditional annual report of the General Technical Secretariat of the Ministry can be seen, where the fundamental changes of the new legal provision are analyzed and exposed ("La Educación Nacional Española, 1965-1966", RE, 185, 1966, 95-106).

[27] From the sixties, the defense of the pedagogical technique as a lever of effectiveness and performance of our schoolchildren will be a constant in the pages of the *Revista*. Its outreach role will include the publication of works by advisors and education policy makers. A. Maíllo, once again, now as director

control of the educational system from the purely ideological to school results (Beltrán, 1991: 153).

However, it would be the publication of the new *Surveys in Primary Education*[28], 1965, the reform that would consolidate the curricular change; in the words of Rodríguez Diéguez (1990: 259), the model of didactic units would mean the most profound, perhaps disruptive, change in Spanish educational history, definitively abandoning the old concept of lesson as a curricular measure. The didactic units, mandatory for all public and private schools in Spain, were presented as "a collection of knowledge and instructional activities learned and carried out in schools around a central theme and of great significance and usefulness for the child".

The globalizing and interdisciplinary nature of the new curricular approach, not exempt from a certain covert ideology, as we say, would be supported by a whole arsenal of didactic tools, among which the "didactic guides" stand out. These would now mark the new rhythm of school work: the teacher would have an instrument (*Levels*) that specified the general provisions and objectives (*Surveys*) by years, marking the guidelines to follow for the correct organization of school work (*Programs*), with which his or her work must focus on the adaptation of these regulations to the specific reality of his or her classroom. "Setting objectives, determining activities and experiences, assigning teaching materials and resources, temporarily guiding learning and providing a system of evaluation", as A. de la Orden (1966: 13) writes, would be the teacher's tasks when drawing up the school program.

The ministry itself, through the Spanish Teaching Service (SEM), in a laudable attempt to seek the complicity of teachers as a guarantee of the success of the reform, would convene a teaching course in the summer of 1966, within the framework of the International University "Menéndez Pelayo", aimed at explaining the central points of the reform, with the participation of teaching specialists and technicians from the ministry, preferentially inspectors: J. M. Moreno, now director of CEDODEP, A.

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of CEDODEP, will be one of the most prolific. As an example, "Cuestiones actuales de educación y enseñanza", RE, 149 (1962) 114-118, or "La supervisión Escolar", RE, 179 (1966) 105-110 y 180 (1966) 12-18. Likewise, due to its importance in school issues, it is worth noting: De la Orden, A., "La promoción de los escolares en la Enseñanza Primaria. Situación actual y previsiones para el futuro", RE, 187 (1967) 33-37 and Rodríguez, Mª. L., "Cara y cruz de las novísimas técnicas didácticas", RE, 190 (1967) 63-68.

[28] *Cuestionarios Nacionales de Enseñanza Primaria* of 1965, in *Vida Escolar*, 70-71.

de la Orden, E. Lavara Gros, N. Jiménez, among others. As it could not be otherwise, the *Revista* would bring together a good number of these interventions, especially referring to the "globalized didactic units"[29].

These methodological innovations and didactic references, as we have written elsewhere (López Martín and Mayordomo, 1999: 41-103), would confirm a "pedagogical orientation that moved from the imperative search for militancy to the call for didactic effectiveness", from the dogmatic calls for school work focused on the "renationalization" of society to the insistent demand for the "rationalization" of school tasks, from a call to teachers as "generals of peace" to another that considers them cooperators in the development of a "peaceful and silent revolution".

Thus, this would precisely mean the general reform of our educational system, through minister Villar Palasí's General Law 14/1970 of Education[30]: a *revolution*, because not only did it involve the modernization of our school structures, but also the democratization of education, its public character, equal opportunities, school coexistence, comprehensive training, personalized education, tutorial orientation, educational performance and quality, creativity, continuous evaluation, and globalization of learning[31]. It was *peaceful*, since it did not involve an abrupt break with the regime, trying to make political authoritarianism compatible with the economic and social developments of the new times; and, in addition, *silent*, since it would subtly facilitate the transition to a democratic educational system. Puelles (1992: 24), in this sense, would give the description of "hybrid character" to the interplay of synergies between the traditional and the modern[32]; a reform "carried out from above, without democratic participation", in the purest regenerating style.

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[29] See the general chronicle of the course, in Abbot Asenjo, A., "Cuestionarios y Programas de Enseñanza Primaria", RE, 184 (1966) 54-58 and 185 (1966) 104-108.

[30] The minister himself would call the law a "peaceful and silent revolution." In his presentation of the bill to the Full Session of the Parliament he argues: "A law of peace. A law called to integrate Spaniards from the base, from school" (RE, 209, 1970, 29-34). In his speech to the Committee on Education, in this case on its application, he would again insist on it (RE, 218, 1971, 70-81).

[31] Most of these pedagogical principles were the subject of published works, and even monographic issues: "El CENIDE y las investigaciones sobre educación" (RE, 290, 1970); "Enseñanza individualizada y evaluación" (RE, 214, 1971); "Educación personalizada" (RE, 247, 1976); "Participación y democracia en la enseñanza" (RE, 252, 1977); "Constitución y educación" (RE, 253, 1977); "Educación y crisis económica" (RE, 261, 1979).

[32] The RE, on the occasion of its 20th anniversary, published an extraordinary issue (1992), "La Ley de Educación veinte años después", coordinated by A. Tiana, with the participation of a good number of specialists. Subsequently, on its 50th anniversary, it would do the same Historia y Memoria de la Educación, 14 (2021) and Cuestiones pedagógicas, 29 (2020), among others.

We are facing a change of epoch: social, economic, educational, and also political. The *Revista* added to that moment of changes, not only with a new image, including its logo, but with renewed intentions. "The new educational - as the 1969 editorial stated[33] - policy requires a renewed magazine that devoted preferential attention to the dissemination of the aims of the same, of its orientation and achievements, of the diverse opinions and criticisms that its conception and application arouses". A new stage for a new Spain, in which "the results of national and foreign educational research", the resources of modern technology, educational experimentation, "the application of new methods and didactic techniques or systems of organization and evaluation", would be, broadly speaking, the purposes of the *Revista*[34]. Moreover, we cannot ignore, perhaps the most decisive political principle: the *Revista* would echo the positions that were publicly supported on educational plans and problems "without excluding those that reflect criteria opposed to those that guide official action in this field." Subsequently, in a special edition in 1972, a new format would be released and these "opening principles" would be consolidated[35].

The new educational reform, with underlying teaching principles of undoubted value, responds to the debate waged with the publication of the Reform Project, submitted to public opinion through the "White Paper"[36]. A good number of the pages of the *Revista* of that year, 1969, are dedicated to the analysis of its content. Thus, the first issue, in its "Studies" section[37], transcribes the preamble of the minister and the second part of the book, the one addressing the proposals, leaving the first, the most extensive (a demolishing criticism, out of sync for the political moment they were going through), for the analysis of articles and collaborations. The appeal to modern technology, the use of audiovisual media, devices for teaching, self-instructive materials, the profound renewal of programs[38], among other aspects, were proposed for the improvement of classroom practices.

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[33] RE, 201 (1969) 5-6.

[34] Beyond studies and articles, numerous monographs would respond to these topics. "Nueva Tecnología Educativa" (RE, 263, 1980); "La administración del centro escolar" (RE, 266, 1981); "La orientación escolar" (RE, 270, 1982); "Innovación educativa" (RE, 286, 1988).

[35] RE, 1972, no. Extr., p. 3.

[36] La educación en España. Bases para una política educativa, Ministerio de Educación, Madrid, 1969.

[37] RE, 201 (1969) 7-35.

[38] The body of monographic studies would be dedicated to the provision of programs and curricula, guidelines generating the activities of centers, teachers and students, to the "internal metabolism of the

Until then, primary education and part of secondary education, was configured in the section of General Basic Education (EGB)[39], in levels of eight years of study - between 6 and 13 years -, divided into two stages - from 6 to 10, and then from 11 to 13 -, of a globalizing and formative nature in the first, with the moderate diversification of teaching in the second, in a commitment to an integrated and comprehensive school. The contents, on the other hand, were configured around large areas of learning, trying to avoid fragmentation in subjects. The curriculum approach of the *New Teaching Guidelines* was easy to implement: effective teaching consisted of formulating objectives (scientifically verifiable goals), exploiting means (dynamic and modern), developing activities consistent with the proposed goals, evaluating the results obtained and modifying the process according to the deviations detected[40]. The Tylerian approach to curriculum and pedagogy by objectives (Gimeno, 1982) would definitely take over the sense of practical work, which is the culmination of the techno-bureaucratic character of pedagogy. As Juvenal de Vega pointed out[41], the arduous enterprise into which the Ministry has launched itself has turned "pedagogy into politics and making politics a pedagogy".

The democratic school. A school belonging to everyone and for everyone

A few years ago, we published a research paper with this same title (López Martín, 2002), in which we tried to analyze how that "revolution" that the 1970 Law had supposed, together with the fall of the dictatorship and the change of political regime, would blur the technocratic character of teaching, to give way to a new context in which education

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system", as stated in the editorial, RE, 207-208 (1970) will dedicate the body of monographic studies. The basic programming criteria (Mª. A. Galino), the formulation of plans and programs (Evaluation Cabinet, Audiovisual Methods and Methods) and the taxonomy of education objectives (V. García Hoz) were analyzed among others.

[39] Buceta Facorro, L., "La nueva estructura educativa", RE, 214 (1971) 64-70.

[40] Ponce, F., "Jornada de trabajo sobre orientación de la EGB", RE, 212-213 (1970-1971) 102-107. The article is the chronicle of the days organized by the Ministry, in collaboration with the Inspection, Normal Schools and Institutes of Education Sciences, for the explanation of the new situation to the teaching body.

[41] De Vega, J., "El contenido de la nueva educación básica", RE, 202 (1969) 12-22.

would be understood as an instrument at the service of democratic coexistence, under the construction of a Social and Democratic Rule of Law. The 1978 Constitution was the definitive consolidation of the democratic approach: a school, now really, "belonging to everyone" and "for everyone". "Belonging to everyone", given that the active participation of the different sectors involved in the educational process is assumed, in an effort to democratize organizational structures; "for everyone", insofar as it is committed to sufficient investment to move towards a network of public, private and private state- subsidized centers, ensuring full schooling with decent levels of education quality.

This transition towards the full democratization of the educational system would also be reflected in the pages of the *Revista*. Since 1974 a "Classical Studies" section has been started, where articles by Giner, Costa, Posada and other *institutionistas,* preferentially published in the *Boletín de la Institución Libre de Eseñanza* (Bulletin of the Free Institution of Education, BILE) are printed, something unthinkable at other historical moments, leading to a special article dedicated to the *Institución Libre de Ensñanza* (Free Institution of Education, ILE), as a "tribute to the Institution, but also to all those who have dedicated their concern and their efforts to the advancement of education in Spain"[42]. The attempt toreconcile the "two Spains" was underway and the fact that this is reflected in our publication is more than evident.

In this context, it is essential to rethink the central points of a renewed school[43]: the validity of its knowledge ("what is taught"), the appropriateness of the methods ("how this is taught") and the values to be transmitted ("what is education for"). Although it is difficult to separate or change one without altering the others, the contents were the first to be modified. The *Renewed Programmes*[44] recognised that "rigidity in the criteria of automatic promotion of the student", confusion created by an "immoderate development of school manuals", excesses in the use of certain work techniques such as "worksheets"[45],

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[42] RE, 243 (1976), we cite p. 4.

[43] De la Orden, A., "La escuela en transición", RE, 266 (1981) 133-149. The article is inserted in a monograph, "La administración del centro escolar", especially interesting.

[44] "Documento Base de introducción a los Programas Renovados de la EGB", Vida Escolar, 206 (1981), 15-page supplement.

[45] This methodology will be widely accepted in the Revista. By way of example: Fernández, A., "La enseñanza individualizada en la EGB", RE, 221-222 (1972) 9-13 and Rodríguez Moreno, Mª. L., "Coordination trial between individualized and team teaching", RE, 223-224 (1972) 33-41.

or excessively broad formulation of objectives and contents, in addition to their indicative character,, among other aspects, had not produced the expected effects and, on the contrary, caused some disorientation in teaching staff.

There are three pillars of change that this reform introduced, although for some authors (Beltrán, 1991: 216) it would be nothing more than "a renewal of the curriculum": the configuration of the EGB (General Basic Education) into cycles, renewed Basic Reference Levels with greater structuring and degree of programming and the need to contemplate certain contents that respond to the current demands in society. The eight EGB courses established by the General Law were structured in three major cycles: initial (1st and 2nd), middle (3rd, 4th and 5th) and higher (6th, 7th and 8th), which meant a profound variation with respect to the previous curriculum organization; the reference levels, perhaps excessively rigid and hierarchical, would be parceled out into thematic blocks, programmed in operational objectives or scientifically verifiable goals. Finally, the constitutional concept of a school as a "practical citizenship workshop" required designing new content: education for democratic coexistence, for health, consumer training, care of the physical and social environment, road safety, or inclusion of new technologies, would be essential basic references to be integrated into the various areas of learning.

The coming to power of the Spanish Socialist Workers' Party (PSOE), in what some have understood as the end of the Transition, at least in its educational aspect, posed new challenges:

> "Modelling a public service of basic education in a way consistent with the specific configuration of what the school offers (…) Carrying out reforms in the educational system that would neutralize its function of reproducing social inequalities (...) Reforming methods and contents, programs and teaching methods" (Maravall, 1984: 6)

The 1983 Royal Decree on Compensatory Education and the Organic Law on the Right to Education (LODE, 1985) addressed these challenges. However, the global reform of the education system, the third in our history, became preferential objective. *The Education Reform Project. Proposal for debate*, a new *White Paper for the Reform of the Education*

System[46] would see the light in 1987, which would then become in 1989 specified in the Organic Law of General Organization of the Educational System (LOGSE), 3 October 1990. These were times of reform aimed at cementing the educational pillars of the 21st century.

The *Revista* in our opinion, would take a qualitative leap by adding to national writers international experts of recognized prestige in the field of teaching, curriculum theory or educational policy: I. F. Goodson, A. Chervel, H. Silver, A. Hargreaves, D. Hamilton or K. Freedman, among others. In any case, the *Revista* continued in its role as an active witness of the times, trying to generate knowledge, in this case, on the reform processes. Two monographs in 1990 on "General training, school knowledge and educational reform"[47], with authors such as N. Luhmann, R.E. Young, M. W. Apple, Th. S. Popkewitz, among others, is an example of this[48].

The LOGSE would bring with it the school model that we have called "school of values and transversality", under the constructivist parameters of the principles of *cognitive pedagogy*[49]. Comprehensiveness[50], as its banner, attention to diversity, teaching approaches focused on student learning, theories of constructivist alignment, meaningful learning, the development of skills and not objectives as a measure of school achievement, the autonomy of schools, quality discourse (the first law that dedicates a specific section to quality) and transversal issues would now be the pedagogical clothing of the new school (Bolívar and Rodríguez Diéguez, 2002). Judged as an ambitious law, it significantly reconfigured the structure of the education system, by extending compulsory education

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[46] MEC (1987), Proyecto para la Reforma de la Enseñanza. Educación Infantil, Primaria, Secundaria y Profesional. Proposal for debate, Madrid, Ministry of Education and Vocational Training (MEC); MEC (1989), Libro Blanco para la Reforma del Sistema Educativo, Madrid, MEC.

[47] RE, 291 and 292 (1990).

[48] We cannot forget, likewise, the monograph "La escuela como centro de cambio" (RE, 304, 1994) and, above all, the one dedicated to "Reformas educativas", under the coordination of A. Tiana and M. de Puelles (RE, 305, 1994); the first focused on the processes of change from micropolitics, to focus the second on the macro-reform of the educational system.

[49] Coll Salvador, C., "Acción, interacción y construcción del conocimiento en situaciones educativas", RE, 279 (1986) 9-23. The article is inserted in a monograph, "Desarrollo del niño en la escuela primaria", which includes the presentations of a "Pedagogical research workshop", within the framework of the "Project 8" of the Council of Europe on "Innovation in primary education".

[50] RE, 289 (1989), monograph "La enseñanza comprensiva y sus reformas", with a wide review of the situation in different European countries.

from 6 to 16 years, as a common training period, organized in a comprehensive and inclusive way, covering both primary education (6-12 years) and compulsory secondary education (ESO), at a new educational level (12-16 years), which brings to end the segregating double certification at the end of the EGB.

In addition to the areas of learning, beyond the contribution of the Autonomous Administrations and the centers themselves, by virtue of the decentralization of the curriculum designed in the Constitution[51], a series of "transversal issues" are highlighted, understood as a set of values and elements of attitudinal awareness that permeate all the content and objectives of the areas or disciplines in the curriculum, as cohesive central points of the teaching-learning processes in the Educational Projects of the Center[52]. The school, which had given collective responses (equal for all) based on the individual work of the teachers, was required, from the opposite point of view, to offer individualized responses from the collective work of the teaching teams. In any case, and despite a certain sense of failure in the carrying out of the reform whose theoretical and normative proposals had moved too far away from the empirical culture of the school, the LOGSE showed that schools cannot ignore the axiological formation of a series of values and attitudinal contents proper to and necessary for the performance of the personal and social life of citizens in the democracies of the twenty-first century.

A twenty-first century in which the *Revista* will continue to play its role as an active witness, the analysis of which will have to be the subject of further work.

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[51] RE, 299 (1992), monograph "Decentralization and evaluation of educational systems".

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Contribution of scientific journals to the construction of teacher training policies in Portugal

Contribución de las revistas científicas a la construcción de políticas de formación para el profesorado en Portugal

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Abstract

Scientific journals are instruments for disseminating advances in knowledge both to the academic community and to society. The results collected in these publications have to be transferred to society through a dialogue between experts, politicians and society. Based on the importance of scientific journals on the dissemination of educational topics, the aim of this work is to verify whether these journals over the period 2011-2021 have published articles on policies and practices of teacher training and development in the educational levels of Basic Education and Secondary Education in Portugal. To achieve this objective, a mixed methodology was chosen starting from a sample of 672 articles collected in journals oriented to the study of Educational Sciences in Portugal, which are in the *Scopus* database within the field of Educational Sciences in Portugal. These will be *Revista Portuguesa de Educação* (Q4) and *Revista Lusófona de Educação* (Q3). From the analysis carried out, it was

possible to note the scarcity of publications focused on the subject under study, which translates into 46 articles, or 6.8%. In the *Revista Portuguesa de Educação* there is a greater diversity of topics, covering both teacher training and teacher development, while the *Revista Lusófona de Educação* includes studies oriented to teacher training. In this line, it is concluded that there is still a need for more studies focused on teachers at these educational levels, reaching their application both to educational institutions and to the development of stable and effective working mechanisms that can transfer such knowledge, orienting it to educational policies. However, although the production is insufficient, the relevance of these publications in terms of their contribution to the improvement of teaching practice is remarkable.

Keywords: Education policy, teacher training, teacher development, scientific journals, knowledge transfer.

Resumen

Las revistas científicas son instrumentos para dar a conocer el avance del conocimiento tanto a la comunidad académica como a la sociedad. Los resultados recogidos en estas publicaciones tienen que ser transferidos a la sociedad a partir de un diálogo entre los expertos, los políticos y la sociedad. Partiendo de la importancia de las revistas científicas sobre divulgación de temáticas educativas, el objetivo de este trabajo es verificar si estas revistas a lo largo del periodo 2011-2021 han publicado artículos sobre políticas y prácticas de formación y desarrollo docente en los niveles educativos de Enseñanza Básica y Enseñanza Secundaria en Portugal. Para alcanzar este objetivo se optó por una metodología mixta partiendo de una muestra de 672 artículos recogidos en revistas orientadas al estudio de las Ciencias de la Educación en Portugal, que se encuentran en la base de datos de *Scopus* dentro del ámbito de las Ciencias de la Educación en Portugal. Estas serán *Revista Portuguesa de Educação* (Q4) y *Revista Lusófona de Educação* (Q3). Del análisis efectuado, se pudo constatar la escasez de publicaciones centradas en la temática objeto de estudio, lo que se traduce en 46 artículos, un 6.8%. En la *Revista Portuguesa de Educação* existe una mayor diversidad de temáticas abarcando tanto la formación como el desarrollo docente, mientras que la *Revista Lusófona de Educação* recoge estudios orientados a la formación de profesores. En esta línea se concluye que, todavía se necesitan estudios más centrados en el profesorado de estos niveles educativos, alcanzando su aplicación tanto a las instituciones educativas como al desarrollo de mecanismos de trabajo estables y eficaces que puedan transferir dicho conocimiento orientándolo a las políticas educativas. No obstante, aunque la producción sea insuficiente, la relevancia de estas publicaciones en cuanto a su contribución para la mejora de la praxis docente es destacable.

Palabras clave: Políticas educativas, formación docente, desarrollo docente, revistas científicas, transferencia del conocimiento.

Introduction

Globalization has meant a real revolution in the traditional forms of scientific communication because of the rise in the digitalization process we are going through and we are a part of. In this sense, society gets access to information by the Internet, seeking for immediate results (Perales-Palacios et al, 2017; Prada et al., 2022). Such immediacy will condition the access to information. The analytical work, the discussion and the critical reflection are sometimes eroded by the culture of the immediacy we all live with. Scientific publications are even more and more published in digital format and they are spread through websites and social media (LeTendre et al., 2018; Baker & Connolly, 2018), which extends the reading and discussion of knowledge to the educational community (LeTendre et al., 2018).

These turbulent changes have conditioned the way science is perceived, forcing it to be fast, used for a specific time and space and updated so that the research is not exceeded or outdated (LeTendre et al., 2018). Not everything which is transmitted to society should be considered as science, hence the responsible for the scientific divulgation magazines must exhaustively and rigorously fulfil standards of quality, on the basis that they are a non-restricted instrument to share results, and they can influence in order to stablish limits in a specific area of knowledge as well as creating the researcher's identity (LeTendre et al., 2018; Baker & Connolly, 2018).

Standards are translated into indicators of qualitative typology created by businesses and public institutions to elaborate rankings of publications, such as the *Scholarly Publishers Indicators* (SPI), promoted by the research group ILIA, which belongs to the Center of Scientific Research of Spain. Such ranking is used to assess the quality of the work of national and international editorials, especially within the field of Social Sciences and Humanities (Grupo de Investigación ILIA, 2022).

With respect to the articles, there are international rankings, for instance, the *Web of Science* (WOS) databases ones, which are currently under the direction of the Clarivate Analytics enterprise. Such enterprise, through the *Journal Citation Reports* (JCR), collects the magazines which have been positively evaluated, mainly due to their *impact factor* in terms of the number of times the manuscripts are referenced in other work (Ruiz & Valero, 2018). Other magazines that, despite being relevant,

have not had such impact in the scientific community, are excluded. The *Journal Citation Indicator* (JCI) consequently arose in 2021 to agglutinate the magazines which had not been elected by the JCR (Clarivate Analytics, 2021).

In this way, *Scopus*, from the Elsevier editorial, also has the *Scimago Journal & Country Rank,* where the number of quotes of any type of publication without considering their inclusion in this editorial is calculated. Thus, it covers a higher number of editorials (Elsevier, 2020; Scimago, 2022).

Such enterprises have conditioned the progression of teaching and researching professional (Perales-Palacios et al., 2017, Ruiz & Valero, 2018). This factor conditions the progression of the teaching and research careers (Perales-Palacios et al., 2017; Ruiz &Valero, 2018). In this line of thought, a big part of the manuscripts is published in English (Ordorika, 2018), and scientific publications written in different languages are not considered (Ordorika, 2018). This is an obstacle for the scientific community, which is idealistically considered globalized. However, it is necessary to keep on advancing so the knowledge can reach everywhere, and to avoid that research work can get restricted to the academic field (LeTendre, et al, 2018).

Also, the quotes assessed by independent evaluation committees for university professors, postdoctoral scholarships and researching projects depend on these bibliometric markers (Delgado & Fernández-Llera, 2012; Perales-Palacios et al., 2017; Ruiz & Valero, 2018), without the possibility to consider allometric indicators such as *Almetric.com, Facebook, Google Scholar, Mendeley, Plumx or Twitter* (Ortega, 2020). Another challenge is how to frame this knowledge within public politics, which means surpassing the disciplinar knowledge to legislation by boosting communication among the scientific community and the political parties, with the aim of correcting social inequality (Baker & Connolly, 2018).

Regarding the top education science magazines in Portugal, there are two magazines which are currently indexed in the prestigious *Scimago Journal & Country Rank* indicator: One of them is the *Revista Lusófona* de *Educação* magazine, founded in 2003 and sponsored by the Centro de Estudos Interdisciplinares em Educação e Desenvolvimento (CEIED) centre, which depends on the Education Institute at the Lusofona University of Lisbon, and accepts work from Education Sciences and other similar knowledge areas. Just like the *Revista Portuguesa de Educação*

magazine, it is highly consolidated, since its first number was launched in 1988, and it is sponsored by the Education Institute at the Minho University, and their orientations match. In this sense, it is necessary to highlight that there is a great diversity of published topics, with special relevance of teacher training and their professional development, as analysed above.

Teacher training and development education policies at Basic Education and Secondary Education stages in Portugal

The teacher training policies have been studied by several authors and international institutions such as the UNESCO, which, on the Delors report (1996), devoted the chapter 7 to the teachers, since their role is relevant for the students' educational processes regarding their future and to motivate them to use rigorous practices in a constantly changing globalised world. In this sense, Novoa (2009) would affirm that the 20th century is the teachers' century, putting them in the focus of education. In the same line, Thompson (2021) makes also reference to the importance of teachers to build up sustainable and inclusive societies, so this one must be an attractive and recognised profession that works with the most innovative and involved ones. In this sense, teacher training at all educational stages will be essential to improve the competence level of these professionals of education.

Initial training

There are two documents which were decisive and emblematic when it comes to talk about the initial teacher training in Portugal during the period 2011 and 2021. Hence, the Decreto-Lei 43/2007, de 22 de fevereiro (complimented by the Decreto-Lei 220/2009, de 8 de setembro) is considered as a hit, since it starts the restructuring of the initial training, derived from the exigences brought by the Bologna process.

It is noteworthy that as of the application of this legal disposition, the professional qualification for teaching turned into a master's degree, and the learning model was reorganised into two educational tiers (bache-

lor's degree and professional master's degree for teaching), for all educational tiers. In the case of Preschool education and of the first and second tier, it will be considered as a generalist and transversal training which starts with the bachelor's degree in Basic Education, as well as a master's degree in the respective area (Bonifácio & Ibraimo, 2021).

For the rest of the teaching levels, this requirement consisted of the appropriate bachelor's degree and master's degree for the respective education areas. The number of credits required was estimated according to the training received. This educational model was associated with the general professional profile (Decreto-Lei nº 240/2001, de 30 de agosto) of educators and childhood and of Basic Teaching and Secondary Teaching, which listed some common reference points for professional training, regardless of the educational level in which each person wanted to get certified and that mentioned four formative dimensions:

> i) Professional, social and ethical dimension; ii) Development of teaching and learning dimension; iii) Professional development through life dimension; iv) Participation in the school and relationship with the community dimension (pp. 5569-5572)[1].

In this document, apart from the contents and their respective programs, the planning of courses in initial training should be included. In the preamble the importance of a solid training of teachers from public, private and cooperative teaching was highlighted, explaining that

> the challenge of Portuguese teachers' training asks for a quality teaching staff, increasingly better qualified (…) the new attribution and accreditation system for teaching places value on the knowledge strands, the practical argument of teaching in researching and the practical professional initiation. Furthermore, the mastery of oral and written skills in Portuguese as common criteria to train teachers is required (…) such assessment translates into the definition of the required credits, not only for the training of the teacher of the discipline but also for the general teachers, both as a requirement to access the masters, the qualitative adequacy of these credits[2], the responsibilities of the teaching (pp. 1320-1321)[3].

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[1] Original translation by the authors.

[2] The credits aimed at facilitating the comparison of programmes and titles within the European context. Each credit corresponds on average to 25-30 hours of student work.

[3] Original translation by the authors.

Afterwards, the Decreto-Lei 79/20014, de 14 de maio decree derogates the earlier legislation and highlights as general principles the need to foster the qualification of teachers' training and intends to:

- ■ Restructure the two-cycle education model (degree and master's degree)

- ■ Increase the duration of the second cycle of studies.

- ■ Deepening of knowledge in scientific areas

- ■ Require the mastery of oral and written skills in Portuguese language and the fundamental rules of logic argumentation and critical thinking.

It is relevant to emphasise the importance of increasing the general level of teachers' training, since

> It tends to have a measurable and very significative effect on the quality of the education system (…) the depth of teachers' knowledge on the specific topics they teach has a great influence in their autonomy and self-esteem in the class, which translates into a higher quality of students' learning process (pp. 2819- 2820)[4].

Apparently, structural changes had not been made in this new training model, that is, it was supposed to maintain the accumulative requirement of the bachelor's degree and the master's degree in education for the access to the teaching profession. However, changes in teaching and didactic area, in which structural changes were defined, became evident. Moreover, an increase in the number of credits for such knowledge was established, especially in the master's degree in pre-school education and in first-cycle teaching (which requires 60-90 credits) and the master's degree which enables for both pre-school education and first-cycle education (which requires 90-120 credits). The reading of the title still shows big differences in terms of the training hours within general education, with a minimum of 6 credits for all education levels, except for the third cycle of Basic Education and Secondary Education, where the requirement changes to 18 credits, which, in practice, translates into many training hours. Overall, training for teachers with the requirements shown in the following chart was established.

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[4] Original translation by the authors.

TABLE I. Formational requirement of professional master's degrees for teachers

MASTER'S COURSES					
Master's degree	**Number of credits**	**General educational area**	**Specific didactics**	**Teaching area**	**Monitored teaching practice**
Pre-school Education	90	≥ 6 credits	≥ 24 credits	≥ 6 credits	≥ 39 credits
1 stage of Basic Education	90	≥ 6 credits	≥ 21 credits	≥ 18 credits	≥ 32 credits
Pre-school Education and 1 stage of Basic Education	120	≥ 6 credits	≥ 36 credits	≥ 18 credits	≥ 48 credits
1 and 2 stages of Basic Education	120	≥ 6 credits	≥ 30 credits	≥ 27 credits	≥ 48 credits
3 stage of Basic Education and Secondary Education	120	≥ 18 credits	≥ 30 credits	≥ 18 credits	≥ 42 credits

Source: Compiled by author starting from the Decreto-Lei 79/2014, p. 282 decree.

Continued training

According to the Legal Framework for Teachers' Continuous Professional Development set out in the Decreto-Lei nº 22/2014, de 11 de fevereiro decree, as well as in other subsequent legislative documents, this teaching modality aims at improving the quality of the teacher development of active practitioners, by focusing on the identified priorities in educational centres, and it is closely tied to the objectives stated by educational policies.

In such cases, article 5 lists the following continued training areas:

> Teaching area, that is, those knowledge fields which are curricular subjects at different educational levels; b) Pedagogical and teaching approaches, that is, training in the field of classroom organization and management; c) General pedagogical training and educational organizations; d) School management and educational management; e) School management, coordination and supervision; f)Ethical and deontological training; g) Information and communication technologies applied to specific didactic or to school management (p. 1287)[5].

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[5] Original translation by the authors.

These training fields can be implemented based on the modalities provided by article 6, namely: a) Training courses; b) Training workshops; c) Study circles; d) Short-term actions (p.1287).

It is important to point out the assessment of the teaching development, which intends to facilitate the progression of teaching careers, and demands that "the continued training component should be at least 50% focused on the scientifical and pedagogical dimension, and at least four fifths of such training should be accredited by the "CCPFC"[6] (p. 1288).

Professional teacher development

Educational policies defined by the different European governments are, as a rule, coherent with the idea of increasing the teaching level and the students' learning. In the case of Portugal, the Ministry of Education has tried to fit this design by doing different legislative changes and, because of that, two changes in the model of initial teacher training have been produced in less than ten years, arguing that

> The best practices and the wide amount of research and international data collected on this subject matter show the importance of initial teacher training and its need to be very exigent, especially in terms of knowledge of the subjects of the teaching area and their respective didactics[7] (Decreto-Lei 79/2014, p. 2819).

In order to recognise the importance of this training stage, it is equally important that professional development combines several personal and professional factors (continued training, conditions and environment in the work context, career progression, the construction of the professional identity, ethical and deontological dispositions, social recognition, etc). Therefore, the teaching profession is full of exigences (scientifical, pedagogical, human, institutional and social ones), and this is also compound by the fact that world has recently focused on the dependence of teachers and education systems (Thompson,2021).

Overall, it can be said that the professional development included the previously mentioned aspects, but also the teachers' commitment as

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[6] Conselho Científico-Pedagógico da Formação Continua.

[7] Original translation by the authors.

relevant actors in the generation of knowledge and the continuous update of their knowledge. This explains the relevance of scientifical publications, whether because of the reflection and the knowledge that allow its reading, or because of the civic participation of teachers as authors and builders of their profession. Thus, the analysis of the main publications in Portugal aims at verifying the scientific production concerning teacher training.

Objectives

These five magazines appear on the last *Scimago Journal & Country Rank* (SJR) indicator, from April 2022, when the variables "Education" and "Portugal" are chosen: *Análise Psicológica* (Q4) *Currículo sem Fronteiras* (Q3), *Boletim de Estudos Clássicos* (Q4), *Revista Lusófona de Educação* (Q3), *Revista Portuguesa de Educação* (Q4). Nonetheless, there is no transversality of studies based on Sciences of Education in the three first publications. In the case of the first one, despite there is a Portuguese flag on the indicator, when the website of the magazine is consulted, one can see that its editors are the *Associação Brasileira de Currículo* association, whereas the other two are focused on General Psychology and on Educational Psychology, as well as on Didactics and History of Greco-Roman World.

In this sense, the *Revista Portuguesa* de *Educação* and the *Revista Lusófona de Educação* magazines were chosen. Both are two referential publications within the Portuguese educational environment, since they currently appear on the *Scimago Journal & Country Rank* indicator.

This general objective was broken down into the following specific objectives:

- To identify the numbers or volumes and to verify the number of publications related to teacher training and development in that period.

- To compare the frequency of publication of articles on the subject matter in both publications.

- To analyse and interpret the topics that have emerged in the published numbers.

- To value their relevance in the published numbers of the magazines depending on their content.

Method

Sample

The *Revista Portuguesa* de *Educação* has published a total of 253 articles from 2011 to 2021, whereas the *Revista Lusófona de Educação* has published a total of 419. On the first, 14 (5.5%) were articles related to training, including basic training, continued training, as well as thematic areas focused on the teaching development in Basic Teaching and Secondary Teaching levels, with a total of 32 articles (5.5) published in the *Revista Lusófona de Educação* magazine. However, together both magazines featured a total number of 672 articles, from which 46 (6.8%) were focused on the subject matter. This fact is translated into a weak monitoring on the thematic fields of current teachers' training and professional development policies of teachers in Portugal.

Instruments

The already-mentioned magazines, indexed in the database of *Scopus*, were the main sources of this research. Hence their relevance to study different education themes which approached the curriculum, the methodologies, experiences in the class, education models from both national and international scene, highlighting mainly articles from Brazil, Spain and Portugal.

Among the different contents, the focus was set on the policies and practices of teacher training and development at Basic Teaching and Secondary Teaching levels in the luse country during the last decade, by analysing the main themes and the interest on the frequency of articles published by the academic community.

Process

The procedure was set by searching at the "Online knowledge Library", promoted by the Technology and Science Foundation, which is under the Government of Portugal. This research resulted in finding magazines such as the *Revista Portuguesa de Pedagogia, Educação, Sociedade &*

Cultura, Revista Portuguesa de Investigação Educacional, Análise Psicológica, Currículo sem Fronteiras, Boletim de Estudos Clássicos, Revista Portuguesa de Educação and *Revista Lusófona de Educação*. The last two magazines, indexed in Scopus, assessed in the *Scimago Journal & Country Rank* indicator, transversally disseminate thematic areas grouped under the headings of Sciences of Education and are edited by Portuguese universities.

After this process, we started to analyse the publications of the *Revista Portuguesa de Educação* e *Lusófona de Educação* magazine during the period 2011-2021, putting the focus on the study of the titles, key words, and the body of the text in order to study the training and teaching development through the first years of the 21st century. To do this we opted by a mixed methodology, both qualitative and quantitative. A detailed picture was built up to classify the total number of articles as well as the number of published volumes or numbers of manuscripts on the subject matter. Then, we classified the type of work, both systematic revisions and empirical work, as well as a comparison of the frequency of the publication of works through graphs which were created with Microsoft Excel 365. Consequently, a quantitative analysis of the topics of the articles and the bibliography collected was carried out.

Results

The results were detailed in different tables and graphs. In this sense, an individual analytic chart with a sample and an array of percentages was created for each magazine in order to justify an analytic chart and an analytic chart and a graph with a sample and a group of percentages which were used for presenting the number of published articles of the subject matter with respect to the total number of articles in each of the volumes/numbers and the comparison in both magazines. The chart I shows that the *Revista Portuguesa de Educação* magazine had a flux of intermittent publications related to both teacher training and development themes. As can be seen, 14 of 253 articles are related to the subject matter, that is, the 5.5.%. The other 253 articles published news related to other topics, being the period 2012-2014 the longest period without publications related to politics and current teacher training practices in basic and secondary education. On the other hand, the number of published

works by volume were just minor, with only two articles in each of them. Therefore, there were no substantial works, nor a frequent publication related to teaching in basic and secondary education in Portugal during the given period.

Regarding the research approach, this could consist of systematic revisions or empirical works, with an outstanding diversity in the subject matter. These were focused in the specialized formation of the respective areas of knowledge (Fernandes et al., 2019), as well as in the supervised areas (Caires, et al., 2011; Pais-Vieira, et al., 2021) and the relationship between the teachers and the future teachers with the aim of thinking about them to build up their professional identity (Alves et al., 2017). This can entail that teachers take a leadership role along their career as researchers and innovators, or that put their knowledge into practice, inferring in their students' training (Campos, 2016).

On the other hand, we put the focus on the emotional education among teachers and learners during compulsory education (Cadima et al., 2011), by giving teachers training strategies so they get feedback and improve their work in the class (Fonseca et al., 2015). This gives attention to students' and families' educational needs, fosters communication among teachers (Silva & Silva, 2015). Furthermore, teachers are both mediators and administrators of the educational curriculum. According to their experience, they have different ways to develop it (Ribeiro & Santos 2011) and give meaning to the strategies employed to improve the learning of the students (Dias, 2011). In this sense, an important factor can be the teaching performance evaluation to think about their learning practices in terms of curricular organization, students' learning, or their relationship with families (Alves et al., 2018). In this sense, this evaluation can help us to help detect strengths and weaknesses that guide the teaching work, not as a manager but as a leader for the school community to deliver the school objectives, being an element that helps his development in the profession (Almeida et al., 2018).

Last, the magazine was a space for articles where early-retired teachers review their professional career and reflect on the changes in school practices that result from generational transformation and educational policies (Furtado & Medeiros, 2019; Thomas & Lopes, 2021).

All out, despite the different contributions, the magazine has not undertaken any monographic on teacher training and education profession which considered the educational practices and policies to build up

new approaches and perspectives to transfer them from manuscripts to Portuguese school overview until 2021.

In relation to Table II, corresponding to the *Revista Lusófona de Educação magazine,* a total number of 419 works have been analyzed, from which 7.6% referred to the subject matter. Overall, 32 works have been focused on teaching, learning and development. The rest of the articles, 387, have been focused on a wide range of topics such as education inclusion, teaching ethics, compared education or teacher training within higher education sphere.

TABLE II. Total score and percentages of articles from the magazine about the subject matter

REVISTA PORTUGUESA DE EDUCAÇÃO MAGAZINE			
	Total number of articles	**Teacher training and development**	**%**
2011	18	4	22%
2012	20	0	0%
2013	23	0	0%
2014	14	0	0%
2015	21	2	9.5%
2016	28	1	3.5%
2017	20	1	5.0%
2018	26	2	7.6%
2019	24	2	8.3%
2020	30	0	0%
2021	29	2	6.8%
Total	253	14	5.5%

Source: Compiled by author.

The teacher training and development issue has been addressed from different approaches and thematic areas. Teaching leadership in relation to the quality of the student learning, among other topics, has been discussed (Rodrigues & Silva, 2015). On the other hand, in evaluation, we could observe the academic treatment of teachers' qualification and supervision by means of research that shows how the most motivated teachers tend to develop second-cycle studies within superior teaching (Castro, et al., 2012). We could see studies focused on knowing the teach-

ers' level of competence and their perceptions in relation to the education inclusiveness at secondary education level (Costa & Sanchez, 2016) Articles are remarkable. Teaching competences are analyzed bearing in mind the teaching career development within the context of a globalized world (Conceição & Sousa, 2012). Others will deal with teacher training since the adaptation to Bologna process, by analysing the creation of masters which aim at training future teachers and thus getting the consequent professional accreditation (Fernandes & Conceição, 2013). With a special focus on the education context, Pinto et al. (2018) approaches the problems for the intervention and interpersonal mediation for the education community from an experience developed in one of the basic education schools of the centre of Portugal. In this line and putting value on the practical dimension of teaching function, Candeias (2020) deals with the education perspective of the training process in the context of formal education.

TABLE III. Total score and percentages of articles of the magazine on the subject matter

	REVISTA LUSÓFONA DE EDUCAÇÃO MAGAZINE		
	Total number of articles	**Teacher training and development**	**%**
2011	28	4	12.5%
2012	28	4	11.1%
2013	28	3	18.18%
2014	31	3	20%
2015	19	1	5.2%
2016	34	5	9%
2017	46	4	16.6%
2018	58	0	0%
2019	56	2	9%
2020	46	3	18.18%
2021	45	1	2.2%
Total	419	32	7.6%

Source: Compiled by author.

GRAPH I. Comparative evolution of published articles on the subject matter
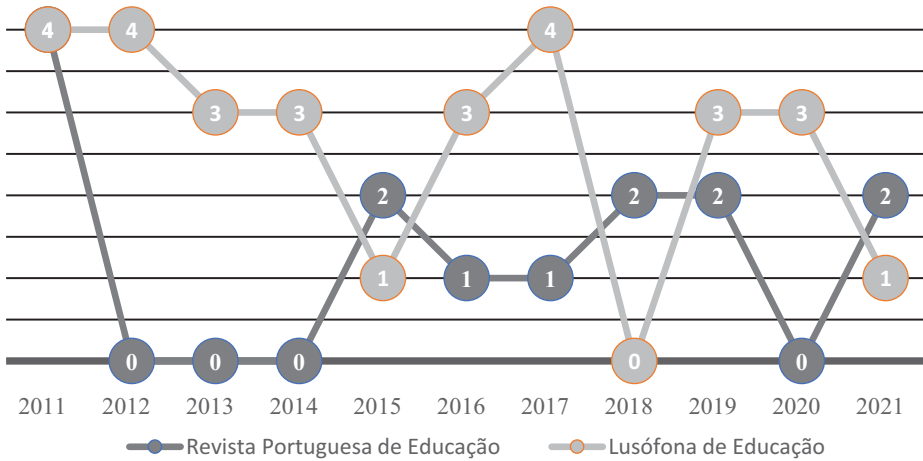
Source: Compiled by author.

Debate

This research was focused on knowing if high-impact education magazines in Portugal had gathered scientific production about teacher training and work from 2011 to 2021. In this sense, the results revealed a scarce publication on this subject. Considering the results obtained, the *Revista Portuguesa de Educação* magazine had a discontinuous publication through time. There is no evidence of this type of publications in 2012, 2013, 2014 and 2020. Nonetheless, the number of articles published per year is lower than the whole number of articles, with no increase in terms of new knowledge production. The number of new articles remains stable over time. With respect to the quality of the publications, it can be highlighted that it embraces both teacher training and development, articulated through systematic revisions, but also through training and professional experiences in education centres. Therefore, although there is a small number of articles on the subject matter of this work, there is a huge variety of published work on the topic.

In relation with the *Revista Lusófona de Educação* magazine, the presence of contributions related with the subject matter has been relatively constant, except in 2018. In general terms, the *Revista Lusófona de Educação* magazine has been a relevant means of scientific dissemination which has embraced a huge amount of high-impact scientific publications. In the same way, its number has helped the projection and puts in value teacher training, and it opens the door to publications with great originality.

In comparative terms, the *Revista Lusófona de Educação* magazine collects more articles on teaching than the *Revista Portuguesa de Educação* one. This is due to the periodicity and frequency of the publication of the volumes/numbers, 4 per year by the former and 2 by the latter, except in 2018, when three articles were published in the special edition of the 30 years of the magazine. That said, with respect to the contents, the *Lusófona de Educação* magazine was focused on the publication of articles on training, while the *Revista Portuguesa de Educação* one was more versatile and published both teacher training and teaching work articles. With all, the total number of articles of both magazines is 672, and the number of articles related to the subject matter is 46, which is translated into 6.8%, that is, a lower production of topics related to the training and work in basic education and secondary education within the Portuguese education context.

It is important to highlight that this scientific production, from the ideas of LeTendre et al. (2018) and Baker & Conolly (2018), cannot remain within the academic context, that is, it must be a useful product both for the advance of the Education Sciences and to improve the legislative reforms, since education is a fundamental right for the whole citizenship, committed with social progress. For this reason, an education on values and knowledge must exist. In this sense, the education administration must consider the aforementioned knowledge, which emerges from real-life school scenarios and that must not be circumscribed to experts' discussion, but establish a communication among scientific, politic and educative spheres. (Viñao, 2002; LeTendre, 2017; LeTendre et al., 2018; Baker & Conolly, 2018; Pattier & Olmos, 2021). Some work, such as that of Roca et al (2020) has been done in this connection, with the aim of intensifying the permeability of scientific evidence at different education levels.

Teaching work will be determined by a *coditio sine qua non* relationship for researching. Such relationship, as stated by Farley-Ripple et al.

(2018), must be stably and reciprocally linked. This way, a continuous flux between scientific knowledge and educational reforms will be generated. It will be necessary to state guidelines that operationalize this scientific knowledge to face up the educational challenges of the school of the 21st century, such as bullying, digital methodologies, communication between school and family, the adaptation of the curriculum to the international education standards or school management, which are just a few of the issues that should be questioned in education forums in order to improve them. To this effect, all the ongoing research should aim at improving the education policies.

In this line of thought, along this text we have tried to explore the interest in teacher training shown by the presence of manuscripts which contribute to the advance of evidence-based knowledge (Pattier & Olmos, 2021). Consequently, we have tried to clarify if these magazines are useful to promote education policies that guide the professional career and, this way, give them the value this type of magazines must have to be considered in the elaboration of education laws as well as in their application in different contexts.

It cannot be ignored that there is high-quality content in both magazines but, despite the articles showing real-life experiences in different contexts, there is still much work to be done to increase the level of knowledge transfer to education policies. In this sense, it is important that the results of these publications are spread among the educational community, so they are considered, with the subsequent improvement of teacher training and teaching work in Portugal. For that matter, despite so far this article was sent there was evidence of a monographic of June 2022 that revolved around the empirical work of teachers through Portuguese and Ibero-American experiences on the *Revista Portuguesa de Educação* magazine, it would be recommendable that these high-impact education magazines carried out specific monographics on these issues. This would give visibility to empirical research focused on the subject matter in local contexts. Such spread would take huge relevance if it was developed through hypermedia channels with social and political scope. The final goal would be to know the innovative teaching practices that have been crucial in the education process of students, as well as to analyse tutor-family relationships, school convenience in the class, peer communication, their work in the class or the bureaucratization in the application of education legislation. But it is also important to assess

their teaching career by analysing the educational and political changes and their adjustment to school context. In sum, it involves putting in value the knowledge learnt at university from a practical point of view in terms of their impact in the improvement of teaching and learning processes.

Conclusions

The research has revealed a lack of scientific production of the subject matter in both analysed magazines from the theoretical and educational field, although it must be pointed out that such assessment must be carefully gathered, since such magazines are circumscribed to a specific context and a restricted subject.

Although the production can be interpreted as sterile, the thematic diversity in the analysed manuscripts can be proved, with a continued presence in the chronological sequence of numbers. Such a sequence of numbers allows one to have a global view of the contributions.

This reality reveals the need for counting with the involvement of other implied agents belonging to the university field, the Administration, and the teachers. Universities, as teacher training institutions, must readapt their education plannings to guarantee the transfer of the knowledge to the graduate students. It is necessary that university teachers stimulate their students to research by implementing active methodologies on the researching-action paradigm. In this line, the educational Administration must assist the legal development of plans which consider the transference of the knowledge, making them flexible to the social chances of current times and with future perspectives. Teachers must be incentivized with the aim of strengthening their role as researchers and disseminators of their teaching practices to contribute to a system of knowledge networks.

The limitations of the research were the reduced number of magazines indexed in the *Scimago Journal & Country Rank* (SJR) indicator, but also to know the reasons why the editors did not promote monographic volumes on this topic. On the other hand, the influence of this scientific production in school culture and professional development is unknown.

As indicated above, this can give clues that guide the scientific community, the political class, and the educational community to promote Portuguese education laws according to the real needs of basic education and secondary education teachers in an era of deep digital transformations. This can be a utopia, since teachers must be chameleonic, that is, they must get adapted in record time to the school context, without the guidance of an educative normative which helps with such changes in a flexible and effective way. Such results in training and development teacher processes conditioned by the resistance and the statism of, at times, partisan and biassed education legislation. It must be affirmed that it is possible to advance towards an inclusive and dynamic education legislation that meets teachers' needs. It is necessary to go beyond the knowledge offered by magazines and apply it to the school context and in education institutions. For this, a debate that unifies procedures and stable working groups with the implied agents must be established.

As a proposal of continuity, it would be interesting to develop future research which deepens in the professional areas the authors of the analysed data belong to.

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Federalism, School Reforms, and the Principle of Equality in Argentina

Federalismo, reformas escolares y principio de igualdad en Argentina

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Abstract

Education as a human right shows challenges when it is regulated in federal states, especially considering the principle of equality. The educational policies initiated in the first decade of this century in Argentina have had an impact on the principle of equality (which is the basis of this human right) since the reform was developed in the context of a federal state. Federalism by definition recognizes the differences between its member States, but the risk is that they generate inequalities in the population due to their places of residence. However, it cannot become an excuse to justify the State's non-compliance with human rights (within its territories). In methodological terms, the design of this research includes qualitative techniques, among which the normative legal analysis and the consequent generation of comparative typification of the sources considered stand out. Quantitative techniques were also used for the analysis of statistics in order to measure educational enrollment. RESULTS. Definitions of federalism and its implications in terms of academics and school coverage, considering contemporary reform processes, are discussed. In particular, the evolution of the affordability of the right to education in terms of compulsory schooling (encompassing pre-school, primary and secondary education) is analyzed. Although all levels are included in the tables, the focus is on primary education since the available information does not allow for inter-annual comparisons in the 2005-2020 period for secondary education. It is noted that, although Argentina has regulated the right to education with a high degree of normativity, the results of the reforms have led to an increase in inequality in the context of federalism, which is coupled with the historical trend towards the fragmented diversification of the school system.

Resumen

El derecho a la educación evidencia desafíos cuando es regulado en Estados federales sobre todo en función del principio de igualdad. Las políticas educativas iniciadas en la primera década de este siglo en la Argentina han impactado sobre dicho principio (el cual está en la base de este derecho humano) debido a que fueron reformas desarrolladas en un Estado federal. El federalismo por principio reconoce las diferencias entre sus Estados parte, pero el riesgo es que ellas generen desigualdades en la población debido a sus lugares de residencia. Sin embargo, el federalismo no puede convertirse en una excusa para justificar el incumplimiento de los derechos humanos por parte del Estado (en el interior de sus territorios). En términos metodológicos el diseño de esta investigación incluye técnicas cualitativas entre las que se destacan el análisis jurídico normativo y la generación de tipificaciones comparativas de las fuentes consideradas. También se utilizaron técnicas cuantitativas en el análisis de estadísticas para poder dimensionar la cobertura educativa. Se plantean definiciones relativas al federalismo y sus implicancias en términos académicos y de la cobertura escolar, a la luz de los procesos de reformas. En particular se analiza la evolución de la accesibilidad del derecho a la educación en función de la escolarización obligatoria (inicial, primario y secundario). Si bien en las tablas se incluyen todos los niveles, se hace foco en la educación primaria ya que la información disponible no permite realizar comparaciones inter-anuales en el período 2005-2020 para la secundaria. Se advierte que, si bien la Argentina ha regulado con una alta normatividad el derecho a la educación, los resultados de las reformas han dado lugar a un incremento de la desigualdad en el contexto del federalismo que se acoplan en la histórica tendencia a la diversificación dispersa del sistema escolar.

Palabras clave: federalismo, derecho a la educación, reformas, políticas educativas, desigualdades educativas.

Introduction: The Educational System in the Argentine Federal State

This article analyses the results of educational reforms implemented in Argentina, in light of the country's status as federal State. The legislation of year 2006 regulates the exercise of the right to education and introduc-

es academic reforms constituting a non-negotiable legal framework that subnational States must observe despite their different capacities to face such changes. The results of such reforms are thus put under scrutiny in relation to the principle of equality, the basis of fundamental human rights. The evolution of accessibility —one of the most illustrative indicators of the right to education— evidences that the application of reforms has intensified the historical trend towards a disjointed diversification of the system. This paper discusses some definitions associated with federalism and their implications in curricular and education coverage terms, in light of the referred contemporary reform processes. To that end, the analysis includes normative and statistical data accounting for several incongruences which stem from the reforms' high normativity levels and low degree of effectiveness.

When analysing federal educational reforms, it is worth considering the government's capacity to implement them. To that end, it is of utmost importance to understand the characteristics of a federal State. On a first approach from the etymology of the term will show that *federal* comes from the Latin word *foedus*, and the notion of treaty. Federalism emerged as a division of power in relation with territory and is conceived as a pluralist system in which different government activities are distributed between the central State and the member States (Loewenstein, 1957). Different classifications of federalisms can be mentioned (Hernández, 2018; Gibson and Falleti, 2007), such as: integrative and devolutionary ones; federalisms for the division of power or related to cultural identity; symmetrical or asymmetrical federalisms. Symmetry refers to the existing level of conformity in the relations of each political unit to both the system as a whole and to other component units (Tarlton, 1965). To find an entirely symmetrical federal State is a difficult venture. At any rate, the idea of *treaty* denoted by the etymological definition also explains the existing asymmetries in federal States. The more each unit participates, the higher the probability that federalism becomes an adequate form of organisation. The features of this form of State include: a) the existence of provincial constitutions; b) the constitutional and legislative autonomy of each member State; c) a limited government, with a separation of powers and cross-control mechanisms; d) the division of power in a territory, that is, different levels of government —federal, national, regional, local—, and distribution of competencies; e) the judicial review of laws; f) the resolution of disputes by an independent court; g) a bicameral

legislature representing federal interests *vis a vis* national-based interests; and h) an appropriate financial system (Suelt Cook, 2018).

Argentina is an example of a form of federation called *coming-together* (Stepan, 1999), i.e. an arrangement by which previously sovereign units agree to transfer such sovereignty to a superior State unit, but reserve competencies for themselves. For that reason, Argentine provinces are considered to have original and indefinite powers, while in the case of the national State, delegated powers[1]. Primary education is among the exclusive competencies that provincial States have reserved for themselves. Based on the principle enshrined in Article 121 of the Constitution, Article 5 provides that provinces are responsible for primary education in their territories, while Article 75(18) and Article 75(19) establish that the Argentine Congress shall enact laws on the education system organisation and basis. A harmonic interpretation of these provisions and of Articles 124 and 125 enables the federal State and the provinces to create consensus policies, since education is an overlapping competency between both levels of government (Ruiz, 2020).

However, throughout its history, Argentina has experienced a centralisation process (which affected schooling) caused by numerous reasons, such as the expansion of the federal government without any resistance on the part of provincial governments, and the concentration of socioeconomic resources in the Buenos Aires area, resulting in an unbalanced development of the country. Argentina is an administratively decentralised federation with a high geographic concentration of productive resources and various interprovincial inequalities. Moreover, its subnational States have a tendency to concentrate powers and resources internally, undermining in turn the capacity of municipal governments (Leiras, 2013; Bernal and Bizarro, 2020).

Although federalism acknowledges on principle the differences among its member States, the risk is that such differences might generate inequalities among he country's inhabitants due to their place of residence. This is particularly important with respect to the rights which, as is the case of education, are recognised to the entire population by the Constitution. Thus, when conceptualising the right to education in a federal State, and considering the entire population in so doing, then the importance of the principle of equality should be highlighted. Aldao and

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[1] The historical Constitution of 1853-1860 was approved by 14 of the 24 current subnational States.

Clérico (2019) propose different formulas to define it: 1) formal equality, which emerges from a classification created by the lawmaker and enables to distinguish formal categories but fails to examine the reasons or construction criteria for such categories; 2) material legal equality, which is concerned with the legitimacy of the classification criteria and the reasons on which the selection is based; 3) equality as a form of redistribution and recognition, which seeks to evidence material and symbolic inequalities, and is therefore a goal to be attained[2]. Bobbio (2020) notes that equality refers to a relationship which, to be interpreted, needs to answer the question "equal to whom or to what". On that basis, Bolívar (2005) distinguishes four combined forms of educational equality: two of them are deemed elitist —equality for some in everything, equality for a few in something—, while the remaining two are not —equality for everyone in everything (the most radical stance), and equality for everyone in something. The latter would be the most attainable in educational terms, and within the federal State, it places the focus on the characteristics of schooling subsystems to verify if the population actually exercises its right to education in an equal manner[3].

Method: Regulations, Statistics, and the Subnational Dimension of Reforms

Within a State like the Argentine, the subnational dimension becomes important to analyse educational reforms, due to the intergovernmental relations between the federal and provincial States. This calls for a consideration of the way in which these relations have been redesigned in the past decades, and a view of those transformations from there (González and Lardone, 2012). Each sphere in subnational politics is relevant for different reasons. The educational realm has undergone repeated reforms resulting in different outcomes in the multiple reformed areas (curricula, mandatory nature of schooling, and others), and the impact

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[2] The principle of equality constitutes one of the most relevant concepts of legal philosophy to analyse human rights. In their work, Montes and Parcerisa (2016) revise the theories of justice applied to the educational field.

[3] The issue of how to measure the exercise of the right to education led to the creation of indicators both related to the State's obligations and the schools' internal performance. In this regard, see Ruiz (2020), Razquin (2020), and Tomaševski (2004).

of those reforms on the provincial level calls for an examination of inter-governmental relations (Bernal and Bizarro, 2020). In Argentina, from the distribution of competencies deriving from the national Constitution, it follows that subnational governments are the ones which administrate their own schooling systems, while the federal State sets the floor in political, academic, and budgetary terms. This was extremely evident in the education system recurrent reform processes of the past decades due to the interdependence of measures established by the base laws enacted (Law No. 24195 in 1993 and Law No. 26206 in 2006).

This path began with Law No. 24049 of 1992. Although this rule put an end to the policy of transferring national educational services, a practice that had begun 30 years before, it caused a rearrangement of the relations among the different government levels of the educational system[4]. Consequently, the Federal Education Board [*Consejo Federal de Educación*] became central as an arena for the negotiation of educational policies that were to be later applied by provincial States[5]. This led, from the 1990s onwards, to an exponential growth of intergovernmental relations regarding educational matters, something that affected the reform processes because provincial States presented different institutional and bureaucratic capacities, which in turn were not accompanied by proactive actions from the national government. Such actions would have guaranteed an equitable and equal application of the changes in the system as a whole[6]. Moreover, the implementation of reforms were to meet very tight deadlines —especially *curricular* ones— without adequate planning to ensure the changes would be similar throughout the country. This resulted in differential *system coverages*, one of the most visible dimensions of the right to education.

Studying a curriculum entails an analysis of the institutionalised forms of educational intervention, characterised by strategies for the classification and control of official knowledge (De Alba, 1995; Goodson, 1995). A curriculum is an educational political project encompassing information,

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[4] The transfers from the national education institutions have always been proposed by the central government as an administrative matter based on financial measures to adjust the sector's expenditure.

[5] The Federal Education Board (or *Consejo Federal de Educación*) is a coordination body that was created in 1972. It is made up by federal and provincial educational authorities as well as three members of the Board of Universities (*Consejo de Universidades*).

[6] Several studies analyse the educational inequality deriving from the reforms due to the different capacities of the provinces. These include, among others, Krüger *et al.* (2022), Riquelme *et al.* (2021), and Rivas (2004).

procedures and cognitive strategies both already developed and to be developed through the interaction between students and teachers. A curriculum can be studied as an object of State intervention as it expresses a public policy associated with the processes to select and disseminate culture. It constitutes a policy with different realisation levels, especially in federal States which envision subnational dimensions, with adaptations that influence teaching and learning processes. When analysing the curricular implications of the 2006 education law in the context of the Argentine federal State, a number of complex issues arise[7].

Firstly, there are the changes introduced by such legislation in the academic structure of the education system. Along with the modifications as to the compulsory nature of schooling, the transformations in this dimension have had consequences that affected financing, the organisation of institutions, inter-jurisdictional coordination, and coverage. The law reinstated the Primary and Secondary denominations of the education systems, to replace the ones of Basic General Education or EGB [*Educación General Básica*] and Polymodal Education [*Educación Polimodal*], but with different durations (Section 134)[8]. This decision has formalised inequality, since provincial States had to choose between two duration alternatives: either a 7 or 6 year-duration (for primary school), and a 5 or 6-year duration (for secondary school). As a result, 12 jurisdictions have applied the former, while the remaining 12, the latter.

These two options reflect a resistance to changing the structure established in the previous reform, as well as the lack of an appropriate diagnosis on the provincial States' capacity to instrument such changes. An aspect that Law No. 26206 was supposed to solve was the different durations of primary and secondary school. However, the law formalises the inter-jurisdictional difference and fails to consider the teaching purposes of these educational levels, which has an impact on the scope of the content of the right to education (Ruiz, 2020).

Secondly, in curricular terms, Law No. 26206 maintains the scheme envisaged by its predecessor: a pursued consensus regarding content at federal level and the approval of jurisdictions on curricular designs; how-

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[7] The National Education Law (of 2006) regulates the exercise of the right to education (Section 1).

[8] These terms were coined in the Federal Education Law (in effect between 1993 and 2006). This law amended the system structure as it created two levels known as Basic General Education (EGB) and Polymodal Education. However, the third tier of EGB was organized and applied differently in each province, affecting the characteristics of Polymodal Education.

ever, there are some modifications. On the one hand, it establishes the mandatory application of the resolutions issued by the Federal Education Board (among them, curricular ones). This seeks to prevent academic fragmentations like the ones which had taken place after the disparate application of the reform in the 1990s. However, the lack of a homogeneous structure across the country thwarts the convergence of curricular policies.

On the other hand, Title VI of the law contains curricular definitions which include *common mandatory contents* for the all the jurisdictions' curricular designs[9]. In addition to this there was the elaboration, as from 2004, of a series of contents called Basic Learning Fundamentals (NAPs) [*Núcleos de Aprendizaje Prioritario*] approved by the Federal Education Board. The purpose of these NAPs is to guarantee basic federal curricular guidelines and to set criteria to validate degrees. Provincial jurisdictions have autonomy to organise the curricular design and may adjust the NAPs to the reality of their schooling systems and jurisdictional rules. After the law was passed in 2006, the provincial governments introduced reforms to implement the federal legislation in their territories. The following table lists the legal framework applicable to provincial systems.

As shown above, the situation in the provinces varies since in some of them the applicable laws were passed before the 2006 reform, while in others the laws were enacted after the National Education Law, and a few others have no education legislation in place —which caused them to implement changes without any prior parliamentary debate. In the latter cases, there was a strengthening of the authority of provincial executive powers, to allow them to implement the educational reforms. Also, the different rules that were passed by the provinces to opt for the duration options of the primary and secondary levels (Table I) must be taken into consideration, as well as those which adapted the curricular guidelines to the different compulsory schooling levels. In sum, it may be stated that the different durations at primary and secondary levels, as well as the mixed degrees of acceptance of the NAPs by provincial governments and the diverse curricular designs approved by them have restrained educational equality in the context of a federal State.

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[9] Titles VII, VIII and IX also contain curricular definitions.

TABLE I. Academic Structure Options, by Provincial Jurisdictions

7-year Primary School Level 5-year Secondary School Level Jurisdictions	6-year Primary School Level 6-year Secondary School Level Jurisdictions
City of Buenos Aires	Buenos Aires
Chaco	Catamarca
Jujuy	Córdoba
La Rioja	Corrientes
Mendoza	Chubut
Misiones	Entre Ríos
Neuquén	Formosa
Río Negro	La Pampa
Salta	San Juan
Santa Cruz	San Luis
Santa Fe	Tierra del Fuego
Santiago del Estero	Tucumán

Source: Compiled by author.

TABLE II. Provincial Education Legislation

Provincial Jurisdictions	Provincial Education Law
Buenos Aires	Law No. 13688 (of 2007)
Catamarca	Law No. 5381 (of 2013)
Chaco	Law No. 1887-E (of 2010)
Chubut	Law VIII – No. 91 (of 2010)
City of Buenos Aires	No legislation
Córdoba	Law No. 9870 (of 2010)
Corrientes	Law No. 6475 (of 2018)
Entre Ríos	Law No. 9890 (of 2008)
Formosa	Law No. 1613 (of 2014)
Jujuy	Law No. 5807 (of 2013)
La Pampa	Law No. 2511 (of 2009)
La Rioja	Law No. 8678 (of 2009)
Mendoza	No legislation
Misiones	Law VI – No. 104 (of 2003)
Neuquén	No legislation
Río Negro	Law No. 4819 (of 2012)
Salta	Law No. 7546 (of 2008)
San Juan	Law 1327 – H (of 2015)
San Luis	No legislation
Santa Cruz	Law No. 3305 – H (of 2012)
Santa Fe	No legislation
Santiago del Estero	Law No. 6876 (of 2007)
Tierra del Fuego	Law No. 1018 (of 2015)
Tucumán	Law No. 8391 (of 2010)

Source: Compiled by author.

Subnational Results in Education Coverage

A brief description of the jurisdictions based on socio-demographic data reveals the diversity of the country's socio-educational contexts[10]. This general depiction enables an interpretation of the scopes and limitations that provincial States have to provide education services and instrument educational reforms.

Table III reveals the disparities among subnational States, with a high *urbanisation* rate in the country but a disproportionate natural growth rate (25% in Tierra del Fuego as opposed to 4.1% in the City of Buenos Aires, for example). From this data, it follows that although Argentine education coverage is high —on average— during compulsory schooling years, its distribution is clearly imbalanced among provincial jurisdictions[11]. Different factors also contribute to this, including the role of provincial States, the provinces' capacity to instrument sector policies which guarantee schooling, and the different academic structures in terms of duration of primary and secondary school. As noted in the information in the Appendix, these inequalities stand out even more within each educational region[12].

As mentioned above, 12 provinces have a 6-year duration for primary education and a 6-year duration for secondary education, while other 12 provinces have a duration of 7 and 5 years respectively for the same levels. These different durations condition the development of school contents in view of the specific purposes of primary and secondary levels of compulsory education. While the former is oriented to basic childhood learning, i.e. basic education on which any subsequent knowledge is to be built, secondary education purposes concern propaedeutic education, i.e. training for employment and the exercise of citizenship. A one-year difference

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[10] This work does not particularly analyse the socioeconomic development of the different Argentine provinces and its effects on schooling since that exceeds the scope outlined herein. On this matter, there are numerous investigations (Álvarez, 2022; Krüger, 2016). These papers constitute only a fragment of the publications on the subject, enabling to approach it but in no way exhaust it.

[11] The table shows information on the *coverage of primary and secondary education in the public sector*. The importance of the City of Buenos Aires in the national average is evident. Appendix Tables I and II include data from the other levels.

With regard to this, Wiñar and Lemos (2005) and Arrigazzi Jallade (2022) have rigorous analyses of the unequal expansion that took place in the past decades.

[12] There are five regions: Central (four provinces and one autonomous city), Cuyo (three provinces), Northeast (four provinces), Northwest (six provinces), and South (six provinces).

Table III. Demographic and Coverage data according to Provincial Jurisdictions

	Jurisdictions	Population–year 2010		%Primary education public sector (2019)	%Secondary education public sector (2019)
		Urban	Rural		
I	City of Buenos Aires	100		52	50
2	Buenos Aires	97.22	2.78	65	67
3	Catamarca	77.13	22.87	61	82
4	Chaco	84.59	15.41	71	83
5	Chubut	91.19	8.81	80	87
6	Córdoba	89.66	10.34	73	60
7	Corrientes	82.84	17.16	87	83
8	Entre Ríos	85.72	14.28	88	75
9	Formosa	80.86	19.14	87	90
10	Jujuy	87.41	12.59	73	84
11	La Pampa	83.18	16.82	90	79
12	La Rioja	86.48	13.52	87	85
13	Mendoza	80.87	19.13	90	77
14	Misiones	73.76	26.24	88	77
15	Neuquén	91.61	8.39	82	86
16	Río Negro	87.05	12.95	83	80
17	Salta	87.11	12.89	86	81
18	San Juan	87.13	12.87	81	78
19	San Luis	88.67	11.33	85	86
20	Santa Cruz	96.09	3.91	78	85
21	Santa Fe	90.85	9.15	87	68
22	Santiago del Estero	68.70	31.30	83	76
23	Tierra del Fuego	98.81	1.19	72	74
24	Tucumán	80.81	19.19	86	73

Source: The National Institute of Statistics and Censuses and Argentine Ministry of Education

at each of these levels affects the integration of educational purposes pursued as a whole. Moreover, it affects the promotion rate from primary to secondary school, given the fact that in the transition from the final year of one level and the first of the second one there are higher dropout or learning lag rates (for various reasons encompassing academic systems; school changes to continue secondary education; social and emotional relationships experimented during adolescence, which may affect students' performance in different ways). All these factors relate to the degree of coordination between primary and secondary levels in each jurisdiction.

Such coordination is influenced in turn by the variety of school offers, the provision of education services by the public and private sectors, the urbanisation level and the geographic contexts, all of which have a bearing on the commencement of secondary education once primary school is completed. A shorter duration of primary education indeed anticipate these experiences for students (in provinces with a 6-year span for such level) since they complete it at the age of 11, whilst at the same time it favours educational inequality within the schooling system as a whole.

If the data from Appendix Tables I and II were to be included in the analysis, it would be possible to determine the disproportionate coverage in compulsory education more accurately. Federalism certainly purports to acknowledge starting points, cultural contrasts and policies which are different from the institutional organisation of the member States. The problem at this point is that the States have unequal capacities, a fact that translates into multiple flaws in terms of compulsory schooling. That becomes evident when considering the substantive role of provincial governments in some jurisdictions to guarantee the provision of education services for the compulsory levels[13].

Interregional and interprovincial inequalities are important, particularly in terms of primary education[14]. Except for the Central region, the percentage of public education in the country is close to 80% or higher. For instance, in the Northwestern region (NOA), coverage of primary education from the public sector is higher than 80% in the six provinces, while in four of them it exceeds 85% (La Rioja, Jujuy, Salta and Santiago del Estero). Except for Tucumán, where private education represents about 20% of the three compulsory educational levels, and Catamarca and Jujuy, which also have a high participation of this sector in early education, in the rest of the jurisdictions private education is not an option for the majority of the population. The situation in the Northwestern region (NEA) is very similar to that of the NOA in terms of education coverage by sectors. Without considering Misiones, almost 90% or more of the students in the rest of the provinces attend public primary education

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[13] This matter is associated with the privatisation of education, which takes place in various forms and to different extents (Verger *et al.*, 2023). That is evidenced by the existence of numerous private education options in the context of a federal State. For an analysis of the Argentine case, see: Correa *et al.* (2021); Morduchowicz and Iglesias (2011); Vior and Rodríguez (2012).

[14] Due to space reasons and the information available, from now on this paper will focus on primary education only (see footnote 16). The Appendix includes data of 2019 from every schooling level.

facilities. Again, except for Misiones at early and secondary education levels — where private education represents over 20%— in the rest of the jurisdictions and schooling levels, private education accounts for about 15%. The case of Formosa is noteworthy, as public education serves 90% of all primary and secondary school students. Lastly, the Southern region also presents similar data to that of the NOA and NEA regions since not only primary but also early and secondary education represent 80% of public education coverage (only decreasing by 74% in Tierra del Fuego). Private education just accounts for 20% at the early education level of three provinces: La Pampa, Río Negro, and Tierra del Fuego. In fact, although the latter has the highest values for this level, public education coverage is still predominant.

The values in the Cuyo and Central regions differ from the above in specific ways. The values in Cuyo provinces are not similar among one another. San Luis, for instance, has extensive public education coverage at the three compulsory education levels with over 82% coverage in each of them. San Juan, for its part, has almost identical values (77%) of public coverage for the three levels. Moreover, it is the province with the most developed private education system for compulsory education in general. Lastly, Mendoza has the most diverse learning levels as well as the highest value for private education sectors (36% for early education). The Central region, on the other hand, is very different from the other jurisdictions since their public education coverage does not reach 80% at any of the compulsory learning levels and, moreover, private education has a much higher representation, with over 25% at all levels. The City of Buenos Aires stands out with almost the same coverage on the part of public and private sectors, while the province of Buenos Aires shows high coverage levels by the private sector (around 35%).

Finally, upon consideration of the effects of these reforms in the federal context based on the evolution of primary level coverage from year 2005, it is clear that the variety of results obtained are inconsistent with educational equality and equal exercise of the right to education[15]. In the Appendix, there is data on the evolution of primary education coverage between 2005 and 2020 (Appendix Table III), broken down into public

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[15] Year 2005 is taken into consideration to characterise coverage in the initial context of the educational reform process, while year 2019 is used as reference year before the school closures that took place due to the 2020 pandemic.

(Table IV) and private (Table V) education[16]. Overall, primary level coverage experienced a 5% growth between 2005 and 2019, but such increase has not been steady and it evidenced various inequalities among the provinces. During the first five years, school roll remained almost the same (1% between 2005 and 2010), whereas between 2005 and 2015 it decreased (-1%), which goes against the purposes of the 2006 reform policy. During the second decade of the century, coverage increased (4%) but maintained the inequalities across jurisdictions. Provinces such as Catamarca, Corrientes, Entre Ríos, Formosa, and La Pampa have shown a reduction in their primary school roll for all the periods analysed in Appendix Table III. Some others like Chaco, Jujuy and La Rioja had a smaller number of students in two periods (2005-2010 and 2015-2015), and then again in the total period analysed (2005-2019); while others revealed an overall reduction between 2005-2019 (Santiago del Estero and Tucumán), with fluctuations in some periods either because of coverage stagnation (Tucumán) or increase (Santiago del Estero). The provinces with the highest growth were Santa Cruz (37%) and Buenos Aires (27% on average between Greater Buenos Aires and the rest of the province), followed by Tierra del Fuego (18%), Neuquén (17%) and Mendoza (16%).

The analysis among sectors accounts for an increase in private education coverage (28%) and a contraction of the public sector (-1%) between 2005 and 2019. Table IV shows that the public sector increases in the periods 2010-2019 (2%) and 2015-2019 (7%), while it decreases between 2005 and 2010 (-3%), and above all between 2005 and 2015 (-8%). The evolution is disproportionate in the provinces: it falls abruptly in the period 2005-2015 in Catamarca (-28%), Entre Ríos (-16%), Formosa (-24%), and Corrientes (-20%); and decreases in all periods under study, though in smaller percentages, in Córdoba (-7%), La Pampa (-8%), and Santiago del Estero (-6%). Education coverage also declined throughout the entire

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[16] It should be noted that, due to changes in levels and durations of compulsory schooling, and the publications of the Argentine Ministry of Education, these tables only consider 6 years of primary education, even though 12 jurisdictions have implemented a 7- year duration for this school level. Moreover, in 2005 the system in force was EGB, which solely computed the first two cycles (6 years) despite its mixed application and the fact that not all the provincial States had imposed such level. Also, it is worth mentioning that these differences in the survey conducted by the Ministry *render it impossible to calculate the evolution of secondary level coverage* (such was its name since December 2006), as the different official statistical yearbooks have published data with dissimilar criteria.

Lastly, to calculate the interannual evolution of coverage, no comparison was made with data from 2020 because the closure of schools distorts the coverage indicator values.

period, although not systematically, in Chaco, Jujuy, La Rioja, Misiones, San Luis, and Tucumán (in the latter, however, the decrease was consistent, with only one stagnation period between 2005 and 2010). Once again, it is in Santa Cruz where there was a considerable increase in coverage (34%), followed by the City of Buenos Aires (15%), Mendoza (11%), Neuquén, and Tierra del Fuego (10% in both provinces). As for private education —as noted above—school roll increased during all the periods under analysis (Table V): overall, 28% (2005- 2019), more remarkably in the 2005-2015 decade (22%). The provinces in which private education roll increased the most throughout the entire period were Neuquén (90%), Chaco (79%), Tierra del Fuego (65%), Santiago del Estero (64%), Chubut (51%), and Mendoza (50%). In addition, and with percentages higher than 40%, the City of Buenos Aires (43%), Catamarca (46%) and La Rioja (48%), as well as Jujuy (39%) and San Juan (38%), with values around 40%.

Conclusions

In sum, in the analysis of existing educational inequalities in subnational States, the different results that federal reforms have had in terms of coverage become evident, and this affects the principle of equality, which is the basis of the right to education. In addition to this, the different curricular adaptations of the NAPs on the part of the provinces should be taken into consideration. It is worth questioning whether these indicators are actually pondered in the design of public policies for the sector. As stated above, federalism is respectful of the social and cultural diversity of member States, and asymmetries are an inherent feature of any federal State. However, international law notes that this should not affect the recognition and exercise of the rights of the population of a federal State. The American Convention on Human Rights, for instance, establishes that federalism may not be used by federal States as an *excuse* for failing to observe such rights within their territories (Article 28).

The Constitution and Law No. 26206 are the federal basis on which provincial legislations must enact their specific regulations. They constitute a non-negotiable legal framework, and the Argentine government is compelled to guarantee its compliance by virtue of the international treaties on human rights it has endorsed. However, the analysed results reveal

that the application of reform policies has intensified the Argentine historical trend to diversify the system in a disjointed manner. Furthermore, access to the right to education has become increasingly inequitable.

The absence of a federal State with a role that seeks to promote this right has resulted in the marked differentiation of provincial jurisdictions. In particular, unequal coverage at primary education level, its contraction in the public education sector, and the advance of private education hinder the purposes embodied in the National Education Law. A greater regulatory recognition of the right to education has clearly not resulted in greater observance of such right in real terms in the subnational dimension. There is still much to be done with respect to internal public policies. The measures established in the legislation in force should be actually implemented (longer school days, continuous teacher training, improvement of the teacher-student relationship). This would enable to honour, rather effectively, some of the government's pending commitments concerning the exercise of the right to education through actions aiming at guaranteeing attainable and equal schooling levels.

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Appendix: School coverage according to compulsory levels and sectors

Table I. Public sector students according to education level per jurisdiction. Absolute and percentage values.

Jurisdiction	Total	Early Education	Primary	Secondary	Tertiary	Early Ed. %	Prim. %	Sec. %	Ter. %
Total	8,210,121	1,264,901	3,537,684	2,738,539	668,997	68	73	71	68
City of Buenos Aires	354,948	56,471	148,394	98,798	51,285	45	52	50	45
Buenos Aires	2,835,805	461,046	1,121,703	1,058,108	194,948	62	65	67	78
Greater Buenos Aires	1,604,737	238,370	656,126	616,050	94,191	56	61	64	75
Rest of Buenos Aires	1,231,068	222,676	465,577	442,058	100,757	71	71	73	81
Catamarca	98,432	13,097	34,412	35,443	15,480	78	80	82	90
Córdoba	609,974	103,775	260,025	200,020	46,154	73	73	60	58
Corrientes	272,792	37,908	114,931	87,655	32,298	82	87	83	85
Chaco	317,329	44,014	144,793	84,373	44,149	84	88	83	69
Chubut	137,680	22,545	53,500	50,576	11,059	83	87	87	85
Entre Ríos	256,112	38,443	102,081	96,368	19,220	70	73	75	73
Formosa	152,202	16,885	65,440	56,687	13,190	74	90	90	87
Jujuy	178,129	24,426	80,523	57,222	15,958	76	87	84	63
La Pampa	70,178	10,493	30,293	26,591	2,801	78	90	79	58
La Rioja	93,935	16,078	40,863	27,234	9,760	88	88	85	98
Mendoza	384,249	56,218	190,648	103,130	34,253	64	82	77	76
Misiones	280,610	40,745	151,242	76,645	11,978	77	83	77	38
Neuquén	149,229	19,228	72,104	44,397	13,500	82	86	86	65
Río Negro	156,269	23,908	70,866	49,011	12,484	79	81	80	63

Table I. Public sector students according to education level per jurisdiction. Absolute and percentage values. (*Continued*)

Jurisdiction	Total	Early Education	Primary	Secondary	Tertiary	Early Ed. %	Prim. %	Sec. %	Ter. %
Salta	337,559	46,371	159,019	103,341	28,828	86	85	81	59
San Juan	162,867	26,982	70,129	60,267	5,489	77	78	78	57
San Luis	110,161	14,679	47,041	42,691	5,750	82	87	86	73
Santa Cruz	77,359	13,124	35,500	25,074	3,661	84	83	85	88
Santa Fe	580,291	85,721	274,415	169,631	50,524	68	72	68	72
Santiago del Estero	237,728	40,778	118,591	59,425	18,934	87	86	76	74
Tucumán	318,312	46,196	137,002	113,145	21,969	73	80	73	64
Tierra del Fuego	37,971	5,770	14,169	12,707	5,325	81	81	74	92

Table II. Private sector students at each education level according to jurisdiction. Absolute and percentage values.

Jurisdiction	Total	Early Education	Primary	Secondary	Tertiary	Early Ed.%	Prim. %	Sec. %	Ter. %
Total	3,320,520	586,700	1,295,295	1,127,502	311,023	32	27	29	32
City of Buenos Aires	369,458	68,461	138,181	100,380	62,436	55	48	50	55
Buenos Aires	1,464,389	280,216	613,513	515,442	55,218	38	35	33	22
Greater Buenos Aires	999,466	189,075	426,886	351,363	32,142	44	39	36	25
Rest of Buenos Aires	464,923	91,141	186,627	164,079	23,076	29	29	27	19
Catamarca	21,842	3,753	8,445	7,869	1,775	22	20	18	10
Córdoba	301,458	38,119	97,816	132,693	32,830	27	27	40	42
Corrientes	49,318	8,542	16,618	18,428	5,730	18	13	17	15
Chaco	65,566	8,586	19,652	17,810	19,518	16	12	17	31
Chubut	22,087	4,501	8,176	7,507	1,903	17	13	13	15
Entre Ríos	92,894	16,288	38,115	31,455	7,036	30	27	25	27
Formosa	21,213	5,823	6,927	6,533	1,930	26	10	10	13
Jujuy	39,760	7,549	12,317	10,678	9,216	24	13	16	37
La Pampa	15,697	2,904	3,495	7,247	2,051	22	10	21	42
La Rioja	12,774	2,293	5,627	4,627	227	12	12	15	2
Mendoza	115,671	31,793	42,688	30,404	10,786	36	18	23	24
Misiones	85,961	11,883	31,865	22,620	19,593	23	17	23	62
Neuquén	30,733	4,218	11,797	7,298	7,420	18	14	14	35
Río Negro	42,257	6,332	16,662	11,888	7,375	21	19	20	37
Salta	78,755	7,674	27,486	23,585	20,010	14	15	19	41
San Juan	48,407	8,204	19,392	16,672	4,139	23	22	22	43

Table II. Private sector students at each education level according to jurisdiction. Absolute and percentage values. *(Continued)*

Jurisdiction	Total	Early Education	Primary	Secondary	Tertiary	Early Ed.%	Prim. %	Sec. %	Ter. %
San Luis	18,873	3,140	6,827	6,797	2,109	18	13	14	27
Santa Cruz	14,672	2,444	7,234	4,504	490	16	17	15	12
Santa Fe	243,257	39,974	105,046	78,639	19,598	32	28	32	28
Santiago del Estero	50,424	5,949	19,018	18,712	6,745	13	14	24	26
Tucumán	105,271	16,704	34,994	41,170	12,403	27	20	27	36
Tierra del Fuego	9,783	1,350	3,404	4,544	485	19	19	26	8

Source: Argentine Ministry of Education. Annual Survey 2019

Table III. Primary education coverage, interannual variation, according to jurisdiction. Period 2005-2020

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
Total	4,597,404	4,637,463	4,550,365	4,832,979	4,859,105	1%	-1%	4%	6%	5%
City of Buenos Aires	226,411	233,968	244,555	286,575	287,737	3%	8%	22%	17%	27%
Buenos Aires	1,577,421	1,655,308	1,696,599	1,735,216	1,748,354	5%	8%	5%	2%	10%
Greater Buenos Aires	973,595	1,034,548	1,058,456	1,083,012	1,091,425	6%	9%	5%	2%	11%
Rest of Buenos Aires	603,826	620,760	638,143	652,204	656,929	3%	6%	5%	2%	8%
Catamarca	53,772	51,595	45,978	42,857	41,902	-4%	-14%	-17%	-7%	-20%
Córdoba	361,642	366,424	359,001	357,841	358,055	1%	-1%	-2%	0%	-1%
Corrientes	158,364	156,443	138,226	131,549	130,999	-1%	-13%	-16%	-5%	-17%
Chaco	169,605	164,221	147,688	164,445	165,276	-3%	-13%	0%	11%	-3%
Chubut	56,194	58,931	60,102	61,676	61,616	5%	7%	5%	3%	10%
Entre Ríos	156,638	155,439	142,357	140,196	140,841	-1%	-9%	-10%	-2%	-10%
Formosa	93,018	87,436	77,588	72,367	72,390	-6%	-17%	-17%	-7%	-22%
Jujuy	95,175	86,652	79,820	92,840	93,659	-9%	-16%	7%	16%	-2%
La Pampa	35,565	34,704	34,118	33,788	33,993	-2%	-4%	-3%	-1%	-5%
La Rioja	46,810	42,514	41,571	46,490	46,190	-9%	-11%	9%	12%	-1%
Mendoza	200,772	187,572	195,775	233,336	235,621	-7%	-2%	24%	19%	16%
Misiones	178,872	172,038	157,066	183,107	184,404	-4%	-12%	6%	17%	2%
Neuquén	71,948	66,773	68,775	83,901	84,430	-7%	-4%	26%	22%	17%
Río Negro	80,776	76,150	73,042	87,528	88,761	-6%	-10%	15%	20%	8%
Salta	177,668	173,669	159,659	186,505	190,165	-2%	-10%	7%	17%	5%

Table III. Primary education coverage, interannual variation, according to jurisdiction. Period 2005-2020 (*Continued*)

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
San Juan	85,931	89,433	91,157	89,521	90,098	4%	6%	0%	-2%	4%
San Luis	52,829	58,415	55,891	53,868	52,678	11%	6%	-8%	-4%	2%
Santa Cruz	31,112	34,879	37,436	42,734	42,679	12%	20%	23%	14%	37%
Santa Fe	342,312	340,472	327,159	379,461	382,284	-1%	-4%	11%	16%	11%
Santiago del Estero	138,346	138,160	127,140	137,609	138,019	0%	-8%	0%	8%	-1%
Tucumán	191,311	190,479	172,118	171,996	171,295	0%	-10%	-10%	0%	-10%
Tierra del Fuego	14,912	15,788	17,544	17,573	17,659	6%	18%	11%	0%	18%

Source: Compiled by author.

Table IV. Primary education coverage from the public sector; interannual variation, according to jurisdiction. Period 2005-2020.

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
Total	3,584,266	3,484,217	3,314,198	3,537,684	3,576,579	-3%	-8%	2%	7%	-1%
City of Buenos Aires	129,475	123,237	126,190	148,394	150,229	-5%	-3%	20%	18%	15%
Buenos Aires	1,086,450	1,073,813	1,067,511	1,121,703	1,149,909	-1%	-2%	4%	5%	3%
Greater Buenos Aires	634,254	625,120	618,689	656,126	678,196	-1%	-2%	5%	6%	3%
Rest of Buenos Aires	452,196	448,693	448,822	465,577	471,713	-1%	-1%	4%	4%	3%
Catamarca	47,996	44,043	37,937	34,412	33,401	-8%	-21%	-22%	-9%	-28%
Córdoba	278,352	275,529	263,401	260,025	260,117	-1%	-5%	-6%	-1%	-7%
Corrientes	143,285	140,171	122,204	114,931	114,598	-2%	-15%	-18%	-6%	-20%
Chaco	158,652	151,993	133,576	144,793	145,050	-4%	-16%	-5%	8%	-9%
Chubut	50,789	52,430	52,214	53,500	52,765	3%	3%	2%	2%	5%
Entre Ríos	121,278	118,692	105,443	102,081	102,580	-2%	-13%	-14%	-3%	-16%
Formosa	86,640	80,670	70,565	65,440	65,449	-7%	-19%	-19%	-7%	-24%
Jujuy	86,332	77,650	68,812	80,523	81,553	-10%	-20%	4%	17%	-7%
La Pampa	32,772	31,762	30,831	30,293	30,449	-3%	-6%	-5%	-2%	-8%
La Rioja	43,018	38,375	36,759	40,863	40,550	-11%	-15%	6%	11%	-5%
Mendoza	172,303	155,892	159,745	190,648	191,947	-10%	-7%	22%	19%	11%
Misiones	154,263	147,524	131,168	151,242	152,240	-4%	-15%	3%	15%	-2%
Neuquén	65,723	59,893	59,777	72,104	72,751	-9%	-9%	20%	21%	10%
Río Negro	67,710	62,619	59,196	70,866	72,014	-8%	-13%	13%	20%	5%
Salta	155,982	149,696	135,210	159,019	162,573	-4%	-13%	6%	18%	2%

Table IV. Primary education coverage from the public sector; interannual variation, according to jurisdiction. Period 2005-2020. (*Continued*)

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
San Juan	71,861	72,789	72,461	70,129	70,597	1%	1%	-4%	-3%	-2%
San Luis	47,531	51,330	48,199	47,041	46,194	8%	1%	-8%	-2%	-1%
Santa Cruz	26,403	29,014	30,884	35,500	35,480	10%	17%	22%	15%	34%
Santa Fe	258,446	250,869	237,453	274,415	276,956	-3%	-8%	9%	16%	6%
Santiago del Estero	126,715	124,612	111,330	118,591	118,705	-2%	-12%	-5%	7%	-6%
Tucumán	159,445	158,670	139,711	137,002	136,101	0%	-12%	-14%	-2%	-14%
Tierra del Fuego	12,845	12,944	13,621	14,169	14,371	1%	6%	9%	4%	10%

Source: Compiled by author.

Table V. Primary education coverage from the private sector; interannual variation, according to jurisdiction. Period 2005-2020.

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
Total	1,013,138	1,153,246	1,236,167	1,295,295	1,282,526	14%	22%	12%	5%	28%
City of Buenos Aires	96,936	110,731	118,365	138,181	137,508	14%	22%	25%	17%	43%
Buenos Aires	490,971	581,495	629,088	613,513	598,445	18%	28%	6%	-2%	25%
Greater Buenos Aires	339,341	409,428	439,767	426,886	413,229	21%	30%	4%	-3%	26%
Rest of Buenos Aires	151,630	172,067	189,321	186,627	185,216	13%	25%	8%	-1%	23%
Catamarca	5,776	7,552	8,041	8,445	8,501	31%	39%	12%	5%	46%
Córdoba	83,290	90,895	95,600	97,816	97,938	9%	15%	8%	2%	17%
Corrientes	15,079	16,272	16,022	16,618	16,401	8%	6%	2%	4%	10%
Chaco	10,953	12,228	14,112	19,652	20,226	12%	29%	61%	39%	79%
Chubut	5,405	6,501	7,888	8,176	8,851	20%	46%	26%	4%	51%
Entre Ríos	35,360	36,747	36,914	38,115	38,261	4%	4%	4%	3%	8%
Formosa	6,378	6,766	7,023	6,927	6,941	6%	10%	2%	-1%	9%
Jujuy	8,843	9,002	11,008	12,317	12,106	2%	24%	37%	12%	39%
La Pampa	2,793	2,942	3,287	3,495	3,544	5%	18%	19%	6%	25%
La Rioja	3,792	4,139	4,812	5,627	5,640	9%	27%	36%	17%	48%
Mendoza	28,469	31,680	36,030	42,688	43,674	11%	27%	35%	18%	50%
Misiones	24,609	24,514	25,898	31,865	32,164	0%	5%	30%	23%	29%
Neuquén	6,225	6,880	8,998	11,797	11,679	11%	45%	71%	31%	90%
Río Negro	13,066	13,531	13,846	16,662	16,747	4%	6%	23%	20%	28%
Salta	21,686	23,973	24,449	27,486	27,592	11%	13%	15%	12%	27%

Table V. Primary education coverage from the private sector; interannual variation, according to jurisdiction. Period 2005-2020. (*Continued*)

Jurisdiction	Years					Interannual variation				
	2005	2010	2015	2019	2020	2005-2010	2005-2015	2010-2019	2015-2019	2005-2019
San Juan	14,070	16,644	18,696	19,392	19,501	18%	33%	17%	4%	38%
San Luis	5,298	7,085	7,692	6,827	6,484	34%	45%	-4%	-11%	29%
Santa Cruz	4,709	5,865	6,552	7,234	7,199	25%	39%	23%	10%	54%
Santa Fe	83,866	89,603	89,706	105,046	105,328	7%	7%	17%	17%	25%
Santiago del Estero	11,631	13,548	15,810	19,018	19,314	16%	36%	40%	20%	64%
Tucumán	31,866	31,809	32,407	34,994	35,194	0%	2%	10%	8%	10%
Tierra del Fuego	2,067	2,844	3,923	3,404	3,288	38%	90%	20%	-13%	65%

Source: Compiled by author.

Asymmetries of cross-national regulatory laws on Heritage Education

Asimetrías de leyes normativas transnacionales sobre Educación Patrimonial

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Abstract

Within the framework of research stays at the *Centro de Investigação Transdisciplinar "Cultura, Espaço e Memória"* (CITCEM, Oporto), an analysis of curricular regulations on heritage education in three countries: Portugal, Mexico and Spain was carried out, focusing on evidence of similarities and differences in the laws of the countries compared. The main objective is to discover what are the conceptualisations of each country on heritage education according to their educational regulations, what is understood by heritage, as well as to analyse which laws provide for the practice of this subject and what are the main differences between them. Comparisons are made with the official documents that govern the Education Systems and that prescribe the heritage education curriculum for Spanish Compulsory Secondary Education and its age counterparts (11 to 16 years old) in Portugal and Mexico. An exploratory sequential mixed method is used, with a first phase of bibliometric analysis using VOSwiever software, in which the categories of ethical analysis are extracted, and a second phase of content analysis of the laws them-

selves, based on a constructivist and post-constructivist worldview of reality. As a result, we found similarities, such as the approach to the concept of heritage, which is very close to that of culture and art used by the three countries in their education and some of the subjects that help to integrate heritage education, such as History, Language or Art; at the same time, there are numerous asymmetries or differences with regard to another series of subjects, differences in the courses in which they are dealt with, asymmetries that are related to the history of the countries and their regulatory changes over the years. There is a need for future discussion on a number of factors such as the role of teachers, their initial training, teaching practice, the students of the new century and the architects of the laws.

Keywords: Comparative Education; Curriculum; High Schools; Heritage Education; Educational Law.

Resumen

En el marco de estancias de investigación, se realizó un trabajo de análisis de normativa curricular sobre educación patrimonial en tres países: Portugal, México y España, enfocándose en evidencias de similitudes y diferencias en las leyes de los países comparados. El objetivo principal es descubrir cuáles son las conceptualizaciones de cada país sobre la educación patrimonial según sus normativas educaticas, qué se entiende por patrimonio, además de analizar qué leyes disponen la práctica de esta disciplina y cómo son las diferencias principales entre ellas. Las comparaciones se realizan con los documentos oficiales que rigen los Sistemas Educativos y que prescriben el currículo de educación patrimonial de Educación Secundaria Obligatoria española y sus homólogos en edad (11 a los 16 años) en Portugal y México. Se utiliza un método mixto secuencial exploratorio, con una primera fase de análisis bibliométrico a través del software *VOSwiever*, en el que se extraen las categorías de análisis *étic* y una segunda fase de análisis de contenido de las propias leyes, basado en una cosmovisión constructivista y postconstructivista de la realidad. Como resultados encontramos semejanzas, como, la aproximación al concepto de patrimonio muy cercano al de la cultura y arte que los tres países utilizan en su educación y algunas de las asignaturas que ayudan a transversalizar la educación patrimonial, como la Historia, la Lengua o el Arte; a su vez, numerosas asimetrías o diferencias en cuanto a otra serie de asignaturas, diferencias en los cursos en los que se tratan, asimetrías que tienen que ver con el transcurrir de la historia de los países y sus cambios normativos a lo largo de los años. Es necesario discutir en un futuro sobre varios factores como el rol del profesorado, su formación inicial, la práctica docente, el alumnado del nuevo siglo y los diseñadores de las leyes.

Palabras clave: educación comparada; currículo; educación secundaria; educación patrimonial; ley educativa.

Introduction

Research into comparative education starts with the pioneer Jullien (1817) who sought to deduce true principles and established pathways for education to become an almost exact science (Fraser 1964, p. 20). Some authors, such as Adamson et al. (2017), also argue that Jullien is based on a positivist epistemology, similar in nature to many recent international studies, but his positioning was more holistic than some of the most influential worldwide, including PISA studies (OECD 2013, 2016). Sobe (2018) reminds us that the comparison between countries is a crossroads between points of view, perspectives, reference frameworks, readings, which puts the notion of "relationality" at the centre (p.335). Moreover, from the socio-historical perspective of comparative education, all production of knowledge is seen as the reflection of a discursive community that imposes "legitimate knowledge and ways of thinking about education" (Novoa, 2005, p.2 4). This means that comparing educational policies requires variables articulated with a series of cultural, ideological and axiological relationships (not always quantifiable) that shape social processes. Carrying out a comparative analysis is not necessarily making a standardized and homogenized comparison of educational systems, characteristic of the institutional isomorphism typical of the 19th and 20th centuries, both of the masses and the elites (Meyer and Ramírez, 2002).

The study presented herein was carried out jointly in an exchange between research groups from the University of Porto (Portugal), the National Autonomous University (Mexico) and the University of Valladolid (Spain), presenting the problem of the concept of heritage in the educational regulations of the three countries, whether it coincides in its axioms; or what importance is being given to heritage education as a transversal subject in the curricula, or if the hidden curriculum includes different conceptualizations in the chosen countries. To this end, the general objective of the study is to develop comparative knowledge among educational regulations and, specifically, the current laws of Portugal, Mexico and Spain on heritage education, focusing specifically on the stages of secondary education (Spain), basic and secondary education (Portugal) and primary, secondary, preparatory, *colégios* and secondary schools (Mexico), that is, education in the three countries from 11 to 16 years old.

The exchange among researchers from the three countries allows us to conceptualize and theorize heritage education and thus have an impact on public policies, especially on national curriculum policies.

Moving from the analysis of educational systems to schools, from educational structures to social agents, from the level of ideas to discourse, from the facts to the political dimension (Nóvoa, 1998), helps us to identify new problems, to apply new forms of analysis and approaches to then produce new meanings for the teaching-learning processes (Ferreira, 2009, Madeira, 2009, Schriewer, 2009), in brief, to optimize pedagogical practices.

When designing education plans for students between 11 and 16 years old, it is necessary for those who are in charge to specify in the documents the purposes, concepts and principles that will guide the way in which the proposed objectives will be achieved. Moreover, it must be taken into account that within the same country there is a great cultural plurality, depending on the established regions or areas, and these differences must be taken into account when creating and designing the curriculum. In addition, as specific objectives, we are interested in discovering and comparing whether heritage education, in each country's curriculum, is transmitted with a focus on certain subjects or specific subjects or the use of new technologies and active pedagogical methodologies, which are very up-to-date, as well as researching whether the concept of heritage is built throughout the documents and with what model it is assimilated, and what is the contribution of each subject so that heritage education is determined as a transversal subject in these countries, with the prior assumption of the growth in a significant production of the subject at national and international level.

The curriculum in Portugal, Mexico and Spain

There are many definitions of curriculum in the academic literature, but we highlight the definition proposed by Sacristán (2000) as a very pertinent and up-to-date one:

A practice, an expression of the socializing and cultural function that a given institution has, which regroups around it a series of subsystems or diversified practices, among which the pedagogical practice developed in the school institutions that we usually call teaching (pp.15-16).

But these specific characteristics of each curriculum are also related to the access to knowledge, taking into account to whom it is proposed and the relevant objectives. However, a distinction must be made between this curriculum and what is traditionally defined as the process that is focused on establishing objectives and content for each educational stage (Pires, 2000). Relevant in the definition on which we base this document is the idea supported by the latest recommendations of the Council of Europe of a curriculum as something that is built before and during the teaching-learning process, which lasts a lifetime. As such, this is a process that is shaped by the people who make decisions about the curriculum, each with their own views and teaching experiences.

In Portugal, the curriculum follows the Basic Law of the Portuguese Education System (Law No. 46/1986, approved on 14 October 1986, and later amended in 1997, 2005 and 2009, 2018). The first two amendments dealt with issues related to access and funding of higher education (1997 and 2005), and the third one, in 2009, with the establishment of compulsory education for school age children and young people and also the establishment of universal pre- school education for children from 5 years of age. The programming follows the concept of Essential Learning, for all subjects and courses, and is developed in conjunction with professional associations. They are defined as the common set of acquired knowledge, identified as structured, indispensable, conceptually articulated, relevant and significant content of subject knowledge, as well as competences and attitudes to be mandatorily developed by all students in each subject area or subject, with reference, in general, to the education grade or training grade (Law no. 46/1986, Article 3. p.2). They implement ten learner profile competence areas (LPCA) into each of the essential learning (EL) outcomes.

They include permeability among Secondary Education courses (see Table I), with the possibility of subject permutation. The National Strategy for Citizenship Education was implemented. Under the European Union International Cooperation Programme (INCO, 2030), Information and Communication Technologies will be extended to all grades of the second and third cycles. The 2018-2019 academic year is the first year in which the new law will be implemented, so it will not be possible to study the results in depth until its full implementation.

For its part, Mexico bases the national education system according to the General Law of Education, based on the New Education Model (2017), which divides it as follows: A) Compulsory basic education pre-school (5 years), primary (6-11 years) and secondary (12-14 years) (see Table II). This is the same reformulated regulation (2019) for the 32 states of the Republic and is public. B) upper secondary education, which includes baccalaureate, vocational technical baccalaureate and equivalent levels, and vocational education. This 2019 standard will promote the comprehensive development of learners, their knowledge, skills, abilities, attitudes and professional competences, through meaningful learning in subject areas of natural and experimental sciences, social sciences and humanities; as well as in transversal areas of knowledge integrated by mathematical thinking, history, communication, culture, arts, physical education, and digital learning. In its article 6, it proposes that all people living in the country must attend pre- school, primary, secondary and upper secondary education, that is, education is compulsory up to the age of 18.

The services that make up secondary education in Mexico are: a) Secondary, including general, technical, community or regional modalities authorized by the Ministry; b) Secondary for workers; and c) Telesecondary.

In the case of Spain, with the LOMCE (2013), in compulsory secondary education (see Table III), the number of competences decreased from eight to seven. They are no longer called basic competences, just competences or key competences. There are two types: two basic (linguistic and mathematical, science and technology) and five transversal (digital, learning to learn, social and civic, initiative and entrepreneurship, and cultural awareness and expression).

Learning patterns are the new element included by LOMCE in the curriculum elements. They are defined as the specificities of the assessment criteria, which allow specifying the objectives that students must achieve at the end of each stage (what they must know and know how to do at the end of each year in each subject). The three types of topics mentioned above appear (core, specific and standalone free configuration). In the ESO (Compulsory Secondary Education) stage, at the end of the fourth grade, students are assessed by means of external tests designed by the Ministry of Education, Culture and Sports; passing these tests is essential to qualify for the Baccalaureate. In the

fourth grade of ESO, students will have two options, they may choose between: the path that leads to the Baccalaureate (known as the Academic Studies Option for introduction to the Baccalaureate) or the path that leads to Intermediate Vocational Training (Applied Studies Option for introduction to Vocational Training).

Currently, the LOMLOE, Organic Law 3/2020, of 29 December, which amends Organic Law 2/2006, of 3 May, on Education, was approved by the current government and it is important to understand that it is organized around three key objectives: to update the LOE, to eliminate the most dysfunctional aspects of the LOMCE, and to guide the education system towards student success. In 2018, the Recommendation of 22 May 2018 of the Council of the European Union on key competences for lifelong learning was made, which not only revises the list of key competences, but also establishes that Member States should "incorporate the ambitions of the United Nations Sustainable Development Goals (...) in education, training and learning", included in the 2030 Agenda. The amendments included in this law are multiple: the definition of childhood education as an educational stage with its own identity is recovered and its objectives are redefined (article 12.1 and article 17), the primary education cycles are recovered (article 18), an explicit reference to the contributions of non-formal education within the lifelong learning framework and its connection with formal education for the development and acquisition of competences is incorporated (article 5), plans are added to promote reading, literacy in multiple ways proposed by UNESCO (Article 19. 3), promoting the use of ICT, digitalization, virtual environments, foreign languages and research and innovation (art. 55.3), promoting the development of significant and relevant projects through inductive methodologies (articles 19.4, 24.3 and 26.2), ensuring the inclusion with personal and economic resources (articles 81, 87. 1 and 88), subjects are integrated to ensure learning for all students with specific needs (art. 22.5), promotion of an educational approach to avoid failure and absenteeism (articles 20 and 28), and education in environmental sustainability and social cooperation (art. 110.3), among others.

To better understand the curricular proposals, we propose Table I, which specifies the differences and similarities in the ages considered, in terms of training levels, cycles, number of years and subject fields:

TABLE I. Education systems in Portugal, Mexico and Spain.

	Age	11	12	13	14		15	16
PORTUGAL	Levels			BASIC			SECONDARY	
	Cycles		2nd	3rd				
	Grades	6	7	8		9	10	11
	Subject fields			Humanities Scientific Technology Specialist Artistic Professional Internship				
MEXICO	Levels		PRIMARY	SECONDARY			MIDDLE UPPER	
	Cycles		3rd	NA			NA	
	Grades		6th	1st 2nd 3rd			4th/1st	5th/2nd
	Subject fields			Mathematics Experimental Sciences Social Sciences Humanities Communication				
SPAIN	Levels			SECONDARY				
	Cycles		1st	2nd				
	Grades		1st 2nd	3rd 4th				
	Subject fields			Biology and Geology. Physical Education. Plastic, Visual and Audiovisual Education. Physics and Chemistry. Geography and History. Spanish Language and Literature and, if any, Co-official Language and Literature. Foreign language Mathematics. Music. Technology and Digitalization				

Source: Compiled by author

Concept of heritage education

The study focuses precisely on these educational stages in order to address - and, when appropriate, confront the concept of heritage from which we start, since these are stages in which the concept of identity is fully developed. Heritage education, understood as a transversal subject in the curriculum, takes into account several satellite concepts that help to understand it: identity, citizenship, new technologies, innovative methodologies, and globalization.

With regard to the concept of identity, Tajfel (1978) defines it as "the part of the individual's self-concept that derives from the knowledge of

their belonging to a social group (or social groups) together with the emotional and evaluative meaning associated with that belonging" (p. 68). And, after Quiroga (1999), identity develops in three stages, an evolutionary change from the beginning of adolescence to the acquisition of this identity between the ages of 18 and 28.

It is in the secondary education stage that social identity, one of the concepts that are part of heritage, settles; and with regard to this identity and following a holistic approach to the concept, we are based on an interdisciplinary perspective between the natural and cultural aspects of heritage, with scientific-technological, historical-artistic and ethnological references, contextualized in a specific space-time and cultural environment, which give meaning and identify a given society (Cuenca and López-Cruz, 2014; Cuenca, Martín and Schugurensky, 2017).

The notion of heritage is important for the countries' culture and development, contributing to the continuous reframing and revaluation of cultures and identities, being an important vehicle for the transmission of experiences, competences and knowledge between generations (UNESCO, 2003, Art. 2.1). Along this same line, Choay (2001) reminds us that heritage does not survive outside the memory and culture exercise of a given population, that is, heritage must be recognized by that social group, must have a place in the affective memory of that group, so that it does not run the risk of being forgotten and lost. And this idea is restated in Fontal (2013, p.65). In this paper, we attribute an integral view of heritage in education, developed through three models: the mediator, the symbolic and the connecting; it is a conception of heritage that enhances its human dimension so that both the material, immaterial and spiritual elements of the human condition are dealt with (Fontal, 2003, 2012; Fontal, Sánchez-Macías and Cepeda, 2018; Trabajo and López, 2019).

The Spanish National Plan for Education and Heritage (PNEyP, 2015) reminds us that heritage education is a subject designed to link heritage to its society, which is at the same time its generator, owner and depositary (PNEyP, 2015, p .22). Research in this field is crucial and is promoted by different institutions for the development of countries and societies that comprise them.

Heritage education also has repercussions in strengthening the concept of citizenship, with the right to memory, but also with the duty to contribute to keeping the country's valuable cultural heritage (Oriá, 2005), while understanding it as a construction with multiple contributions.

In this Secondary Education and Baccalaureate age group, the use of new technologies (ICT) is of the utmost importance, based on the wide acceptance they have in global and extracurricular life with great mobility in the physical space, of technology, in a conceptual space from a personal interest that evolves, in the social space, and finally, in learning dispersed in time (Ibáñez-Etxeberria, Asensio and Correa, 2012, p. 65). This ICT idea is confronted with the situationism of the projects inside the classroom, as pointed out in the Portuguese case, on the defence of collections and historical museums of natural or health sciences (Lourenço, 2009; Gomes, 2017), in which Mota-Almeida (2020) also includes certain requirements for the Portuguese teachers, extensive to Spain, with regard to the lack of training of specific personnel with specialization in heritage collections, or specific training for regular teachers or the creation of a reserve of hours to be dedicated specifically to this heritage. This draws us to the theoretical formulation of these requirements with a more generic scope proposed by Fontal (2003), which led to the regulation of methodologies in heritage education through multidisciplinary criteria.

Globalization can also arise from some definitions of globalization, the philosophical paradigm in which looking at the past can be questioned ontologically, which will problematize the importance of Heritage, History and Heritage Education. Heritage education must move from the current stage, which is used to complement the current curriculum, to the follow-up of the results of several studies (Fontal and Ibáñez-Etxeberria, 2017) that suggest that it should be included not only in the students' learning experiences, but also in the national curriculum. This requirement is essential in the Spanish, Portuguese and Mexican contexts, demanding the removal of formal obstacles, both in more general laws and in curricular designs, as a central axis to support the pedagogical reform in individual projects spread throughout the territories of the three countries.

Method

For this study, we designed a mixed sequential exploratory research method (Clark et al. 2008; Hanson et al. 2005; Creswell, 2014), in which quantitative (quan) data were extracted, documentary analysis (Gil Pas-

cual, 2011) and qualitative (QUAL) data, supported by Grounded Theory (Flick, 2007), and integrated into the interpretation phase.

First, we carried out a co-occurrence analysis of bibliographic words from the three databases in which the main topic was Heritage Education and the secondary topics: Portugal, Mexico, Spain and Secondary, in the last five years, with VOSwiever software (Van Eck and Waltman, 2010). The co-occurrence analysis of words is included in the classification of relational and multidimensional indicators (Callon, Courtial & Penan, 1995; Leydesdorff & Welbers, 2011). This analysis is carried out when there are joint occurrences of two terms in a given text in order to identify the conceptual and thematic structure of a scientific domain. After selecting the words, co-occurrence networks or matrices are created and the similarity among them is measured (see Fig. I):

FIGURE I. Word co-occurrence networks on the Web of Sciences.
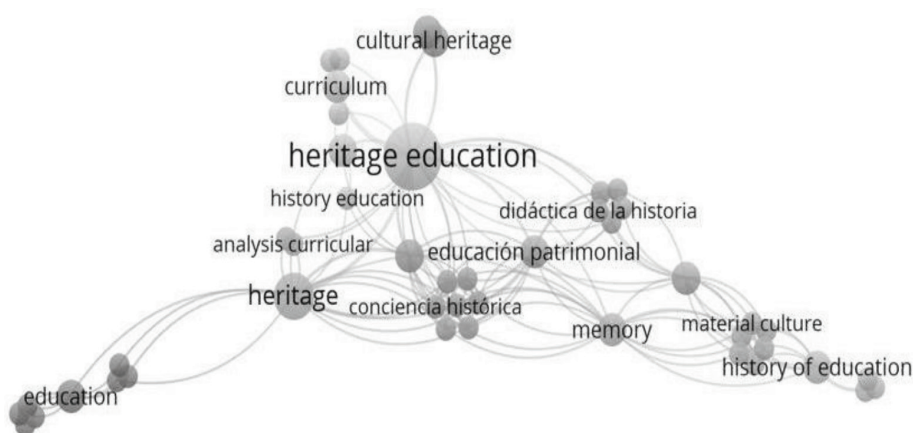
Source: VOSviewer

Based on this result, together with the proposals of four subject matter specialist judges, we used words and their respective families, which served as categories in our study, specified in Table II.

These ethical categories are analysed in a second qualitative phase, within each one of the documents analysed, which are our sample: Basic Law of the Portuguese Education System (Law No. 46/1986, approved on 14 October 1986, and later amended in 2018), General Law of Education (2017) of Mexico and the current law in Spain, LOMLOE, Organic Law 3/2020, of 29 December.

TABLE II. Ethical categories proposed for content analysis.

CATEGORIES	WORDS AND WORD FAMILIES
patrim*	Patrimonio/s, patrimonial/es, patrimonialización…
art*	Arte/s, artístico/s, artista/s…
muse*	Museo/s, museístico/s, museográfico/s…
memo*	Memoria, memorial…
cult*	Cultura/s, cultural/es, multicultural/es, transcultural/es, intercultural/es…
ident*	Identidad, identitario…
monument*	Monumento/s, monumental, monumentalista…
ciudad*	Ciudad, ciudadanía, ciudadano/a…
arqueol*	Arqueología, arqueológico/a…
vincul*	Vínculo, vinculativo…
perten*	Pertenencia, pertenece…
famili*	Familia, familiar…
herencia*	Herencia, hereditario/a…

Source: Compiled by author

Initially, the ethical categories were developed (patrim*, art*, muse*, memo*, cult*, ident*) and later, after the judges' analysis, the emic categories were added (monumento*, cidade*, arqueol*, vincul *, perten*, famili*, herencia*), thus completing the group of study categories presented in Table II.

Results

The results of the document analysis will be grouped into several points according to our research objectives:

Firstly, according to the count of word-categories searched in the regulation, it can be seen (see Table III) that the most frequent category is culto* and its word family, followed by arte* and the least frequent is vincul*, perten* or herencia*. This gives an idea of the meanings and concepts closer to heritage that are used in these documents, in which culture and art are the protagonists of this definition; however, the coded categories do not always coincide with the definitions we have of them,

TABLE III. Study categories count

	PORTUGAL	MEXICO	SPAIN
patrimo*	33	39	22
art*	143	314	63
muse*	2	33	2
memo*	3	4	2
cult*	175	448	236
ident*	22	82	42
monument*	4	9	8
ciudad*	85	107	56
arqueol*	1	6	10
vincul*	0	4	9
perten*	12	0	8
famili*	2	17	53
herencia*	4	0	11
TOTAL	486	1063	438

Source: Prepared by author

with other attributes characterizing them. In general, these words (culture and art) are classified in the curriculum as: culture and geography, cultures and societies, artistic manifestations, artistic and documentary heritage, natural, historical and linguistic heritage, historical-artistic heritage, archaeological heritage, musical heritage, folkloric heritage, indigenous heritage, popular culture, etc.

Secondly, in the three countries we can find explicit references to the values and attitudes of the concept of heritage about "knowing, valuing and respecting the basic aspects of one's own and other peoples' culture and history, as well as artistic and cultural heritage" (LOMLOE, Chapter III, Art.23, p.57); in the Portuguese law, it is stated that it is necessary to "ensure a general education common to all Portuguese people that guarantees the discovery and development of their interests and abilities, reasoning ability, memory and critical thinking, creativity, moral sense and aesthetic sensitivity, promoting the individual achievement in harmony with the social solidarity values" (Decreto de Educación Básica, Objetivos, p. 7). In this sense, in Mexico, its law highlights: "knowledge of the arts, appreciation, preservation and respect for musical, cultural and artistic heritage, as well

as the development of artistic creativity through technological and traditional processes" (LGE, Article 30. Conteúdos, 22). The third result found in the analysis is related to the subjects that take into account the heritage defined through the chosen analysis categories (see Table IV):

Within these topics that include heritage in their study programmes, we highlight, as another result, some remarkable particularities:

With regard to the topics History and Geography, the use of the concept of heritage stands out, very close to the patrimonialization process, as a bridge between heritage and society, as part of citizenship:

In Spain: "Finally, a particular approach to artistic manifestations will be needed to signify the creative effort of the human being over time and, consequently, to value cultural heritage in its richness and variety" (History, First grade ESO, block 1, common content, p.32141); other evidence: "To value the cultural and artistic heritage as a wealth to be preserved" (History, First grade ESO, block 1, common content, p.32158).

In Portuguese law, the concept also comes close to this idea of symbolic appropriation of heritage: "Recognition of the marks left by the Phoenicians, the Greeks and the Carthaginians in the Iberian Peninsula, highlighting the major (technical and cultural) contributions of these civilizations to the enrichment of the peninsular cultures" (History and Geography of Portugal, 2nd cycle Basic Education., 2013, p. 5).

Moreover, in Portuguese law, in this matter, heritage is present from 11 to 16 years of age, whereas in Mexico it is discovered in the cycles from 11 to 14 and in Spain, as in Portugal, throughout the cycle from 11 to 16 years of age.

In the Anthropology subject in the 12th grade of the Portuguese educational system, which is the only subject that includes it, among the essential learnings that are promoted, the importance of patrimonialization processes stands out: "EA: Knowledge, Skills and Attitudes. The student must be able to: Distinguish patrimonialization processes and their different involvements with the populations that produce material cultural and immaterial practices" (Anthropology of Portugal, 12th course, 2013, p.6). In addition, this law speaks of a profile in which students are guided in this subject and in the use of ICT: "Strategic teaching actions aimed at the students' profile".

(Examples of actions to be developed in the subject): - Mapping heritage processes in Portugal (examples: Cola San Jan, Chocalhos, Fado) and ideally close to the local community; Finding videos on Youtube

TABLE IV. List of subjects that include heritage in their competences.

PORTUGAL	
2nd CYCLE	History and Geography of Portugal 5th and 6th grade
	Natural Sciences 5th and 6th grade
	Technological Education 2nd cycle
	Visual Education 2nd cycle
	Portuguese 5th and 6th grade
3rd CYCLE	History 7th, 8th and 9th grade
	Geography 7th, 8th, 9th grade
	Visual Education 3rd cycle
	Natural Sciences 7th, 8th, 9th grade
	Portuguese 7th, 8th, 9th grade
SECONDARY - 10th grade	Biology and Geology 10th grade
	Geography A 10th grade
	History A 10th grade
	History B 10th grade
	History of Culture and Arts 10th grade
	Portuguese 10th grade
Basic and Secondary Education	Citizenship and Development
MEXICO	
6thPRIMARY	Arts
1st-3rd SECONDARY	Civics and Ethics
	Mother Tongue/Spanish
	Mother/Indigenous Tongue
	History
	Geography
ESCUELA NACIONAL PREPARATORIA	Spanish Language
	Universal History
	Aesthetic and Artistic Education IV
	History of Mexico
	Aesthetic and Artistic Education V
	World Literature
	Geography

TABLE IV. List of subjects that include heritage in their competences. *(Continued)*

MEXICO	
COLEGIO D CC Y HUMANIDD	Modern and Contemporary Universal History I and II
CENTRO DE ESTUDIOS CIENTÍFICOS Y TECNOLÓGICOS	History of Mexico I and II
	Modern and Contemporary Universal History II
	Modern and Contemporary Universal History I
	Philosophy I
	Philosophy II
Colegio Nacional de Educación Profesional Técnica (HOSPITALIDAD TURISTICA)	Citizen Development
Colegio de Bachilleres	Social Sciences
	Introduction to Philosophy
	Art Appreciation
	Ethics
SPAIN	
1st SECONDARY	Biology and Geology
	Geography and History
	Castilian Language and Literature
	Mathematics
	First Foreign Language: ....
	Physical Education
	Ethical Values or Religion
	Plastic, Visual and Audiovisual Education
	Technology
2nd SECONDARY	Biology and Geology
	Geography and History
	Castilian Language and Literature
	Mathematics
	First Foreign Language
	Physical Education
	Ethical Values or Religion
	Music
	Classical Culture

TABLE IV. List of subjects that include heritage in their competences. *(Continued)*

SPAIN	
	Biology and Geology
	Physics and Chemistry
	Geography and History
	Castilian Language and Literature
	Maths AC or AP
3rd SECONDARY	First Foreign Language
	Physical Education
	Ethical Values or Religion
	Latin
	Plastic, Visual and Audiovisual Education
	Music
	Introduction to entrepreneurial and business activity
	Geography and History
	Castilian Language and Literature
	Maths AC or AP
	First Foreign Language
	Physical Education
	Ethical Values or Religion
	Classical Culture
	Plastic, Visual and Audiovisual Education
4th SECONDARY	Music
	Galician Language and Culture
	Latin
	Information and Communication Technologies
	Technology
	Scientific Culture
	Biology and Geology
	Economics

Source: Compiled by author

about patrimonialization processes: - Contacting researchers dedicated to patrimonialization processes" (p.7).

The fact that this subject was introduced in the Portuguese curricula helps the teaching- learning process at this age to implicitly involve heritage processes so that there is a symbolic appropriation of heritage. This heritage process is seen from three perspectives: institutional, cultural and community (Fontal and Gómez, 2015, p.91), through the teaching actions and strategies proposed in this essential learning, that is, with the use of active methodologies proposed for the development of competences in this subject.

The example of the topic History and culture of religions (Spain), very controversial due to its existence in the curricula of the successive Spanish reforms, is curious in its fifth assessment criterion in which the verb to bind is used for the sole and exclusive moment when speaking of heritage, related to the concept of heritage as a link between individual and object (Fontal, 2008; Calaf, 2009; Marín, 2013): "5. Valuing religious traditions, their cultural and artistic manifestations and the socio-cultural heritage they generated and with which they are linked" (LOMCE, Historia y cultura de las religiones, p.86). The remaining documents use other types of verbs: value, know, recognize, identify, respect, enjoy, or conserve.

And in the Portuguese topic Citizenship and Development (Portugal), values and cultural diversity are also mentioned: "In short, Citizenship and Development intends to contribute to the increase of attitudes and behaviours, dialogue and respect for others, based on ways of being in society that have human rights as a reference, especially the equality, democracy and social justice values" (EL: Secondary Education, p.6).

(...) in the Citizenship and Development (CD) component of the curriculum, the teachers have the mission of preparing students for life, to be democratic, participatory and humanist citizens, in a time of increasing social and cultural diversity, to promote tolerance and non-discrimination, as well as to eliminate violent radicalism (EL: Secondary Education, p.7).

In Mexico, within the topic of Civility and Ethics, the law clearly points out the relevance of indigenous culture as an important part of citizenship: "Indigenous education must meet the educational needs of indigenous people, peoples and communities with cultural and linguistic relevance; it must also be based on respect, promotion and preservation

of the historical heritage and of our cultures" (LGE, Chapter 4, art. 56). However, little is specified about the methodology to be used or whether it is advisable to use ICT, as in the Portuguese case.

-And, within the topic of Secondary History in Portugal, we can highlight a study topic, Glocal (global+local) and heritage awareness, which was not identified in any Spanish or Mexican document: "Glocal and Heritage Awareness - enhances the experimentation of diversified techniques, instruments and ways of working, intentionally promoting, in the classroom or outside the classroom, observation activities, questioning of close and more distant realities from a perspective of knowledge integration (Perfil dos Alunos à Saída da Escolaridade Obrigatória, p. 31). However, what the new Spanish law assumes is the development of critical ability on ICT: "To develop basic technological competences and advance in an ethical reflection on their operation and use" (LOMLOE, Art.23.e, p.57).

In these very up-to-date concepts, it is assumed that heritage encompasses a great diversity of typologies and that it forms the cultural heritage of communities and minorities, both in the past and in the present. And heritage awareness comprises a large complex web of interculturality and identity in which each individual must take on the responsibility for their local or global civic action, that is, situated and contextualized.

Discussion

In the study presented, we started from the basis proposed by the Council of Europe of a curriculum that is built before and during the teaching-learning process, throughout life, and that is shaped by the people who make decisions about it, each one with their own views and teaching experiences. The heritage education curriculum in the three countries studied, whose comparison becomes asymmetrical, is modelled, but not created, according to Fontal (2011), by professionals of subjects such as History and Geography, Arts, Language, Music, Civic Education, Values, Religion, or Citizenship, among others. And, according to Sacristán (2000), each curriculum promotes different content and internal management because it has different social functions. The concept of heritage found in this study is close to that of culture and art is close to the notion of UNESCO (2003), which advises us

that heritage is important for the countries' culture and development, contributing to the continuous reframing and revaluation of cultures and identities, while being an important vehicle for the transmission of experiences, competences and knowledge between generations, that is, in their education. However, it is a concept, in part, far removed from Fontal (2003), in which heritage is part of its environment and territory, in which an individual and collective affective connection is established for the formation of identities. The curriculum for this age group, between 11 and 16 years old in the three countries, does not specifically take into account the affective connections between people and their environments, territories and contexts, on which they later build their identities, a crucial issue in adolescence.

Given these results, it is necessary, on the one hand, as Madeira (2009) points out, to define the type of education that corresponds to each society through the comparative method and, at the same time, it is this method that allows us to decide which educational practice is appropriate for a given reality. Based on all of them and on the results, it is important to redefine the curricula of these countries in terms of heritage education, to broaden its concept and adapt it to new methodologies and ICT, to make agreements between educational agents on policies in this matter so that professionals from this transdisciplinary field can locate the broad, mediating, symbolic and binding notion of the concept of heritage.

However, to consolidate this hypothesis, it is necessary to pose more research questions in a comparative historical framework that allows us to find, for each space-time unit considered, the particular modes, modalities, institutions, strategies, responses and appropriations, from which such symmetries, patterns or inequalities can be introduced.

Conclusions

The curriculum of each country has its own peculiarities and, after making comparisons, we highlight a series of similarities with regard to heritage education in these studied stages: the notion of heritage in the three regulations is related to the concepts of culture, geography, society, artistic manifestation, documentary, natural, history, language,

archaeology, music, folklore, indigenous and popular culture, as well as being related to citizenship, ICT, and globalization. In other words, a concept that relates to identity, the symbolic, the social and the human, a holistic and relational model. The asymmetries arise in the way the concept is dealt with in the topics that cover it in each country, or in the fact that, in Spain, for example, there are 17 educational rules that emanate from a common law, but that are adapted to the peculiarities of each Autonomous Community. In Mexico, however, we find 32 different states that follow the same common law, just like Portugal, which is governed by a national law agreed by the different regions and municipalities. It would be necessary to extend the study to a longitudinal level and with learning outcomes in the three countries.

We found that the problems that arise in this comparative work do not differ much on either side of the Atlantic. For this reason, intensifying the cooperation relationships among academic institutions through the integration of countries that share a common language and history with Portugal and Spain is an exceptional opportunity to analyse the expansion process of the European school model in colonial contexts and perhaps on its heirs. The consolidation of research networks, as in the case of this study, can contribute to revaluing, on a global scale, the specificity of the organization, construction and dissemination processes of the European school model on the other side of the Atlantic, with a special focus on the spaces occupied by shared languages and stories. Like Nóvoa (2005), we believe that it is this specificity of each country and culture that should be studied, that it is worth investing in. It is a complex challenge that articulates different fields of relationships, namely the political, social, cultural, epistemological aspects and the forum for the creation of scientific communities in different spaces.

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Gender stereotypes and vocational variables in secondary education female students[1]

Estereotipos de género y variables vocacionales en alumnas de educación secundaria

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Abstract

Gender stereotypes are at the root of gender inequalities in education and employment. These stereotypes affect adolescent girls' academic performance, interests, behaviours and career choices. The aims of the study are: a) to examine whether there are differences in career decision self-efficacy, career adaptability and clarity of lifedesign of adolescent girls according to their gender stereotypes; b) to introduce a model with the independent variable "gender stereotype" to

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understand the relationship between the analyzed variables. The study involved 1,012 female students in the 3rd and 4th years of secondary education. Data collection was carried out using the Academic and Vocational Guidance Questionnaire. Correlation analyses and parametric tests were carried out; a structural equation model was run to understand the relationships between variables and to test a hypothetical model predicting the effect of gender stereotypes. Results showed that girls with high gender stereotypes have lower scores on career decision-making self-efficacy, career adaptability and clarity of life-design than girls with low stereotypes. A parsimonious model was constructed to fit the data, in which adolescent girls' stereotypes predicted career decision-making self-efficacy, and in turn self-efficacy predicted career adaptability and clarity of life-design. The improvement of these vocational variables in adolescent female students requires a critical analysis of the beliefs that underlie gender stereotypes; an analysis that allows them to become aware of the socio-cultural nature of these stereotypes, promote their deconstruction and empower them vocationally.

Keywords: gender stereotypes; career choice; secondary school students; self-efficacy; career adaptability; life-design

Resumen

Los estereotipos de género son la base de las desigualdades entre hombres y mujeres en la educación y el empleo. Estos estereotipos afectan al rendimiento académico, intereses, comportamientos y elecciones de carrera de las adolescentes. Los objetivos del estudio son: a) examinar si existen diferencias en la auto-eficacia para la toma de decisiones de la carrera, la adaptabilidad de la carrera y la claridad del diseño del proyecto de vida de las adolescentes según sus estereotipos de género; b) introducir un modelo con la variable independiente "estereotipo de género" para comprender la relación entre las variables analizadas. En el estudio participaron 1.012 alumnas de 3º y 4º de educación secundaria. La recogida de datos se realizó a través del Cuestionario de Orientación Académica y Laboral. Se realizaron análisis de correlación y contrates paramétricos; se ejecutó un modelo de ecuaciones estructurales para comprender las relaciones entre las variables y contrastar un modelo hipotético que predice el efecto de los estereotipos de género. Los resultados mostraron que las chicas con altos estereotipos de género tienen puntuaciones más bajas en la autoeficacia para la toma de decisiones de la carrera, la adaptabilidad de la carrera y en la claridad del diseño del proyecto de vida, frente a las chicas con bajos estereotipos. Se construyó un modelo parsimonioso que se ajusta a los datos, en el que los estereotipos de las adolescentes predijeron la autoeficacia para tomar decisiones de carrera y, a su vez, la autoeficacia predijo la adaptabilidad para la carrera y la claridad del diseño del proyecto vital. La mejora de estas variables vocacionales en las alumnas pasa por el análisis crítico de las

creencias que subyacen a los estereotipos de género; un análisis crítico que les permita tomar conciencia de la naturaleza sociocultural de dichos estereotipos, promover su deconstrucción y empoderarlas vocacionalmente.

Palabras clave: estereotipos de género; elección de carrera; estudiantes de secundaria; autoeficacia; adaptabilidad de la carrera; proyecto de vida

Introduction

Throughout the history of mankind inequality between sexes has been present in all social and political systems. The woman´s situation has been marked by a patriarchal culture which has established social, educational, political and economic restrictions for them (Kollmayer et al., 2018; Solbes-Canales et al., 2020). The inequality between men and women has made itself felt in access to education, professional training and work; it is also present in the housework distribution, in advertising, in text books and in other cultural expressions (Sánchez-García & Suárez-Ortega, 2021).

Gender stereotypes are the basis for inequalities between males and females in education and employment (Smith, 2014). These stereotypes refer to expected patterns of behaviour for women and men, based on beliefs of what is appropriate for each other Martínez-Marín, 2018; (Santana-Vega et al., 2012; Villanueva-Blasco & Grau Alberola, 2019). The emergence of gender stereotypes begins in the early childhood, and by early adolescence most individuals have completely developed them (; McGuire et al., 2020; Olsson & Martiny, 2018; Picho & Schmader, 2018; Schuster & Martiny, 2017). Moreover, gender stereotypes affect adolescents' academic achievement, interests, behaviours and vocational choices (Hadjar & Aeschlimann, 2015; Martínez-Marín, 2018; Ramaci et al., 2017).

Several studies have analyzed the role of gender in adolescents in a wide range of topics such as bullying (Navarro et al., 2015), problematic smartphone use (Haro et al., 2022), social networking and fear of missing out (Oberts et al., 2016; Santana-Vega et al., 2019a), professional choices (Alnıaçık et al., 2019; García et al., 2017; Heilman, 2015), study habits (Santos, et al., 2020), and subject and career choice (Dunlap & Barth, 2019; Makarova et al., 2019). These studies have mainly focused on differences between boys and girls regarding the beliefs associated to each gender.

However, little research has been conducted to assess how gender stereotypes specifically affect high-school girls when they make vocational decisions and plan their life-design. This warrants special attention if we consider that students start planning their careers during compulsory secondary education, and they have to make important vocational decisions at the end of this educational stage (Babarović, 2016).

Decision making is a challenge for adolescents in an increasingly global and diverse society undergoing rapid socio-economic and technological changes (Savickas et al., 2009; Sawyer et al., 2018; Viola et al., 2017). Gender stereotypes influence and hinder women's career development (Heilman, 2015), lead them to not choose certain academic and high-status fields (Olsson & Martiny, 2018) and affect their career decision-making process when they consider that they have fewer academic-employment opportunities than men (Migunde et al., 2015). The presence of women in university studies or in different spheres of professional activity is not uniform (Martínez et al., 2016); gender does not affect women in the same way as men, it does not equally influence men and women on their life-design, and the labour market is manifestly segregated by gender. According to European Institute for Gender Equality (2020), the EU's progress on gender equality is still low; the change of this situation is only possible when legislative measures and other proactive government actions are implemented. There is no doubt that there is a social and educational need to better understand how gender stereotypes affect girls' career development, especially in adolescence.

Career decision self-efficacy and gender stereotypes

The development of vocational behaviors coexists with the emergence and establishment of Career Decision-Making Self-Efficacy (CDSE) (Cepero, 2009). CDSE is an underlying variable in the decision-making process (Bandura et al., 2001). It is a type of self-perception of personal efficacy with respect to the competencies and skills intrinsic to the career choice process. This self-perception has a direct impact on the process of making decision (Lozano, 2006). According to Social Cognitive Theory, CDSE affects people's vocational choice tasks: people tend to feel more committed, and to show more effort, persistence and self-confidence toward tasks in which they feel more effective (Betz & Schifano, 2000). In this way, CDSE plays an important role as a cognitive mediator for vocational

behaviour (Jo et al., 2016). Research shows that adolescents' CDSE is positively related to proactivity, number of tasks aimed at exploration, persistence and motivation in the career decision-making process; however, it has an inverse relationship with perceived barriers to decision-making and indecision (Blanco, 2009; Creed et al., 2006; Duffy et al., 2015; Lam & Santos, 2018; Lozano, 2006;; Shin et al., 2014;).

Students' beliefs about their own academic competence are shaped by gender stereotypes (Bouchey & Harter, 2005). Shin et al. (2019) observed that relationship between career gender stereotypes and CDSE was significant only for female students. Leaper et al. (2012) note that girls who hold beliefs about gender equality show more positive self-efficacy in maths and science. According to Brown (2019), girls who are more supportive of gender stereotypes have less academic self-efficacy and less orientation to mastery goals over time. The under-representation of women in science, technology, engineering and mathematics (STEM) has been the focus of a number of studies. This under-representation has been linked to gender stereotypes and beliefs about the capabilities of boys and girls (Dunlap & Barth, 2019; Makarova et al., 2019; Moè et al., 2020). Jasko et al. (2019) point out that when girls focused on the similarities between men and women, they were more motivated to participate in STEM-related activities than when they focus on gender differences.

According to Tellhed et al. (2017), gender differences in interest towards scientific careers are related to girls' lower perceived self-efficacy for those careers, and to girls' lower expectations of social belonging in this kind of careers. Ramaci et al. (2017) point out that men perceive themselves to be more self-efficacious in military, scientific and agricultural professions than women, and that the parents' profession is a predictor of self-efficacy in their vocational choice. Harding & Longhurst (2016) observed that girls at the beginning of their science careers had less coping self-efficacy than boys. Therefore, it is necessary to explore gender role stereotypes in girls, as well as to design intervention programmes that minimise their negative effects on CDSE (Shin et al., 2019). Efforts to explore the mechanisms intermediating between gender stereotypes and vocational behaviours are still highly warranted, and they constitute an urgent social and educational requirement.

Career adaptability and gender stereotypes

Career Adaptability (CA) plays a fundamental role in the decision-making process. CA is conceptualized as a set of psychosocial self-regulation strategies and resources that allow coping and solving problems arising in vocational development tasks, in occupational transitions, or in negative work episodes that alter people's social integration (Rudolph et al., 2017; Savickas, 2013). These self-regulation strategies and resource are organized in four dimensions: 1) Concern or interest to be involved in decision making; 2) Confidence or feeling of efficacy to achieve goals and overcome obstacles; 3) Curiosity or inquiry into future alternatives and the actions to be taken to achieve them; 4) Control or awareness of personal responsibility in decision making (Savickas & Porfeli, 2012). According to Hartung & Cadaret (2017), a lack of concern results in indifference/pessimism about the future; a lack of confidence results in inhibition regarding decision making; a low level of curiosity limits exploration; a low level of control results in indecisiveness.

Several studies (Duffy, et al., 2015; Hirschi, 2009; Marcionetti & Rosier, 2019; Merino-Tejedor et al., 2016; Negru-Subtirica & Pop, 2016; Tolentino et al., 2014; Viola et al., 2017) evidence that people with higher CA strategies and resources: a) are proactive in building their career; b) consider that they can successfully manage career-related tasks; c) have low levels of anxiety, high levels of extraversion and openness to experience; d) possess higher vocational identity and academic-job satisfaction. In this regard, Zhang et al. (2021) found that among male students, unlike female students, there is a significant negative association between career insecurity and worry, and a positive association between deep career exploration and concern. Shin et al. (2019) observed a CDSE-mediated effect on the relationship between career gender stereotypes and career adaptability in female students. Dostanić et al. (2021) observed that gender moderated how CDSE affected career adaptability: self-efficacy was a significant predictor of adaptability for the female student body, but not for male students. These results suggest that counselors should approach decision making with consideration of the constraints created by gender stereotypes, and that the role of gender in career decision making and adaptability should be investigated. Students have a stereotypical view of different

professions (Miller et al., 2015), and the psychological barriers created by stereotypes are a handicap for women in accessing certain academic fields or jobs (Olsson & Martiny, 2018). It is necessary to explore in depth the effects that gender stereotypes have specifically on career adaptability of female students in compulsory secondary education.

Life-design and gender stereotypes

Life-design is an active and continuous construction; its configuration requires a personal and contextual exploration, a decision-making process, a personal goals specification and a concrete action plan. It is an orientation towards the future in which people give meaning and purpose to their lives in a constantly changing socio-economic and employment context (Maree & Twigge, 2016). Life-design is the result of the conciliation between emotional and rational decision-making, which is strongly influenced by the personal and contextual conditions of each individual (Lomelí-Parga et al., 2016; Melendro et al., 2017; Savickas, 2016). The construction of the life-design begins during secondary education, implying serious difficulties for students due to the fact that they have to develop strategies to define their life goals, to recognize the required personal and material resources, to establish priorities, and to select aims based on these priorities in a stage characterized by fast change (Santana-Vega et al., 2016).

Villanueva-Blasco & Grau-Alberola (2019) point out that there are significant differences in the internalization of gender stereotypes between adolescents according to sex and age, with the transition to middle adolescence being the critical moment of this internalization. In childhood and adolescence, different socialization processes occur for boys and girls; this process have an impact on the prioritization of life design goals and, in particular, on academic and labor trajectories considered optimal for each gender (Ginevra & Nota, 2017; Selimbegovic et al., 2019). Santana-Vega et al. (2019b) observed differences between boys and girls with respect to the prioritization of their academic and labour goals, as well as with respect to family, leisure and physical appearance goals. Different studies have analyzed how gender differences affect students' academic goals, observing meaningful differences between girls and boys (García et al., 2017; Picho & Schmader, 2018; Santana-Vega et al., 2012; Zhao et al., 2018). Struthers and Strachan (2019)

found that gender stereotypes limit girls' interest in courses and careers where there is a greater presence of men. The low presence of women in male-dominated vocational training courses means that occupational segregation of occupations remains resistant to change. Ehrtmann et al., (2019) say that students with male stereotypes have a high interest in mathematics, research and entrepreneurship, and a low interest in the artistic, social and conventional domains; while students with a female stereotype present the opposite pattern.

Despite the progress made in our society in terms of equality, there are still differences in academic and work opportunities based on gender. Although women's access to the education system and the labour market has improved, they still encounter structural barriers (gender-differentiated socialization) and business barriers (limited access to certain occupations or responsibility for the positions they hold) marked by gender stereotypes (Jang et al., 2019). According to Buxarrais Estrada & Valdivielso Gómez (2021) education should be directed towards the realization of basic universal values and the construction of fairer and more inclusive societies; therefore, it is urgent to give gender equality more space and prominence in the educational system and in the curriculum.

Gender stereotypes can negatively affect girls' life-design during adolescence, insofar as they diminish their CDSE and limit the range of possible academic-professional objectives to be met. From a coeducational perspective it is necessary to pay attention to how gender stereotypes affect girls' life-design and vocational development (Zhao et al., 2018).

The aim of this study is to explore the relationships between girls' gender stereotypes and vocational variables, such as career decision self-efficacy, career adaptability, and clarity of life-design. Specifically, the aims are: a) to determine whether there are significant differences in those vocational variables according to girls' gender stereotypes; and b) to introduce a model with the independent variable gender stereotype to fully understand the relationship between the variables tested.

The following research questions were addressed:

- Are there significant differences in career decision self-efficacy, career adaptability, and clarity of life-design according to girls' gender stereotypes
- Do gender stereotypes predict career decision self-efficacy and does this, in turn, predict career adaptability and clarity of life-design in adolescents girls?

Based on the literature reviewed, we hypothesized statistically significant relationships between girls' gender stereotypes, career decision self-efficacy, career adaptability, and clarity of life-design. We also hypothesized that girls' gender stereotypes will predict girls' career decision self-efficacy, and this, in turn, will predict girls' career adaptability and clarity of life-design (see Figure I).

FIGURE I. Hipothesized model
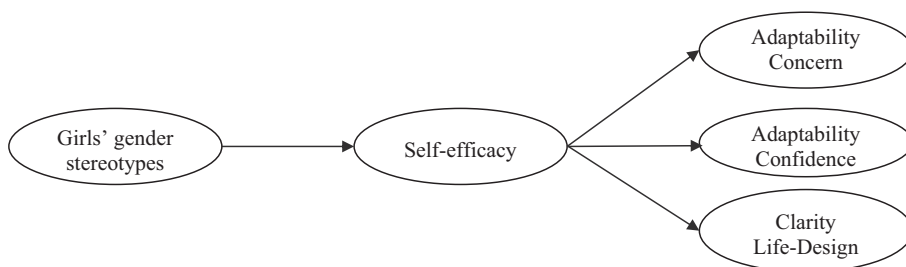
Source: Compiled by author

Method

Participants

A total 1,012 female students were recruited from 22 secondary Spanish schools (20 state schools and 2 private schools). It is a sample of convenience.Girls were from third to fourth grades of compulsory secondary education, and their mean age was 15.26 (SD = 1.00).The management teams of the participating centers communicated to the research group their desire to participate in the project to facilitate to male and female students' decision making.

Instruments

Data collection was carried out using the Academic and Vocational Guidance Questionnaire, designed by the Educational and Vocational Guid-

ance Research Group of La Laguna University. The questionnaire examines demographic, institutional, academic and vocational variables, and includes the following scales:

- *Vocational Gender Stereotypes Scale.* An ad hoc scale was designed to assess girls' vocational gender stereotypes. Several studies were consulted for the design of the scale (García-Cueto et al., 2015; Hadjar & Aeschlimann, 2015; Sánchez et al. 2011; Steele & Barlin, 1996). In addition, a brainstorming session was conducted with female students of compulsory secondary education on "the beliefs of girls with vocational stereotypes in which they consider themselves inferior to boys". The brainstorming sessions were conducted with six groups of six female students (three of third grade and three of fourth grade). Four sessions were held in public schools and two in private schools. A first draft of items was prepared and evaluated by university professors of psychology, educational sciences and sociology. Two criteria were assessed: 1) the relevance of the items to be analyzed for examining vocational gender stereotypes, and 2) the adequacy of the item wording. Items considered irrelevant by more than 80% of the experts were eliminated. The final scale consisted of five items relating to girls' beliefs about their academic and employment inequality with respect to boys ("Girls are less likely than boys to study what they want"; "When choosing studies, boys think more about what job they are going to do than girls"; "Boys are more ambitious about their professional future than girls"; "Boys have more need to work than girls"; "Boys tend to choose harder careers than girls"). Items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (*I do not agree at all*). To gather evidence of construct validity, we performed a CFA. We used the Confirmatory Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA) as fit indexes. The model fits well when CFI and TLI > .90, and RMSEA ≤ .08. Regarding the CFA, the $\chi 2$ value and fit indexes were $\chi 2$ (1011, 5) = 54,864 (p < .01), RMSEA = .10, CFI = .94, and TLI = .89. CFI and TLI values indicated the scale is adequate for the purposes of the study, even the $\chi 2$ value and RMSEA are high, which is expected due to the large sample size, the small degrees of freedom and the simplicity of the model (Kenny et al., 2014). McDonald's Omega was .83.

■ *Decision-Making Self-Efficacy Scale.* To assess career decision self-efficacy, the Decision-Making Self-Efficacy subscale from the Career Self-Efficacy scale developed by Carbonero y Merino (2002) was used. This subscale consists of 13 items relating to students' self-confidence in their decision-making (e.g. "When I have to make decisions, the opinion of others influences me more than my own"). Items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (I do not agree at all) with the scores reverting to negative items. McDonald's Omega was .95.

■ *Inventory of Attitudes toward Career Choice.* To assess career adaptability, a reduced version of the Spanish adaptation of the Inventory of Attitudes toward Career Choice (Álvarez et al., 2007; Crites & Savickas, 1996) was used. This inventory is a particular measure of career adaptability for choosing a career (Chan et al., 2015; Savickas & Porfeli, 2011). The instrument is made up of two subscales: a) The *C*onfidence Subscale consists of 5 items related to the students' feeling of self-efficacy in overcoming obstacles and deciding on a career (e.g. "I can't understand how some people can be so certain about what they want to do"), McDonald's Omega was .81; b) The Concern Subscale is made up of 9 items relating to students' interest in making a career decision *(*e.g. *"*I am not worried about choosing a career, something will come up sooner or later*")*, McDonald's Omega was .79. The items were rated on a 4-point Likert-type scale, ranging from 1 (*I strongly agree*) to 4 (*I do not agree at all*).

■ Clarity of life-design Scale. This scale developed by Santana-Vega et al., (2016) was used to assess the degree of security that students have about their life design objectives. It consists of 3 items (e.g. "Planning my future is problematic for me") rated on a 4 point Likert-type scale, ranging from 1 (I strongly agree) to 4 (I do not agree at all). McDonald's Omega was .74.

Procedure

The objectives and characteristics of the study were explained to the school management teams. The management teams accepted the condi-

tions of participation, informed the teachers and the students' families and requested their agreement. The students were informed about the process to be followed, the confidentiality and anonymity of the data collected, and their consent was obtained for the completion of the instruments. The information was used anonymously following the Organic Law 3/2018 of December 5, on Personal Data Protection and Guarantee of Digital Rights, and was used strictly for research purposes. The administration of the instruments was carried out during class hours by the tutor teachers, and they were completed in a 40-minute session.

Data analyses

Data analysis was carried out using SPSS 21 statistical software and Mplus 8.2 software (Muthén & Muthén, 2017), and included: descriptive statistics for each variable, Pearson's correlation coefficient, analysis of variance, T-test contrast of means for independent groups, and the Cohen's d to assess the significant effects and the effect sizes. In order to check whether there were significant differences in the vocational variables according to gender stereotypes, 25% of the subjects with high scores and 25% with low scores on the stereotypes scale were selected. In addition, a structural equation model (SEM) was run to fully understand the relationships between the variables and to contrast a hypothesized model predicting the effect of Girls' Gender Stereotypes on Career Decision Self-Efficacy, factors of Career adaptability (Concern and Confidence) and Clarity of life-design. Standardized scores were used to simplify the interpretations and to reduce non-essential multicollinearity. The Chi-square (χ^2) and its associated probability (p), the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSA) were used. The model fits when CFI and TLI > .90, and RMSA ≤ .05. Regarding the estimation method, maximum likelihood with robust standard error was performed, as it has shown evidence of performing accurately even when data is non-normally distributed (Schmitt, 2011). Missing data were processed using the full information maximum-likelihood (FIML), which provides unbiased parameters in missing at random conditions and in cases where data is not missing at random (Enders, 2010).

Results

Preliminary analyses

Descriptive statistics and correlations between the variables are shown in Table I.

TABLE I. Means, standard deviations, and correlations between variables

	Mean	**SD**	**1**	**2**	**3**	**4**
1. Gender stereotypes	15.32	3.50	-			
2. Self-efficacy	38.30	5.38	.412**	-		
3. Concern	21.34	3.55	.488**	.470**	-	
4. Confidence	13.85	2.66	.237**	.443**	.451**	-
5. Clarity of life-design	11.45	2.51	.267**	.477**	.368**	.589**

** sig. < 0.05
Source: Compiled by author

Gender stereotypes and vocational variables

We found significant differences between the mean age scores of high and low stereotypes groups in all variables (Table II). Overall, results showed that the higher Girls' Stereotypes, the lower Vocational Self-Efficacy, Concern, Confidence, and Clarity of life-design.

Specifically, the contrast of means for Vocational Self-Efficacy showed that the group with lower stereotype had a significantly higher mean score ($M= 40.90$; $SD= 5.88$; $p < .01$) than the group with higher stereotype ($M= 35.15$; $SD= 5.33$). The effect size was high ($d= 1.02$). With regard to Career Adaptability, we also found significant differences between the mean average scores both in the Concern factor (high stereotype: $M = 12.12$; $SD = 2.51$; low stereotype: $M = 23.64$; $SD = .63$; $p < .01$) and in the Confidence factor (high stereotypes: $M = 8.11$, $SD = 2.37$; low stereotypes: $M = 13.83$, $SD = 2.75$; $p < .01$). The effect sizes were high for both Concern ($d = 6.32$) and Confidence ($d = 2.24$).

TABLE II. T-test according to gender stereotyping

	M	SD	t	gl	Sig	d
Vocational self-efficacy						
High stereotype	35.15	5.33	-13.919	810	.000	1.02
Low stereotype	40.90	5.88				
Concern						
High stereotype	12.12	2.51	-103.24	709.72	.000	6.32
Low stereotype	23.64	.63				
Confidence						
High stereotype	8.11	2.37	-29,841	481.57	.000	2.24
Low stereotype	13.89	2.75				
Clarity of life-design						
High stereotype	7.10	2.40	-8.345	850	.000	.61
Low stereotype	8.57	2.42				

Source: Compiled by author

Finally, regarding Clarity of life-design the contrast of means showed that the group with lower stereotype had a significantly higher mean score (M =8.57; SD = 2.42) than the group with higher stereotype (M = 7.10; SD = 2.40; $p < .01$). The effect size for Clarity of life-design was moderate (d = .61).

Test of the hypothesized explanatory model

To fully understand the relationship between the variables tested, a structural equation model (SEM) was used to contrast a hypothesized model predicting the effect of Girls' Gender Stereotypes on Career Decision Self-Efficacy, factors of Career adaptability (Concern and Confidence) and Clarity of life-design. The $\chi2$ test and fit indexes for the SEM were $\chi2$ (1011, 3) = 11.403 (p < .01), RMSEA = .05, SRMR = .021, CFI = .988,

TLI = .962. With regard to the relationships between the variables, Girls' Gender Stereotypes predicted Career Decision Self-Efficacy (β = .445; SE = .026; p < .001), and this, in turn, predicted Girls' Concern (β = .429; SE = .029; p < .001), Girls' Confidence (β = .410; SE = .025; p < .001), and Clarity of life-design (β = .337; SE = .034; p < .001). As the results show, a parsimonious model was obtained that fits the data, showing that the model is plausible to correctly explain the relationships between the variables tested (Figure II).

FIGURE II. Results of the structural equation model
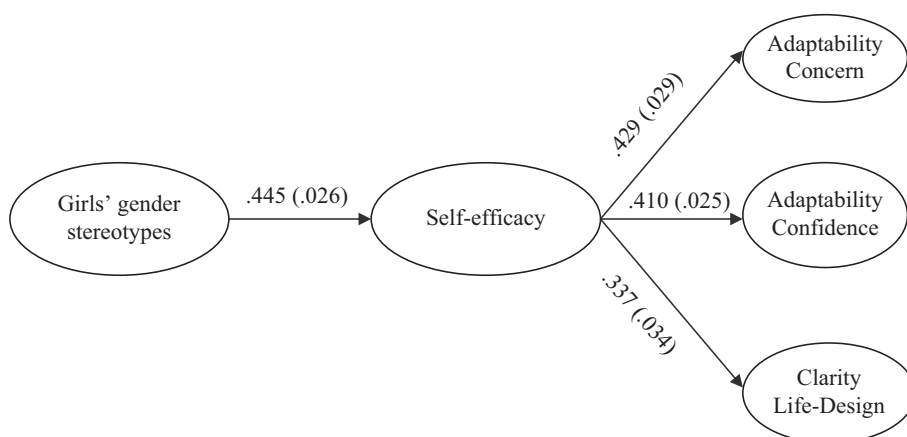
Source: Compiled by author

Discussion

Social progress in the field of gender equality is undeniable. However, stereotypes that establish gender-differentiated behavior patterns continue to persist; such stereotypes condition academic and socio-labour expectations and imply limitations in career development for both sexes (Villanueva-Blasco & Grau Alberola, 2019). In this sense, Koening (2018) points out the existence of prescriptive stereotypes for women and men. Women should be communal and avoid being dominant. Men should be independent, masculine in appearance, and interested in science and technology, and avoid being weak, emotional, shy, and feminine in

appearance. According to these stereotypes, girls often do not perceive themselves represented in scientific-technological careers, while boys do not perceive themselves represented in social and humanistic careers. If the aim is to empower female students to shape life designs free of social prejudices, it is necessary to analyze the mechanism through which vocational gender stereotypes modulate their vocational behavior. The purpose of the present research work was to analyze how adolescent girls' gender stereotypes are related to career development self-efficacy, career adaptability and clarity of life-design.

a) *Are there significant differences in career decision self-efficacy, career adaptability, and clarity of life-design according to girls' gender stereotypes?* The results obtained regarding gender stereotypes show that not all adolescent girls are vocationally empowered: there are those who consider that 'girls are less likely than boys to study what they want', or that 'boys tend to choose more difficult studies than girls'. These beliefs are the basis of vocational gender stereotypes that limit female students' career development (Blažev et al., 2017). Gender stereotypes simplify or ignore a socially complex and diverse reality, reducing girls' career decision self-efficacy, their concern and confidence in the decision-making process, and the clarity of their life-design (Dinella et al., 2014; Plante et al., 2019). Girls who maintain an unequal vocational gender stereotype tend to: 1) lack confidence in their ability to perform career development tasks and make professional decisions; 2) show no concern about their academic and professional future; 3) feel more uncertainty than confidence in facing the decision-making process. Developmental studies carried out from an ecological perspective confirm that these influences come from the closest environments, mainly family and school, and also from other systems such as media or cultural values. As children are socialized in these norms and values, they increasingly internalize those schemes and use them to construct expectations (Solbes-Canales, et al., 2020).

b) *Do gender stereotypes predict career decision self-efficacy and does this, in turn, predict career adaptability and clarity of life-design in adolescents girls?*

In accordance with our second aim we proposed a model to explain the impact of gender stereotypes on vocational variables. Our results show how gender stereotypes affects CDSE; in turn CDSE is an important cognitive mediator of career adaptability and clarity of life-design. These results coincide with and complement those obtained in previous studies (Bouchey & Harter; 2005, Brown, 2019; Eccles, 2011; Jo et al., 2016; Shin et al., 2019). The improvement of self-efficacy and career adaptability of adolescent girls involves the critical analysis of the beliefs underlying gender stereotypes; an analysis that allows them to become aware of the socio-cultural nature of such stereotypes, promotes their deconstruction and empowers them vocationally. Educational and vocational guidance should help adolescent girls to decipher and understand the relationship of gender stereotypes with academic and occupational decision-making processes (Kessels et al., 2014). Unmasking what is hidden under these stereotypes implies becoming aware of differential socialization practices based on gender, carried out in families, schools and the peer group (Ecless, 2011). These practices condition the career development of adolescent girls, to the extent that they assume as real the differences in self-efficacy and academic-work expectations between boys and girls.

Many people have private convictions and implicit beliefs that often rely on stereotypical associations without them realizing that is the case. Indeed, across different cultures and contexts, even those who are reluctant to claim that women are less competent may still believe that women are particularly sensitive and need to be protected by men (Ellemers, 2018). To answer to this situation it is necessary to carry out, among other actions: 1) girls and boy should analyze collaboratively the contents of textbooks and mass media contents in order to check if the women are represented in politic, economic and social life, and analyzing the reasons why they are not made visibles; 2) to encourage adolescent to critically analyze their immediate social context and to explore their "possible selves" in a dynamic and flexible way (Sávickas et al., 2009).

Some implications for the professional practice of school counselors are: a) Counselors must be activists to change educational practices governed by a patriarchal culture. They should encourage the analysis of discourses elaborated by students to high light gender biases in decision making. According to Sávickas et al. (2009) counselors should help boys and girls tell a story that represents their life trajectory; a story through which they can understand their own life issues, vocational personality

and adaptive resources. The role of the counselor should be to help adolescents formulate identity in their own words, how a given individual sees themselves and others in a particular context, and how they relate to others. Within the Tutorial Action Plan, awareness-raising activities, exploration of the self, exploration of the environment, exploration of the relationship between self and environment should be designed to analyze gender barriers in the development of the life-design. b) Career education programmes must be developed from a non-sexist approach to studies and professions. Such programmes should: to increase the adaptability of students to effectively manage their career development in a changing society; to promote analysis, discussion and reflection on the effect of personal, academic, family and social dimensions on decision making; to foster human, open and authentic dialogue with students so that they feel supported by significant others (Klehe et al., 2021).

Despite its strengths, the study has some limitations: a) The cross-sectional nature of the research does not allow us to establish a cause-effect relationship between the variables analysed; it would be advisable to carry out a longitudinal study. b) Likewise, a qualitative study could be conducted through discussion groups with adolescents in different educational stages and with different socio-familiar characteristics in order to examine their vocational stereotypes in greater depth, and to analyze how these stereotypes affect their self-efficacy and their career adaptability.

The research opens up new lines of study on vocational gender stereotypes in adolescent girls. Specifically, the following questions are posed for further research: a) What socio-familiar characteristics have the greatest impact on the development of vocational gender stereotypes?; b) how does the peer group contribute to reinforcing/eliminating these stereotypes?; c) how do the academic-professional trajectories of adolescent girls evolve according to their vocational stereotypes?; d) what personality factors characterize adolescent girls who maintain vocational stereotypes?; e) how can the deconstruction of gender stereotypes be facilitated in female students?; g) are vocational gender stereotypes maintained in students participating in vocational guidance programs?

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Development of graduates' transversal competences: the mobility program **Galeuropa**

Desarrollo de competencias transversales de los egresados universitarios: el programa de movilidad **Galeuropa**

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Abstract

The development of transversal skills, beyond those that are strictly academic, has become one of the central pillars of university education today. It is supported by the formation of the European Higher Education Area. This means that it is useful to identify all of the educational possibilities that help in the development of competences beyond the set curricula and activities in the university system, such as non-formal education programs. The objective of this study is to determine whether

university students' participation in a mobility program (Galeuropa) helps them to improve their transversal skills that are fundamental for employability. It also aims to identify the profile of university students who benefit the most from participation in this program. A questionnaire was applied to 439 young people (graduates participating in Galeuropa and final year university students). The results showed that the participants in the program demonstrated the greatest development of transversal competences (proactivity and personal adaptability, intercultural competence, and leadership). Non-formal education (particularly in mobility programs) helps reinforce academic education, especially in terms of youth employability.

Keywords: higher education, non-formal education, transversal competences, employability, mobility.

Resumen

El desarrollo de las competencias transversales, más allá de las estrictamente académicas, se ha convertido en uno de los pilares centrales de la educación universitaria actual, apoyada por la formación del Espacio Europeo de Educación Superior. Por ello, es conveniente identificar todas las posibilidades educativas que ayuden al desarrollo de dichas competencias, fuera de los planes de estudio y actividades establecidas en el sistema universitario, como los programas de educación no formal. El objetivo de este estudio es determinar si la participación de los estudiantes universitarios en un programa de movilidad (Galeuropa) les ayuda a mejorar las competencias transversales fundamentales para la empleabilidad. También pretende identificar el perfil de los estudiantes universitarios que más se benefician de la participación en este programa. A tal fin, se aplicó un cuestionario a 439 jóvenes (titulados que participan en Galeuropa y estudiantes universitarios de último curso). Los resultados mostraron que los participantes en el programa demostraron un mayor desarrollo de las competencias transversales (proactividad y adaptabilidad personal, competencia intercultural y liderazgo). Así pues, la educación no formal (especialmente en los programas de movilidad) contribuye a reforzar la educación académica, especialmente en lo que respecta a la empleabilidad de los jóvenes.

Palabras clave: educación superior, educación no formal, competencias transversales, empleabilidad, movilidad.

Introduction

Universities have faced a series of unprecedented changes in recent years and especially since the beginning of the 21st century. Their principles

and functions have been reformulated from a social and more strictly educational point of view. In Europe, the shaping of a new model of university has run in parallel with the creation and consolidation of the European Higher Education Area (EHEA), which promulgates the guiding principles of a university education meeting the requirements of the post-industrial knowledge society, where knowledge and technology have become the main driving forces of development (Santos Rego, 2016).

The university is the main institution through which the new social model is articulated, and the requirements of the university justify the wholesale changes being made to European higher education. Various policy proposals and ministerial announcements have highlighted particularly important issues. These include increased mobility, a learning process centered on students and working autonomously, strengthening the social dimension of learning and links with the community, and improving student employability through focusing on the development of transversal competences (Gargallo et al., 2011; Santos Rego et al., 2020).

The new university dynamic is expected to contribute to the proper development of competencies that must ensure better personal and professional development for students at a time when the realities of work are in constant flux (Välimaa & Hoffman, 2008). All of this should be considered without ignoring the high rates of youth unemployment which, in the case of Europe, put Greece (31.1%), Spain (29.8%), and Italy (24.2%) at the top of an extremely concerning ranking[1]. Almost two decades ago, the Commission of the European Communities (2003) warned that universities in the knowledge society faced new challenges and expectations, since social needs meant that technical and specific learning had to be complemented with transversal competences and life-long learning opportunities.

Therefore, the links between university and employment have had to become increasingly close. Examples of this include the recent meetings and sessions of the EHEA (Yerevan, Paris, and Rome) wherein direct reference was made to the need to improve graduate employability through innovative training in line with changes in the labor market and 21st century job profiles. However, this does not mean that the university will turn into a mere tool in the service of employers for the technical

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[1] Eurostat data for October 2021: https://ec.europa.eu/eurostat/statisticsexplained/index.php?title= Unemployment_statistics#Youth_unemployment

training of workers. The university-employment relationship needs to be understood from the dual perspective proposed by Escámez & Sanz (2017) who spoke of a university that responds to the logic of the market and/or human development, both orientations being understood as necessarily coexistent. In short, if human capital is perceived as an indicator of economic and social growth and prosperity, the university has an unquestionable role to play in workers' lifelong learning processes which should lead it to pay attention to its graduates' chances of finding and maintaining employment (Välimaa & Hoffman, 2008).

Given these arguments, and with the aim of training future professionals and citizens, higher education must provide students with a set of generic and transversal learning content which, together with the mastery of disciplinary content, will enable future graduates to perform successfully in a labor market and social environment that are characterized by instability and accelerated change (Barrie, 2006). This was stated in the Bucharest Communiqué (2012), which called for combining transversal, multidisciplinary, and innovative competences with those of a specific type, in order to properly meet the needs of the labor market.

For all of these reasons, it is advisable to explore educational channels and spaces that would allow for the broadening of the competences acquired in the classroom. There is no doubt about the possibilities that have been opened up by initiatives such as professional internships, problem-based learning, and service-learning at the formal and curricular level (Santos Rego et al., 2020), but experiences and programs in non-formal education should not be ignored. In fact, the development of transversal and employability-related competences can be further strengthened through participation in these initiatives that take place outside of the classroom, but which offer young people the opportunity to acquire contextualized learning and to connect to the world of work. This type of learning may even be considered to have better operability and outreach, since it is acquired within a context in which it is useful.

The present study focuses on youth mobility programs, which are an ideal means of supporting higher education institutions in their quest to contribute to the development of global citizenship. However, Rodríguez-Izquierdo (2022) indicated that it was worth determining how these international experiences were reflected in the development of student learning, including intercultural learning. That is not to ignore the impact of these programs on the improvement of social commitment, graduate employ-

ability, or intercultural competences, since contact with other cultures improves social and human capital, which are catalysts of employability (Bracht et al., 2006; Jones, 2013; Vázquez-Rodríguez et al., 2021).

The specific aim of the present study is, firstly, to analyze whether students' participation in the Galeuropa mobility program[2] enables them to improve their transversal competences, which are fundamental for their employability. Secondly, the aim is to discover the profile of university students who benefit the most from participation in this program. The Galeuropa program is an initiative of the regional government in Galicia in Spain (Xunta de Galicia). It started in 2012 with the aim of strengthening the mobility of young people aged between 18 and 30 with university or vocational degrees, facilitating the discovery of cultural diversity and richness, and promoting the acquisition of knowledge, competences and qualifications, which would contribute to their training and subsequently to their finding employment. The most recent round of the program was in 2019, because due to the COVID-19 pandemic, it was suspended owing to the difficulties of international travel.

The objectives of the Galeuropa project include improving participants' general competencies, their employability (especially for those who are not in education or training), and strengthening vocational training programs as a complement to the personal and professional development of the youngest participants. The program participants select their destinations according to their personal and professional interests. The program is open to young people aged 18- 30 who have gained university or vocational qualifications in the previous five years and who have sufficient language skills.

The length of the program has grown continuously, from a maximum stay of 4 weeks in 2012 to a minimum stay of 2 months (and a maximum of 4 months) in the most recent round (Santos Rego et al., 2018).

Non-formal education, university, and the development of transversal competences

Non-formal education can be defined as an «organized educational process that takes place alongside mainstream systems of education and

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[2] https://xuventude.xunta.es/programas-eu/galeuropa

training, and that does not typically lead to certification. Individuals participate on a voluntary basis and the individual is usually aware that (s)he is learning» (Souto-Otero et al., 2013, p. 12). Based on this definition, these activities can complement the training provided by higher education institutions, as they allow the consolidation of generic and transversal learning which must accompany specific education in each field. They may also involve a direct approach to the students' potential professional activity (Santos Rego et al., 2018; Souto-Otero, 2016). Furthermore, what non-formal educational programs provide in comparison to formal training is better procedural learning, derived from practical actions and participation in solving real-life problems (Colom, 2005).

However, these kinds of activities have not always enjoyed recognition in university education. As suggested by Fernández García & Rodríguez Menéndez (2005), between the 1970s and the advent of the EHEA, non-formal education in European universities has gone through three stages: A first period where it had no place because of the rigidity of the curriculum and the prevalence of theoretical learning; a second stage, in which practice began to appear in university education; and a third stage, with the Bologna Process, which introduced and encouraged programs close to non- formal education, such as volunteering, youth entrepreneurship programs, and mobility. Nevertheless, as Talbot (2015) acknowledged, perhaps the main reason for the introduction of non- formal learning in the university was related to advances in theories of economic growth and human capital. This author argued that higher education institutions were seen in the political agenda as pillars of economic development and growth, paving the way for a readjustment of the university system in order to promote new models of learning and development of competences.

From the perspective of human capital, investment in education and training is essential to strengthen university graduates' employability (Becker, 1962, 1994; Schultz, 1961). Many studies have highlighted the importance of developing various types of generic competencies in university to promote students' entry and proper adjustment into employment and the wider social world. There is evidence of a skill mismatch between the transversal competencies students develop in the university system and what employers seek (Freire et al., 2013; Santos Rego et al., 2018).

In this context, non-formal education, which is understood as the large set of social and educational activities done outside of formal, regulated

institutions, has become a keyway of establishing better links between the academic world and the community. These types of educational programs complement university students' training and improve their employability as part of lifelong learning (Colom, 2005). In this study, we focus on non-formal mobility programs which, unlike university-led programs such as ERASMUS+, are run by non-academic institutions (mostly local government) and have become a means to extend university training in international contexts (Vázquez-Rodríguez et al., 2021).

The positive coexistence of higher and non-formal education in recent years is a consequence of the current university training framework, in which the guiding principle is the development of competences through students' autonomous work. In European universities specifically this idea is reflected in the proposals from the Tuning Project (González & Wagenaar, 2003), which acknowledges that university education must pay equal attention to the development of specific competences (strictly academic and associated with each field of study) and generic, transversal competences (transferable to any degree). The purpose of combining both types of learning is quite clear and is aimed at improving graduate employability, which are the competences required for adequately accessing and retaining employment (Sá & Sherpa, 2018).

This model, based on generic competences, is the result of a dialog between universities and social and professional bodies that is aimed at defining the basic learning content for various professions (Villa & Poblete, 2007). In this regard, Vilcea (2014) stated that a university culture focused on quality should promote learning content which would go beyond the professional field of immediate reference for each degree, and was confident that the introduction of non-formal education programs would be beneficial in this context. Nevertheless, the perspective of the higher education institutions and employers does not always agree, because, as Sá & Sherpa (2018) stated, the curriculum tends to prioritize theoretical content over practical application, somewhat hindering the development of transversal competences. In any case, involvement in non-formal education activities is valued by employers and recruiters in access to employment (Souto-Otero, 2016).

The issue at stake is ultimately that of understanding non-formal education as part of the same continuum as formal education, with the aim of preparing individuals for the changes and innovations that they will have to face in both their personal and professional lives (Colom, 2005).

This is all occurring at a time when a university degree is no longer a guarantee of a job as it was in the past, meaning that degrees are losing their status as a possible «advantage » in a labor market characterized by being highly competitive, in which extracurricular activities become more important in graduates' education (Tomlinson, 2008).

Research has shown how these educational programs can train competences which prove to be very useful in terms of young people's employability (Santos Rego & Lorenzo, 2019). In this regard, Souto-Otero (2016) used the «Youth organizations and employability (YOE) database», which collected 1076 responses from young people from more than 40 European countries, and concluded that those who participated in non-formal education activities within the framework of youth organizations experienced improvements in their capital in three dimensions:

- Human capital, which the author equated with «soft skills», highlighting communication skills, adaptability and flexibility, teamworking skills, intercultural skills, and self-confidence.

- Social capital, given that 80% thought they established contacts and networks which would be useful for them in the future and two-thirds reported that these contacts would be useful for them in finding a job.

- Psychological capital, in terms of resilience, with the respondents also stating that they expanded their expectations regarding job-seeking, both in terms of how hard they would look and the type of work or locations they would look at.

The same author had previously conducted a study (Souto-Otero et al., 2013), based on a direct sample of 1301 young Europeans who had participated in non-formal education, which were confirmed by these results. The same soft skills produced the most significant improvements and these were the skills that employers reported as being the most sought-after. Giancaspro & Manuti (2021) reported that involvement in volunteer work was linked to the development of personal competences (self-awareness, taking responsibilities, and respect), communication competences (managing discussions, building social networks), and interpersonal competences (teamwork, capacity to adapt to new situations, negotiation). Similarly, in a study on trainee schoolteachers, Tang et al. (2017) found that participation in these kinds of programs enabled them to improve their competence in the classroom, gener-

al pedagogical knowledge, organizational and systemic learning, and their teamworking competence. Non-formal education can also facilitate flexible and tacit learning environments, which can contribute to the development of entrepreneurial competences in university students (Ripollés & Michavila, 2020).

Mobility programs and youth employability in a global society

Within the framework of non-formal education, mobility programs are activities which, although complex to implement, have a considerable impact on young people's employability by offering them the opportunity to gain life and work experience at an international level (Santos Rego & Lorenzo, 2019; Van Mol et al., 2021). The Commission of European Communities (2009) considers educational mobility as the means of turning the European Union into an optimal space for developing young people's potential and talent as well as advocating in favor of cross-border mobility beyond the formal education system, such as the case of young volunteers.

Mobility is even more important in higher education, since the EHEA considers it as the cornerstone of processes for harmonizing, restructuring and internationalizing university systems, in pursuit of an open and borderless educational area, as required by the Lisbon European Council (2000). However, it also responds to a new educational model, since it allows a contextualized education (in this case at an international level), which, by basing itself on the experience of the students, places the learning processes into specific circumstances that occur when in contact with other people (Ortega & Romero, 2021).

Mobility goes beyond the strictly academic sphere, in which it is part of study plans and, in the case of the European university system, has been the subject of robust development thanks to the ERASMUS program (currently known as ERASMUS+) (Haug, 2010). The matter concerning us specifically is the potential of mobility as a non-formal education strategy, which has grown considerably in recent years (Devlin, 2017). Although many mobility initiatives were designed to favor young people who were not part of the formal system, many of the participants are still students, particularly university students (Şenyuva & Nicodemi, 2017). This indicates that the social and human capital of young people and their families is a variable that directly influences the decision to become

involved in these international experiences (Vázquez-Rodríguez et al., 2021). In addition, from the perspective of their preparation for the labor market, research shows that students benefit more from participating in occupational mobility (internship abroad) than in academic programs (study abroad) (Petzold, 2021; Van Mol et al., 2021).

Since having a degree no longer guarantees employment, given that graduates are also required to have experience, for which they would need to work, international mobility (e.g., the European Voluntary Service) enters the scene as a resource which helps them develop competences and gain experience beyond precarious jobs or unpaid internships (Şenyuva & Nicodemi, 2017). Several studies have demonstrated the possibilities offered by educational mobility. It helps students to develop competences and, given that these experiences are in an international context and outside of their comfort zones, they can lead to improvements in both human and social capital, with significant results in terms of employability (Potts, 2015; Vázquez-Rodríguez et al, 2021). The Council of the European Union (2011, p. C 199/1) echoes the potential of mobility in young people's educational and professional development:

> Learning mobility, meaning transnational mobility for the purpose of acquiring new knowledge, skills and competences, is one of the fundamental ways in which young people can strengthen their future employability, as well as their intercultural awareness, personal development, creativity and active citizenship.

The ERASMUS program is a good example in this regard. Jacobone & Moro (2015) carried out an experimental study and found that students participating in this European program showed significant improvements over non-participating peers in language skills, employability —in terms of generic competence development—, self-efficacy and intercultural sensitivity. Looking at intercultural competence, including with ERASMUS students, Almeida et al. (2016) showed that international experience completing formal and non-formal education activities had an impact on the respective learning processes.

Along similar lines, Souto-Otero et al. (2013) concluded that young people who participated in non-formal education abroad experienced better improvement in foreign language skills, intercultural skills, and leadership than those who were involved in these programs in their coun-

try of origin. In addition, Geudens et al. (2017), starting from the RAY (Research-based Analysis of Youth in Action) project, noted the development of transversal competences in international youth programs: communication in a foreign language, social and civic competences, entrepreneurship, and cultural awareness. This study also highlights different development depending on the profile of the young people, as those with few opportunities exhibited better results in terms of self-confidence, career-goals, ideas about further education, participation in political life, intercultural skills, and planning and organizational skills. This does not match the results of the study by Souto-Otero et al. (2013), in which young people with a higher level of education experienced the greatest improvement in competences derived from non-formal education activities.

In short, international experiences, both in the academic and non-formal framework, influence the development of young people's transversal competences. This is what Wordelmann (2017) proved in a study on the «Integration durch Austausch» (Integration through Exchange) mobility program in Germany. At the end of the program, the managers of the host institutions confirmed that the participants had improved in a range of personal and professional competences. When carrying out a follow-up on those young people 6 months later, the author found that 35% were already working, whilst 25% were continuing their education.

Furthermore, when mobility as a non-formal strategy takes place at the university level, students can observe and learn about their profession's dynamics and procedures in other countries (Tang et al., 2017). This must necessarily be accompanied by a serious process of reflection which would allow them to analyze their experience within a rigorous, critical, and comparative framework. Certain variables must be taken into account which may affect the degree to which students develop these transversal competences when participating in non-formal education programs. Young people who are involved in youth organizations more frequently and for longer periods of time experience a greater development of competences and furthermore, the higher the level of their formal education is, the greater the development of competences (Souto-Otero et al., 2013). In the case of international mobility, in addition to the duration of the stay, the level of involvement in the activities of the host entity also has a direct impact (Wordelmann, 2017). Similarly, participants need appropriate linguistic, cultural, and psychological preparation, before starting

their involvement in the program, which would help them to cope with the challenges and problems that they will have to face. There also need to be processes on their return aimed at reflecting on their experiences in order to convert them into meaningful learning (Wordelmann, 2017). The Dutch Xplore mobility program is a good example of these support activities upon return, in which the young people share their experience with a broad audience by means of presentations, theater, workshops, etc., thereby demonstrating better results in acquired competences than other, similar programs (Janssen & Nuyens, 2013).

At this point, we present a study analyzing how participation in a mobility program (Galeuropa) allowed university students and graduates to improve the development of transversal competences in a non-formal education framework. We also aim to identify the variables that define the subject profile that obtained the most benefit from the program.

Method

Participants

There were 439 participants in this study, who were selected by means of non-probabilistic intentional sampling from the university students involved in the 2013 and 2014 editions of the Galeuropa mobility program and from university students at the three public universities in Galicia (University of Santiago de Compostela, University of A Coruña, and University of Vigo). The sample was made up of 160 male (36.4%) and 279 female subjects (63.6%), with a mean age of 21.14 years (SD=3.78). Informed consent was obtained from all the subjects involved in the study. The participants were divided into three groups:

■ 194 university graduates who had participated in the Galeuropa program (44.2%): 73 male (37.6%) and 121 female subjects (62.4%), with a mean age of 27.51 years (SD=3.58).

■ 145 students in the final year of a bachelor's degree or studying for a master's degree (33%) at three public universities who had been involved in volunteer action organizations during the previous 12 months: 52 male (35.9%) and 93 female subjects (64.1%), with a mean age of 20.11 years (SD = 2.29).

■ 100 students in the final year of a bachelor's degree or studying for a master's degree (28.8%) at three public universities who had not participated in such organizations in the previous 12 months: 35 male (35%) and 65 female subjects (65%), with a mean age of 20.81 years (SD = 2.39).

Instrument

Two questionnaires were administered: the «Questionnaire on non-formal education and youth employability» (for participants in the Galeuropa Program) and the «Questionnaire on competence development for youth employability» (for non-participants) (Santos Rego, 2015; Santos Rego et al., 2018). In both cases, a scale of generic competences was included, comprising14 significant items (initially there were 20, and the number was reduced following exploratory and confirmatory factor analysis) (Vázquez-Rodrí-guez, 2020). The purpose of this scale is to evaluate the degree to which the subjects feel that they have developed a series of generic competences considered by scientific literature as fundamental for youth employability.

The questionnaire for Galeuropa participants was sent to the personal e-mail of each of the participants who consented to participate in possible surveys when they applied for the program. Data collection with this questionnaire was carried out between July and September 2015. The second questionnaire was administered in person in university classrooms, collectively, under the guidance of members of the research team throughout October 2015.

The dimensionality of the scale was determined first by an Exploratory Factor Analysis (EFA), using Principal Components Analysis and Varimax rotation (Vázquez-Rodríguez, 2020). The initial extraction yielded three significant factors which explained 50.56% of the variance: proactivity and personal adaptability (items 2, 3, 4, 5, 6, 8, 9 and 10), intercultural competence (items 1, 7, and 11), and leadership (items 12, 13 and 14). The rotated component matrix produced the following results:

■ Proactivity and personal adaptability (α= .79): item 3 (.671), item 2 (.645), item 9 (.640), item 5 (.600), item 4 (.599), item 6 (.565), item 10 (.493) and item 8 (.474).

■ Intercultural competence (α= .65): item 11 (.785), item 7 (.776), and item 1 (.501).

■ Leadership (α= .68): item 12 (.808), item 13 (.808), and item 14 (.564).

Data analysis

In order to determine whether young people who participated in non-formal education programs were more competent in various skills which are fundamental to employability than those who are not involved in such programs, we performed an Analysis of Variance to find statistically significant differences between the three groups in the 14 transversal competences in the scale. Next, given the differences in age —as the program participants were graduates and the comparison groups were composed of students in their final years of bachelors' or masters' degrees— we performed an Analysis of Covariance to control for the effects of age on the results. Finally, we identified the profile of young people who benefited the most from these programs by means of a Student's t-test.

Results

The data analysis showed that there were statistically significant differences between the groups (Table I), except for the factor «leadership capacity», where there were no differences between the participants in one of its items (I am capable of coordinating a group of people).

The post-hoc tests showed differences between the young people involved in the Galeuropa program and the other two groups, with the former attaining higher levels of competences. In other words, they had greater proactive capacity and personal adaptability, higher intercultural competence, and greater leadership capacity. More specifically, the largest differences were in the items related to intercultural competence.

Given that the members of the Galeuropa group were older (27.51) than the members of the other two groups (20.11 and 20.8), the age variable might have co-varied with the dependent variable, which could explain the better development of transversal competences in the group that participated in the program. Hence, we performed an ANCOVA

TABLE I. ANCOVA between groups on transversal competences, the co-variable being Age

Dependent variables	Groups	Mean/SD	F	Post Hoc	Age
1. I adapt easily to other cultural environments	1	3.69 (.584)	F(2,438)=23.689***	1-2*** 1-3***	$F_{(2,438)}=1.19$
	2	3.30 (.578)			
	3	3.30 (.595)			
2. I am aware of my capabilities and attitudes	1	3.42 (.591)	F(2,438)=5.225**	1-2**	$F_{(2,438)}=.199$
	2	3.20 (.640)			
	3	3.31 (.647)			
3. I find it easy to take a position on a problem	1	3.18 (.585)	F(2,438)=7.646***	1-2* 1-3**	$F_{(2,438)}=.289$
	2	2.98 (.679)			
	3	2.90 (.628)			
4. It is easy for me to evaluate and accept the consequences of my decisions	1	3.30 (.615)	F(2,438)=7.927***	1-2** 1-3*	$F_{(2,438)}=.112$
	2	3.05 (.641)			
	3	3.07 (.671)			
5. I am always honest with myself and others	1	3.39 (.637)	F(2,438)=6.174**	1-2**	$F_{(2,438)}=1.35$
	2	3.15 (.625)			
	3	3.22 (.705)			
6. I am able to identify and control my own emotions as well as the emotions of others	1	3.08 (.678)	F(2,438)=14.905***	1-2*** 1-3**	$F_{(2,438)}=.751$
	2	2.68 (.731)			
	3	2.77 (.712)			
7. I can communicate in a foreign language	1	3.45 (.691)	F(2,438)=30.804***	1-2*** 1-3***	$F_{(2,438)}=.988$
	2	2.90 (.847)			
	3	2.79 (.913)			
8. I am able to generate new ideas (solutions, products, viewpoints, etc.)	1	3.28 (.625)	F(2,438)=3,952*	1-2*	$F_{(2,438)}=1.628$
	2	3.12 (.584)			
	3	3.13 (.506)			
9. I am able to find alternatives to obstacles and difficulties	1	3.26 (.609)	F(2,438)=4,019*	1-2*	$F_{(2,438)}=.370$
	2	3.11 (.538)			
	3	3.11 (.510)			
10. I am able to analyze information from a critical point of view	1	3.42 (.608)	F(2,438)=6.016**	1-2* 1-3**	$F_{(2,438)}=.347$
	2	3.25 (.583)			
	3	3.20 (.534)			
11. I am comfortable in an international environment	1	3.55 (.619)	F(2,438)=22.751***	1-2*** 1-3***	$F_{(2,438)}=1.53$
	2	3.14 (.661)			
	3	3.11 (.723)			
12. I like working in a team	1	3.53 (.645)	F(2,438)=13.102***	1-2*** 1-3*	$F_{(2,438)}=.001$
	2	3.14 (.755)			
	3	3.29 (.743)			

(continued)

TABLE I. ANCOVA between groups on transversal competences, the co-variable being Age *(continued)*

Dependent variables	Groups	Mean/SD	F	Post Hoc	Age
13. I easily relate with other people	1	3.42 (.710)	F(2,438)=5.239**	1-2*	$F_{(2,438)}=.007$
	2	3.18 (.794)			
	3	3.20 (.682)			
14. I am capable of coordinating a group of people	1	3.07 (.709)	F(2,438)=.247		$F_{(2,438)}=.069$
	2	3.07 (.663)			
	3	3.02 (.586)			

* p < .05, ** p < .01, *** p < .001

* 1st Group: Galeuropa; 2nd Group: Participants in volunteer action organizations: 3rd Group: Non-participants in volunteer action organizations.

(Analysis of Covariance) to statistically control for the effect of age and to assess whether there were statistically significant differences in the 14 transversal competences in the scale. As the table above shows, age did not significantly affect the results.

In addition, we identified the participant profile that benefited most, in terms of competence improvement, from the Galeuropa program (3rd quartile). This included 164 young people, mostly female (64.6%), with a mean age over 27 years old (M=27.47; SD=3.11). Their parents had primary education (39.9% father and 38% mother) or university education (35.6% father and 35.6% mother), 44.6% declared having participated in youth volunteer action organizations in the previous 12 months, and 78% were involved in activities related to the work that they would like to do in the future.

At the other extreme (1st quartile) there were 30 young people with a mean age of 28.03 (SD=5.423), equally divided (50%) between men and women. The educational levels of both their mothers (50% primary education and 28.6% university education) and fathers (46.7% primary education and 26.7% university education) were lower than in the previous group. They reported high participation (60%) in youth volunteer action organizations in the previous year, but no activities or very few activities related to their job expectations (80%).

Comparing the two groups, we found statistically significant differences between the subjects in the first quartile (n=30) and those in the third quartile (n=164) in all competences analyzed (Table II).

TABLE II. Differences in competences between the highest and lowest scoring participants of the Galeuropa group

Dependent variables	Groups	Mean/SD	t
1. I adapt easily to other cultural environments	1st quartile 3rd quartile	2.93 (.828) 3.82 (.398)	$t_{(31.500)}$=-5.768***
2. I am aware of my capabilities and attitudes	1st quartile 3rd quartile	2.53 (.571) 3.29 (.507)	$t_{(36.757)}$=-5.396***
3. I find it easy to take a position on a problem	1st quartile 3rd quartile	2.80 (.664) 3.40 (.561)	$t_{(192)}$=-7.390***
4. It is easy for me to evaluate and accept the consequences of my decisions	1st quartile 3rd quartile	2.80 (.714) 3.50 (.559)	$t_{(192)}$=-5.200***
5. I am always honest with myself and others	1st quartile 3rd quartile	2.47 (.730) 3.20 (.605)	$t_{(192)}$=-6.022***
6. I am able to identify and control my own emotions as well as the emotions of others	1st quartile 3rd quartile	2.43 (.774) 3.68 (.505)	$t_{(36.648)}$=-5.149***
7. I can communicate in a foreign language	1st quartile 3rd quartile	2.90 (.691) 3.47 (.847)	$t_{(192)}$=-5.781***
8. I am able to generate new ideas (solutions, products, viewpoints, etc.)	1st quartile 3rd quartile	2.63 (.669) 3.40 (.539)	$t_{(192)}$=-6.905***
9. I am able to find alternatives to obstacles and difficulties	1st quartile 3rd quartile	2.60 (.675) 3.38 (.512)	$t_{(192)}$=-7.312***
10. I am able to analyze information from a critical point of view	1st quartile 3rd quartile	2.97 (.809) 3.51 (.525)	$t_{(192)}$=-4.707***
11. I am comfortable in an international environment	1st quartile 3rd quartile	2.83 (.699) 3.68 (.505)	$t_{(34.739)}$=-6.361***
12. I like working in a team	1st quartile 3rd quartile	2.97 (.809) 3.63 (.556)	$t_{(192)}$=-5.545***
13. I easily relate with other people	1st quartile 3rd quartile	2.50 (.861) 3.59 (.530)	$t_{(33.133)}$=-6.677***
14. I am capable of coordinating a group of people	1st quartile 3rd quartile	2.30 (.702) 3.21 (.614)	$t_{(192)}$=-7.319***

* p < .05, ** p < .01, *** p < .001

As the table shows, the 3rd quartile group always scored higher, thereby demonstrating that they benefited more from this program. The program was more effective for female subjects whose parents had higher educational levels and who participated in volunteer organizations where they took part in activities related to the work that they wanted to do in the future.

Conclusions

One of the major challenges for higher education in the 21st century is for students to develop transversal competencies. For this reason, and because of the consequences of this type of learning for employability, there is a pressing need to find places and times that allow students to acquire this type of learning outside the classroom and beyond their academic schedules. One good example of this is provided by non-formal education programs (Santos Rego & Lorenzo, 2019). This is the idea behind this study, in which we were able to see how participation in international youth mobility programs allowed university students to acquire a series of transversal competences which will ultimately have a positive impact on their chances of finding and keeping a job (Potts, 2015; Vázquez- Rodríguez et al., 2021).

In short, we showed that participation in mobility programs complements and enhances university students' training. This contributes to the better development of generic learning which, being common to all university degrees, should ensure better preparation for participation in a social context characterized by uncertainty and rapid transformation. More specifically, the results showed that young people who participated in the Galeuropa program demonstrated a higher level of development in the competences we evaluated than students in their last year of studying for a bachelor's or master's degree, the latter group being divided according to whether or not they had been involved in volunteer action organizations. The graduates who participated in this program exhibited greater proactive capacity and personal adaptability, greater intercultural competence, and greater leadership capacity, the latter dimension containing the only element in which the differences were not significant: The capacity to coordinate a group of people (Santos Rego et al., 2018; Vázquez- Rodríguez, 2020).

The potential of the Galeuropa program in terms of developing transversal competencies comes from the fact that the participants themselves choose their destination and the field in which they participate, based on their own motivations (Santos Rego et al., 2018). These non-formal programs put students in similar situations to their future professions, promoting the development of appropriate transversal competences that will improve their employability and social inclusion (Souto-Otero, 2016).

Our study confirms the results of previous studies, such as Souto-Otero et al. (2013), who reported that in addition to foreign language skills,

leadership and intercultural skills, there are aspects in which the young people who participate in non-formal education abroad are positively differentiated from those who are involved in such programs in their own country. It is worth highlighting the possibilities offered by mobility programs in aspects related to students' intercultural development by putting them in international contexts in which cultural diversity marks the course of activities that, in most cases, are linked to their future professional practice. Our findings agree with those of Rodríguez-Izquierdo (2022), in demonstrating positive correlations between mobility experiences and intercultural sensitivity, given that such experiences contribute to reducing ethnocentrism. This is confirmed by research focused on the evaluation of mobility programs within the formal, academic system (Jacobone & Moro, 2015) as well as the framework of non-formal education and youth organizations (Cheng & Zhao, 2006; Geudens et al., 2017).

International mobility enables young people to improve their human capital. Our results agree with the study by Souto-Otero (2016), who showed that participation in non-formal educational activities led to an improvement in human capital, defined in terms of soft skills, highlighting adaptability, flexibility, and intercultural skills. The transversal competences which develop the most during mobility are also those most in demand by employers (Nuijten et al., 2017), which highlights the possibilities that programs such as Galeuropa offer for improving young people's employability. However, our results also indicate that these programs are not equally effective for all young people, because the participant profile is strongly determinant. The effects were greater for women whose parents had higher educational levels and who were involved in activities related to the work they wanted to do in the future. That said, there are several other important aspects, such as the duration of the experience, the level of involvement of the host organization, the young people's previous training, and the eventual dissemination and communication of their experience to various audiences and agents (Janssen & Nuyens, 2013; Souto-Otero et al., 2013; Wordelmann, 2017). Young people's educational and socioeconomic levels also play a role, although studies in this regard have shown mixed results. A study by Geudens et al. (2017), showed that those with fewer opportunities experienced greater development of competences, while Souto-Otero et al. (2013) found the greatest development of competences in young people with higher levels of education. It is noteworthy that young people's human and social

capital (especially that reflected by their family situation) may result in different motivations for getting involved and different results. There is "social selectivity" conditioning involved —in addition to the impact of non-formal education programs— which highlights the effect of variables such as the socioeconomic level, financial resources, and family support (Holloway & Pilmott-Wilson, 2014; Purcell et al., 2012; Vázquez-Rodríguez et al., 2021). Similarly, aspects such as the heterogeneity of the labor markets of the destination countries, or of the university systems, in the case of academic mobility, could also explain the results obtained by the young people (Van Mol et al., 2021).

The study is not without limitations. Perhaps the main limitation is the age of the data we analyzed, as it comes from 2013 and 2014, although there are various reasons to believe it to be useful. Firstly, there were no studies in Spain looking at the development of transversal competencies as a result of non-formal educational mobility, as the only studies which have been done have focused on the ERASMUS+ program (formal, academic mobility) or volunteer programs (non-formal programs without mobility). In addition, although the most recent edition of the program took place in 2019, the most recent data available is from 2014, and it was impossible to expand the sample due to university data protection policies.

Our results are relevant with regard to what Brown & Hesketh (2004) defined as the "economy of experience". In other words, if employers pay increasing attention to complementary indicators that they base their decision-making on in personnel selection processes, participation in non-formal education programs, such as Galeuropa, will compensate for young people's limited professional experience. At the same time, employers expect them to have a set of transversal competences that are not recognized in the degree programs in the formal education system (Brown & Hesketh, 2004; Souto-Otero et al., 2013; Tomlinson, 2008).

In view of the above, our results underscore the usefulness of non-formal education as a complement to what is provided within the framework of the university system, since it encourages more instrumental learning that will help students to deal with the changes they will have to face in their personal and professional lives (Colom, 2005). Within the framework of non-formal education programs, we highlight the potential of international mobility programs, such as Galeuropa, since they undoubtedly stimulate the development of competences that can be acquired through

participation in academic mobility programs (Jacobone & Moro, 2015). Precisely for this reason, youth mobility is becoming a topic of interest for university systems beyond Europe, highlighting thereby the case of countries such as Australia (Potts, 2022) or the United States (Davis & Knight, 2021). In our context, if mobility is a strategic issue for the European Union (Teichler, 2009), this study shows that, apart from contributing to the internationalization of the European university system, mobility also ensures a type of learning that is more in line with the educational interests proposed by the EHEA, combining specific and transversal training, and thereby contributing to improved student employability.

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Teacher credibility and learner engagement in traditional and nontraditional education university students

Credibilidad docente y engagement académico en estudiantes tradicionales y no tradicionales de Ciencias de la Educación

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Abstract

Teacher credibility and learner engagement are factors associated with academic performance of university students. In the case of nontraditional students, defined as those who join the university over 24 years old or combine studies and work, teacher credibility and learner engagement are factors that are especially relevant for their integration and permanence in the university. The aim of this study was to describe nontraditional students' perceptions of teacher credibility and their learner engagement and compare them with these same traits in traditional students. The sample included 483 students, of which 353 were traditional students and 130 nontraditional students. They were administered the

Credibility Scale in University Professors and the Classroom Engagement Scale. The construct validity and reliability have been assessed through confirmatory factor analysis and the calculation of Cronbach's alpha. The analysis has been supported by descriptive statistics and the contrast of means through the multivariate analysis of variance. The results show high levels of perceived teacher credibility in nontraditional students, although lower levels of learner engagement. In addition, a superiority of nontraditional students is confirmed in all dimensions of teacher credibility (competence, goodwill and trustworthiness) and in agentic engagement. The differences in cognitive, behavioral and affective engagement are not significant. The results lead us to reflect on the importance of these variables for the success of nontraditional students at university and allow us to derive practical recommendations to support it.

Keywords: Teacher credibility, learner engagement, nontraditional students, higher education, students' perceptions, teachers' behavior, teaching-learning process.

Resumen

La credibilidad docente y el engagement académico son factores asociados al desempeño y al rendimiento académico del alumnado universitario. En el caso del alumnado no tradicional, definidos como aquellos que se incorporan a la universidad con más de 24 años o compaginan estudios y trabajo, credibilidad docente y engagement académico son factores que resultan especialmente relevantes para su integración y permanencia en la universidad. Con este trabajo se pretende describir la percepción de credibilidad docente y el engagement académico del alumnado no tradicional, y compararlos con estos mismos rasgos en el alumnado tradicional. Se ha contado con una muestra de 483 estudiantes, de los cuales 353 eran estudiantes tradicionales y 130 estudiantes no tradicionales. Se aplicaron la Escala de Credibilidad en Profesores Universitarios y la Escala de Engagement en el Aula, cuya validez de constructo y fiabilidad han sido valoradas mediante análisis factorial confirmatorio y el cálculo de alfa de Cronbach. El análisis se ha apoyado en estadísticos descriptivos y en el contraste de medias a través del análisis multivariante de la varianza. Los resultados muestran en el alumnado no tradicional niveles altos de credibilidad docente percibida y algo menores en engagement. Además, se constata una superioridad del alumnado no tradicional en todas las dimensiones de credibilidad (competencia, buena voluntad y confianza) y en el engagement agéntico. Las diferencias en engagement cognitivo, conductual y afectivo no son significativas. Los resultados llevan a reflexionar sobre la importancia de estas variables para el éxito del alumnado no tradicional en la universidad y permiten derivar recomendaciones prácticas para favorecerlo.

Palabras claves: Credibilidad docente, engagement académico, estudiantes no tradicionales, educación superior, percepciones del alumnado, comportamiento del profesorado, proceso de enseñanza-aprendizaje.

Introduction

For several decades, the number of students who enter university has been increasing, while their personal traits have diversified significantly compared to previous times. The profile of students who enroll university immediately after finishing high school, with full dedication and being economically dependent on their families, used to characterize a vast majority of new students. The situation has been changing over time, in such a way that it is possible to identify other types of students in post-secondary education who have received the name of nontraditional students (Jinkens, 2009). This term includes a broad and diverse group of students who do not fit the traditional profile, since they are students who begin their studies after being separated from the educational system for a while, have not completed secondary education and enter university through exams for those over a certain age, work and have dependents under their care, or enroll only in some subjects (Suárez-Cretton & Castro-Méndez, 2022). These and other characteristics have allowed to extend this nontraditional group to other groups of non-majority students since they belong to the first generation in their families that enters university, are part of immigrant families that come from other cultural contexts or belong to an ethnic minority. Despite this diversity of features that could serve to identify this group, age and the combination of studies and work are the most used criteria when defining nontraditional students, since they include a broad group of students who access post-secondary education at a later age and through alternative routes, or have family and professional responsibilities (Chung et al., 2014; de-Besa & Gil Flores, 2019). Currently, according to the Data and Figures report elaborated by the Ministry of Universities (2021), 22.9% of the students enrolled in Spanish university studies in the 2019-2020 academic year were 26 years or older, which means more than 300,000 students. These data reflect a significant percentage of students who have

been considered a vulnerable group and prone to having a higher probability of dropping out of their university studies (Sánchez-Gelabert & Elías, 2017; Tuero et al., 2018).

Although university professors are, above all, purveyors of knowledge (Esteban Bara, 2022), other factors such as their attitudes and their relationship with students have been associated with nontraditional students permanence (Mitchell & Hughes, 2014). In this sense, the results of the study by Bolh et al. (2017) showed that the professors' accessibility and responsiveness influenced nontraditional students permanence by making it easier to face academic challenges. Furthermore, as Landrum et al. (2001) pointed out, nontraditional students appreciated their interactions with their professors, and the concern and care expressed by their professors in those interactions, more than traditional students.

According to various studies, positive relationships between teachers and students favor student learning (Awoniyi & Butakor, 2021; Chamizo-Nieto et al., 2021; Paschal & Mkulu, 2021; Pervin et al., 2021). Thus, student perceptions of teacher behavior in the classroom acquire great relevance (Xie & Derakhshan, 2021), with teacher credibility being one of the most relevant elements within the teacher-student relationship (McCroskey et al., 2004). According to McCroskey (1992), teacher credibility refers to the student's perception of whether the teacher is credible or not. McCroskey and Teven (1999) define the multidimensional nature of the teacher credibility construct, establishing three dimensions. On the one hand, the competence dimension refers to the perception of knowledge or mastery of the subject taught by the teacher. On the other hand, the goodwill dimension indicates to what extent the students perceive the interest teachers show for their well-being. Finally, the trustworthiness dimension refers to the perception of the teacher's reliability and kindness towards their students.

The study of teacher credibility in the university environment has shown results that indicate a significant influence on the teaching-learning process (Finn et al., 2009), playing a fundamental role in classroom dynamics and becoming a necessary requirement for effective instruction (Russ et al., 2002). In this sense, various studies indicate that teacher credibility is related to the willingness of students to attend class (Pishghadam et al., 2019, 2021; Zheng, 2021) and to the intention of the students to continue with their university studies (Wheeless et al., 2011; Witt et al., 2014). Therefore, the role of teacher credibility is highly relevant, espe-

cially in this group of nontraditional students. As a result, university institutions need to develop teacher awareness programs on the challenges faced by nontraditional students and on how to adapt to their needs when they enter university (Conlan et al., 2001; Kenner & Weinerman, 2011).

Likewise, one of the variables linked to the teaching-learning process that is affected by teacher credibility is the student's academic engagement (Derakhshan, 2021; Imlawi et al., 2015; Rezvani & Miri, 2021; Zheng, 2021). The academic engagement of university students has become an essential component of their well-being and academic performance (Benito Mundet et al., 2021). Academic engagement has been conceptualized as the degree of active participation of the students in the different activities proposed for the learning development (Skinner et al., 2009). Martin (2008) identifies this concept as the energy and momentum that students develop to carry out academic tasks related to participation and learning, with the purpose of reaching their maximum potential.

Academic engagement has been identified as a multidimensional construct, made up of four components that respond to behavioral, emotional, cognitive, and agentic aspects (Jang et al., 2012); each of them acquire its own role in the internal dynamics of engagement development. (Skinner et al., 2008). Skinner et al. (2009) associate behavioral engagement with behaviors such as attention to the task, effort, and persistence. Likewise, emotional engagement is associated with the presence of interest and enthusiasm, and inversely with the absence of anxiety or boredom in class tasks. Walker et al. (2006) relate cognitive engagement with the use of learning strategies (deep or surface), active self-regulation, etc. Agentic engagement would refer to actions carried out by the student towards the teacher, such as raising questions, requesting clarification, or communicating interest, expression of preferences and opinions (Reeve & Tseng, 2011). Considering that nontraditional students are at greater risk of dropping out of their studies, various studies highlight that academic engagement can be considered a protective factor to prevent student dropout (Janosz et al., 2008; Wang & Fredricks, 2014).

In previous studies, it has been verified that the characteristics of the students constitute determining factors of their perceptions of teachers, as well as of their assessments of the learning process (Hatfield & Coyle, 2013; Hejase et al., 2014). However, in the Spanish university context, no research has been found that focuses on analyzing student perceptions of teacher credibility and their academic engagement, considering traditional

and nontraditional students. In the present work, this issue is addressed by setting out the objective to describe the perception of teacher credibility and the degree of engagement in traditional and nontraditional students, analyzing possible differences between both groups. This will allow us to advance in the knowledge of the way in which nontraditional students face their university experience, serving as a basis to formulate recommendations in order to favor this group's permanence and academic success.

Method

A quantitative approach has been adopted, resorting to an ex-post facto cross-sectional research design, based on descriptive methods and group comparison. Considering the way in which the data is collected, the study falls within the survey methods.

Sample

483 students from the University of Cádiz have participated in the study. They were studying a degree at the Faculty of Educational Sciences during the 2021-2022 academic year. The students are mostly women (87.1%) aged from 17 to 60 years, with an average of 20.79 years (SD = 4.74). It is therefore a non-probabilistic sample, selected with accessibility criteria. Considering students who combine their university studies with work, or who are 25 years or older, the sample was divided into two groups, consisting of 353 traditional students and 130 students that were consider non-traditional.

Instrument

In order to analyze student perceptions of teacher credibility, the Spanish version of the *Credibility Scale in University Professors* (Froment et al., 2019) was used. This instrument presents 18 bipolar adjectives, six for each dimension (competence, goodwill and trustworthiness). The students have to indicate their perception of the professor according to a

range of values that go from 1 to 7, taking into account that the closer the number is to the adjective, the greater certainty there will be in the assessment made by the student. The three-factor structure proposed by the authors of the original scale (McCroskey & Teven, 1999) and confirmed for the Spanish version (Froment et al., 2019), was contrasted with the data obtained from the sample used in the present study. For this, a confirmatory factor analysis was carried out, estimating the parameters through the method of unweighted least squares. The goodness of fit of the three-factor model is supported by the values reached in the root mean square residual (RMR=.059), the goodness of fit index (GFI=.993), the adjusted goodness of fit index (AGFI=. 991), the normed fit index (NFI=.991) and the relative fit index (RFI=.990). All these values satisfy the levels required to consider a good fit of the model (Byrne, 2016). The factor weights of the items in each of the factors were between .54 and .84 for the competence factor, between .60 and .86 for goodwill, and between .72 and .81 for trustworthiness. The reliability of the scale was analyzed, obtaining the following Cronbach's alpha values: .94 for the global scale, .87 for competence, .88 for goodwill and .90 for trustworthiness.

The measurement of the academic engagement of the students was carried out by applying the version adapted by Núñez and León (2019) of the *Classroom Engagement Scale* (Jang et al., 2012),. This instrument is made up of 12 items, three for each of its four dimensions (agentic engagement, behavioral engagement, emotional engagement, and cognitive engagement). To respond to the items, participants have to select values ranging from 1 (totally disagree) to 7 (totally agree). Using the data collected in this study, the construct validity and reliability of the scale have been assessed. The confirmatory factor analysis, using the unweighted least squares estimation method, has allowed to validate the structure of the scale in four factors or dimensions, according to the values obtained in the goodness-of-fit indexes for the model (RMR=. 057; GFI=.995; AGFI=.992; NFI=.991; RFI=.990). The standardized weights of the items in their respective sub-scales have been above .77, with the sole exception of the cognitive engagement factor, where two items registered weights of .63 and .69. In the internal consistency analysis, the following Cronbach's alpha values were obtained: .88 for the global scale, .85 for agentic engagement, .84 for behavioral engagement, .85 for emotional engagement, and .77 for cognitive engagement.

Based on the results described, it can be concluded that the construct validity is confirmed for both instruments and that both have acceptable

levels of reliability, since Cronbach's alpha values were higher than .70 (Nunnally & Bernstein, 1994).

Procedure

Data collection took place at the end of the first quarter of the 2021/2022 academic year. Professors who taught at the Faculty of Educational Sciences of the University of Cádiz were previously contacted to request their collaboration. At the time of the survey, participants were informed of the purpose and nature of the study. The participating students voluntarily completed the two scales and were guaranteed both the anonymity and the confidentiality of their responses. The instruments were administered by the researchers in the classroom, in pencil and paper format, presenting them in the following order: *Credibility Scale in University Professors* and *Classroom Engagement Scale*. The approximate duration for the application of the two instruments was 25 minutes.

The conduct of the study has the authorization of the University of Cádiz, according to the criteria established by the Bioethics Committee of aforesaid university, in terms of guaranteeing respect for the dignity, integrity and identity of the individuals participating in the study.

The data analysis began with the calculation of the mean descriptive statistics and standard deviation for each of the dimensions of teacher credibility and engagement. The comparison of the values achieved in these dimensions by traditional and nontraditional students was conducted through the multivariate analysis of variance (MANOVA). First, the dependent variables were taken together and then separately. In all cases, the effect size was estimated using the partial eta squared statistic. Taking into account the large size of the samples, a possible violation of the assumption of normality would not significantly affect the MANOVA results.

Results

Table 1 shows descriptive statistics for the perception subscales on teacher credibility and the engagement of the participating students, distinguishing 2 groups based on their traditional or nontraditional nature. These results

show that nontraditional students attribute high credibility to their professors, since the average values corresponding to competence, goodwill and trustworthiness are above 6 on a 7-point scale. In the three aspects considered, these scores exceed those obtained from traditional students. In other words, if we compare traditional students with those students who are at least 25 years or who combine work (either part-time or full-time) and studies, the latter perceive their professors to be more competent, more interested in their well-being, more reliable and kinder.

TABLE I. Descriptive statistics for credibility and engagement in traditional and nontraditional students

	Traditional students		Nontraditional students	
	M	D.T.	M	D.T.
Teacher credibility				
Competence	6.27	.75	6.50	.60
Goodwill	5.68	1.11	6.04	1.07
Trustworthiness	6.09	.90	6.42	.75
Engagement				
Agentic engagement	4.23	1.44	4.88	1.33
Behavioral engagement	6.21	.88	6.08	1.07
Emotional engagement	6.12	.95	6.08	1.22
Cognitive engagement	5.86	.97	5.91	1.05

Source: compiled by author

Regarding engagement, the means recorded for both types of students in Table 1 are quite close in the dimensions related to behavioral and cognitive engagement, while they differ more clearly with regard to agentic engagement (4.23 in traditional students and 4.88 in nontraditional students). That is, nontraditional students raise more questions, request more clarifications, show more interest or express their preferences and opinions in class more regularly.

In order to check whether the differences in perception of teacher credibility and engagement between the two groups of students are significant, multivariate analyses of variance (MANOVA) were carried out, considering the sets of variables linked to each construct as dependent variables and taking the cohort as a factor. These analyses have been fol-

lowed by tests for intersubject effects, with the purpose of assessing the differences in each of the dependent variables considered in the previous MANOVA once the existence of significant differences between the two groups has been confirmed.

Table 2 includes the results related to the perception of teacher credibility. According to these, the values reached for the Pillai trace, Wilks' lambda, Hotelling trace and Roy's largest root statistics (F=4.686; *p*<.01) allow us to affirm the existence of significant differences between traditional and nontraditional students taking globally the set of measures on teacher credibility. The partial eta squared value (η^2_p=.029) indicates, however, a small effect size due to the traditional or nontraditional nature of the students. Considering the tests carried out for each variable separately, the F values confirm that the differences in favor of nontraditional students are equally significant for the three subscales, with *p*<.01 in the case of perceptions of competence and goodwill of the teacher, and *p*<.001 when the trustworthiness generated is contrasted.

TABLE II. Contrast statistics for the MANOVA analysis of the teacher credibility variables and subsequent univariate analyses.

Effect		Value	F	Sig.	Partial eta squared
Traditional/non-tradicional	Pillai Trace	,029	4,686	,003	,029
	Wilks' Lambda	,971	4,686	,003	,029
	Hotelling Trace	,029	4,686	,003	,029
	Roy's largest root	,029	4,686	,003	,029
	Dependent variable	Mean square	F	Sig.	Partial eta squared
Traditional/non-tradicional	Competence	4,932	9,686	.002	,020
	Goodwill	11,810	9,698	.002	,020
	Trustworthiness	10.019	13.372	.000	,027

Source: compiled by author

For engagement, the differences observed are significant (F=7.309; *p*<.001), according to the MANOVA results (see table 3). In this case, the size of the effect due to belonging to traditional or nontraditional students is medium (η^2_p=.058). When analyzing each of the variables, it is verified that the differences found result from agentic engagement (F=20.508; *p*<.001; η^2_p=.041), which alludes to a more active participation

of nontraditional students, requesting information or expressing opinions. On the other hand, the dimensions of behavioral, emotional and cognitive engagement do not allow distinction between traditional and nontraditional students, as the values obtained for the descriptive statistics in both groups already foreshadowed.

TABLE III. Contrast statistics for the MANOVA analysis of the engagement variables and subsequent univariate analyses

Effect		Value	F	Sig.	Partial eta squared
Traditional/non-tradicional	Pillai Trace	,058	7,309	,000	,058
	Wilks' Lambda	,942	7,309	,000	,058
	Hotelling Trace	,061	7,309	,000	,058
	Roy's largest root	,061	7,309	,000	,058
	Dependent variable	Mean square	F	Sig.	Partial eta squared
Traditional/non-tradicional	Agentic_engagement	41,016	20,508	,000	,041
	Behavioral_engagement	1,456	1,674	,196	,003
	Emotional_engagement	,106	,101	,751	,000
	Cognitive_engagement	,208	,213	,645	,000

Source: compiled by author

Conclusions

This study has been aimed at increasing knowledge about the characteristics of university students, with special emphasis on those known as nontraditional students, exploring their perception of teacher credibility and their academic engagement. In addition, it has been attempted to analyze the differences they present regarding these characteristics in contrast to traditional students.

A first result indicates that the levels of teacher credibility perceived by both groups of students are high in terms of competence, goodwill and trustworthiness. Considering the positive pole of the paired bipolar attributes used to measure teacher credibility, university students consider that their professors are intelligent, trained, experienced and, ultimately, competent. In addition, they trust their goodwill, perceiving that they are sensitive, understanding, take their interests into account and care

about them. Finally, they inspire confidence, since they are perceived as honest, sincere and reliable.

These results are relevant considering the importance that teacher credibility has in terms of performance and the results achieved by university students. In this sense, teacher credibility is a variable that influences both attendance and student permanence (Pishghadam et al., 2019, 2021; Wheeless et al., 2011; Witt et al., 2014; Zheng, 2021). Likewise, teacher credibility affects other variables such as academic motivation (Froment et al., 2021; Kulkarni et al., 2018), academic satisfaction (Gaffney & Gaffney, 2016; Zhu & Anagondahalli, 2018), affective learning (Henning, 2010; Vallade & Kaufmann, 2021) and cognitive learning (Carr et al., 2013; Gray et al., 2011) of university students.

The results obtained here also indicate that these high ratings from nontraditional students regarding teacher credibility are significantly higher than those made by traditional students. Nontraditional students value more positively the behaviors and characteristics of their professors. They perceive them to be more competent, interested in their well-being, trustworthy, and kinder than traditional students do. This more positive perception may be based on greater maturity, which has an impact on taking their professors more seriously. In this sense, Landrum et al. (2001) already found that nontraditional students valued interactions with their professors more positively than traditional students, considering that professors care about them.

The role of teacher credibility is even more important in the case of nontraditional students. As previously pointed out, students with a nontraditional profile have been considered more likely to have difficulties in facing their university studies successfully. Previous literature has indicated that this type of student, due to its characteristics, constitutes a vulnerable group prone to premature dropout (Sánchez-Gelabert & Elías, 2017; Tuero et al., 2018). The high levels of teacher credibility perceived by nontraditional students, which have been verified in this study, place it as one of the protection factors that may be contributing to the permanence of these students.

Having verified the perception of teacher credibility as a strength of nontraditional students, which allows to establish certain differences in contrast to traditional students, it is necessary to point out the important role that professors will have as a central agent of the strategies that universities adopt to promote nontraditional students' integration into university life and the continuity in their studies. Professors must manage

their credibility to increase student learning (Myers & Martin, 2018), so it is worth considering the need to reinforce a positive attitude and the relationship of professors towards nontraditional students who present more academic needs due to their characteristics, without neglecting, nonetheless, traditional students. As indicated by Bohl et al. (2017), the accessibility and responsiveness of professors towards their students are directly related to their permanence in higher education, justified by the help they receive to meet academic demands.

Regarding academic engagement, the levels found in university students are moderately high, with a somewhat lower level in regard to agentic engagement. However, this type of engagement is responsible for the differences observed between traditional and nontraditional students. Considering their superiority in agentic engagement, nontraditional students raise more questions, request more clarifications, show more interest or express their preferences and opinions more regularly than traditional students. A possible interpretation of these differences could be that nontraditional students show a greater interest in taking advantage of class time because they probably have a more limited schedule, as a consequence of combining studies and work or due to their family situation. As Manthei and Gilmore (2005) point out, nontraditional students highlight the lack of time as a problem to combine studies with work, whether full or part-time. Thus, our results could be linked to a tendency among nontraditional students to waste less time, a fact that was already identified by Robotham (2012), as well as presenting greater communication and socialization skills. In addition, the superiority of nontraditional students in agentic engagement could be attributed to a better perception of teacher credibility, a circumstance that has also been revealed in this work. In this sense, Hospel and Garland (2016) pointed out that many of the differences between the levels of academic engagement of students body are due to the teacher.

In short, this study has revealed singularities that nontraditional students present in contrast to traditional students: higher levels of teacher credibility and, especially, agentic engagement. However, the levels of agentic engagement of both groups of students can be improved, since they are below behavioral, emotional or cognitive engagement.

In relation to these results, it is worth recommending professors to be more open with both groups of students and, taking into account the relationship between credibility and engagement, to establish and

maintain their credibility throughout the entire academic year in order to increase academic engagement. Especially, the case of nontraditional students should be taken into account due to the greater problems of persistence, so it is important to maintain and reinforce these high levels in their perception of teacher credibility and engagement, and even to increase them in order to avoid dropout.

Some general recommendations to serve both groups of students are derived from the results of this study. In this sense, following the recommendations formulated in the work of Froment et al. (2020), for teachers to be perceived as credible professionals, they must, among other behaviors, use an argumentative verbal style, share relevant personal information, support and value student involvement, and avoid behaving inappropriately or using verbal aggression. In the same way, students' perceptions of the teacher's behavior in the classroom affect their academic engagement (Havik & Westergård, 2020; Jiang & Zhang, 2021), so that, for students to commit to their learning, teachers must show closeness (Derakhshan, 2021; Dixson et al., 2017) and be clear in their explanations about the content to be taught and be clear in their explanations about the content to be taught (Brckalorenz et al., 2012; Zheng, 2021).

From the results of this study we have gathered some practical implications that have been commented on in previous paragraphs. However, when assessing these results, the limitations of this work must be taken into account. In this sense, it is necessary to point out those that are inherent to the instruments used, based on self-report techniques, which may be subject to problems of sincerity or bias in the responses. In addition, the non-probabilistic nature of the sample reduces the possibilities of generalizing the results. Although the sample is large, only students from the field of Educational Sciences participated in the study, where there is also traditionally a predominance of women.

In answer to some of these limitations, future studies could consider students from different degrees, and aim to examine whether there are significant differences by gender and by academic degree both in perceptions of teaching credibility and academic engagement. Other lines of future research could be aimed at continuing to increase knowledge about the differentiating features of nontraditional students, when compared to traditional ones. For that purpose, attention could be paid to variables associated with student learning, such as satisfaction, academic interest or work fatigue. In the same way, the study of their percep-

tions about clarity, closeness, inappropriate behaviors or self-disclosures, which refers to the personal information that the teacher shares with the students, would contribute to a better knowledge of the singularities of nontraditional students. Analyzing how nontraditional students perceive the behavior of teachers will make it possible to better understand their expectations, needs, and desires (Goldman et al., 2017) and will make it possible to enhance the effectiveness of teaching, increasing the academic success of students (Myers et al., 2018).

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Reviews

Nieto Moreno de Diezmas, E., and Custodio Espinar, M. (2022). *Multilingual Education under Scrutiny. A Critical Analysis on CLIL Implementation and Research on a Global Scale.* **Peter Lang. 138 pp. ISBN: 978-3-631-88361-7**

Content and Language Integrated Learning (CLIL) has become one of the most important approaches in foreign language teaching and learning. What began as a European response to the need to promote multilingualism in its citizens, this approach has resulted in a transnational and transcontinental network of multiple strands, faces and possibilities.

In this monograph, published by the prestigious Peter Lang publishing house and featuring an exceptional foreword writer, María Luisa Pérez Cañado, the authors, Esther Nieto Moreno de Diezmas and Magdalena Custodio Espinar, successfully undertake the byzantine task of addressing the past, present and future of CLIL from multiple perspectives in an efficient and concise manner, in three clearly differentiated sections. Critical and cross-sectional analysis, historical review, and profound reflections on the virtues and possibilities of this educational approach meet in this carefully crafted work. In the first section, chapter one offers an exhaustive review of the origins and current situation of the different approaches to bilingual education around the world, from the initial studies in Canada and the United States, to the European Union, where the term "CLIL" was coined, also considering its adoption in other international contexts. Chapter two offers an in-depth reflection on the current state of CLIL, highlighting the versatile and flexible nature of the approach and analysing the various ramifications that have emerged and will continue to emerge in its implementation and development. Similarly, concerns and objectives beyond language learning, such as attention to diversity or its function as an ecological phenomenon, are also encompassed in this chapter.

The second section defends the effectiveness of CLIL in foreign language learning, content acquisition and mother tongue development. Chapter three provides an exhaustive review of quantitative studies on CLIL effectiveness in language learning, exploring the linguistic competences and skills on which CLIL has had a more favourable impact

compared to others that might be less affected. Furthermore, comments and observations related to the solidity of the studies carried out and various controversial aspects about the implementation and research on CLIL are likewise offered. Next, chapter four lists and analyses the most pertinent studies on the acquisition of content in CLIL environments, which dissipate any concern about an adequate assimilation of the subjects. The second section ends with chapter five, in which we find informed answers, supported by quantitative studies, to concerns related to the development of the mother tongue in CLIL. The transfer of skills between languages and the cognitive capacities resulting from the double processing of the bilingual mind means that CLIL not only does not harm the acquisition of the mother tongue, but may even provide beneficial effects, especially in the long term.

The third and final section begins with chapter six, which delves into the importance of preservice CLIL teacher training. Firstly, the different actions carried out by European universities in this regard, within the framework of the Bologna Process, are considered. Next, the increasing offer of postgraduate CLIL teacher training is presented. The chapter concludes with a successful dissertation on the challenges existing in preservice CLIL teacher training and the need to implement multivariate analyses. Finally, chapter seven expands on what was stated in the previous chapter, underlining the importance of inservice CLIL teacher training. Far from considering the heterogeneity of teaching profiles a problem, it is suggested that it contributes to the creation of an interesting scenario for the exchange of ideas and arguments on the matter.

In short, this rigorous monograph offers the perfect balance among description, analysis based on empirical evidence, critical reflection and scientific communication in the field of CLIL. It not only includes the most up-to-date and in-depth literature review on the subject, but also interesting contributions on the ramifications of bilingual and multilingual teaching methodology and its future possibilities in very different aspects. This work is, therefore, the perfect reference manual on CLIL, both for research and teaching professionals as well as for students, families and other stakeholders.

Lucas Baeyens Morata

Biesta, G. (2017). *Rediscover teaching*. Morata. ISBN: 978-84-369-6051-8

We are witnessing the resounding neoliberal proclamation about existential poverty exhibited by the school. The institution has to generate discernible benefits to be blessed by the logic of the market. There is nothing to be surprised when our author evokes the image of a *robot vacuum cleaner* to illustrate the dominant tendency to arrange what education must achieve. The domestic appliance is autonomous*,* it optimizes without help its journey through the spaces that must be freed from dust and dirt. Similarly, education is devoted to the *self-learning* of students: the most efficient and personalized way to achieve the development of their talents and skills. Needless to say, the accessory of the figure of the teacher in this paradigm. It falls to them nothing more than the abstract task of bringing out such self-knowledge and self-development.

Contrary to such pretensions, Gert Biesta composes in *Rediscovering teaching* - with translation and preliminary presentation by Professor Bianca Thoilliez- an ode in defense of the essence of teaching and the figure of the teacher. The first chapter, *What is the Educational Task?*, begins by addressing the question of educational work. In his view, the ultimate meaning of education lies in the responsibility to interrupt the *egologic* of the student. To challenge him, to call him, to draw him towards an existence as a subject, but not *as a subject* identical with himself. On the contrary, as if it were an awakening from a state of drowsiness, the essential thing is to exist as a subject "outside oneself, that is, in a certain way "to stand out" ("*ek-sist*") from the world and be thrown into it" (Biesta, 2017, p. 6). During the second chapter *Liberating Teaching from Learning*, the author discusses the question of the relationship between teaching and learning. From a gnoseological perspective, he turns to the History of Philosophy to argue a critique, ultimately, against the dominant paradigm today: constructivism. Biesta problematizes the prominence of the *self* in terms of the act of understanding in constructivist logic. In his own words, "if this is the only way we conceive of our relationship with the world and our position in it, we will find ourselves significantly limiting our existential possibilities" (Biesta, 2017, p. 40). In the third chapter, *The Rediscovery of the Teaching*, takes as a starting point the reflection raised in the previous chapter, Is it plausible to consider that mere existence can be understood in terms of meaning, understanding and understanding? To argue his answer, he begins by

analyzing the roots of the current critique of traditional education. It proposes to go beyond the surface, exposing the wear and tear of the figure of the teacher derived from such thinking, inviting us to reflect on the relationship between authority and obedience. The fourth chapter, *Do not be fooled by ignorant teachers*, continues to delve into this question through the analysis of the idea of the concepts of education, equality and emancipation in critical pedagogies, stopping in more detail in the thought of Paulo Freire and in the approach of Rancière (1991) as a counterpoint, analyzing the dominant interpretations of both and their current consequences. In the last chapter, *Asking for the Impossible: Teaching as Dissent*, he focuses on the meaning of the *act* of teaching. Faced with the conceptions that link teaching to a temporal logic (either in relation to the moment of development, or in terms of the acquisition of competences for the future), Biesta proposes teaching as dissent, understanding this not as conflict, but as a way of orienting the student towards the unforeseen, claiming the role of trust in educational relationships, in those situations in which it is not possible to foresee the way in which another human being will act.

In this book we find a philosophical disquisition on teaching. It does not seem possible to restrict the question of education, always returned, to an ultimate answer. It is perhaps the duty of education to keep the light of knowledge burning, to prevent the dust of oblivion from settling on the knowledge accumulated by human consciousness. This may be a first step to transmit to the new generations the love and responsibility for the world.

María Casas Bañares

Tomasello, M. (2021). *Becoming human: A theory of ontogeny. Ávila: Dr Buk. 383 pp*. **ISBN: 978-84-18219-02-3.**

After receiving a solid academic training and scientific collaboration at various universities, the multifaceted researcher Michael Tomasello became co-director of the prestigious Max Planck Institute for Evolutionary Anthropology in 1998. There he led a series of research projects that, over three decades, sought to unravel the evolutionary enigma behind human culture, a form of social organisation that guarantees the uniqueness of the human condition. In the present work, Tomasello proposes a theoretical framework for this research that goes beyond the classical core of the evolutionary paradigm in the light of contemporary advances in evolutionary developmental biology, focusing on hereditary variation and epigenetic mechanisms as a generative evolutionary process and on the constitution of individuals.

In the first of the four sections, dedicated to introducing the study and clarifying its background, the theoretical object is delimited in the identification of the psychological differences that exist between human individuals and the great apes that make the coordination and transmission of culture possible. Its goal, therefore, is to describe and explain the ontogeny of human psychology and its unique features compared to the ontogeny of the great apes. In order to carry out this enterprise, the author assumes that the sociocultural activity of the human species is the causal factor in the cognition and socialisation of individuals through the constitutive action of ontogenetic processes. This working hypothesis supposes an updating of Vygotskian theory which, rather than the transmissive dimension of culture formulated by Vygotski, focuses on its co- ordinating dimension, so that the co-operative factor in human cognition and socialisation is responsible for culture as a whole.

The ontogenetic proposal postulates three sets of processes in the constitution of the human being, which translate into the conformation of a series of ontogenetic routes. Thus, the maturation of children's capacities, their individual experiences and human forms of executive self-regulation are responsible for eight developmental pathways. The analysis of these is addressed in the central parts of the book; the second part is devoted to the four ontogenetic pathways of human cognition (social cognition, communication, cultural learning and collaborative thinking), and the third part is reserved for the ontogeny of socialisation through

collaboration, prosociality, social norms and moral identity. Thus, each chapter starts with the ontogeny of the great apes with respect to the corresponding pathway and then contrasts it with the description of the human ontogenetic pathways, with special emphasis on the differential factors, and ends with an assessment of the weight of the pathway in the child's development into a rational and moral creature.

In the fourth part, the author recapitulates his study to offer an overall picture of the theory of shared intentionality. As a species, the origin of the novelties that humans have presented throughout their evolutionary history is to be found in adaptations to ecological challenges and, especially, in the hyper-collaborative response given. In contrast to the great apes, who present only an individual intentionality, humans have developed two additional adaptations that provided the motivations and skills indispensable for their social and cultural way of life. Joint intentionality, which appeared in early humans, and collective intentionality, which is characteristic of modern humans, are evolutionarily distinct moments, but they are also key stages in the ontogeny of individuals, developing at nine months and three years of age respectively.

To close the work, Tomasello explores the possibility of extending the domain of the theory presented to the general ontogeny of the human being, that is, to make shared intentionality a global theory of ontogeny. This exercise shows the depth of the study developed and its potential for the fields of biology and psychology. Enriched by both, however, the major achievement of the work is to propose a novel anthropological model that reconciles culture and biology as closely connected and interdependent realities. This milestone in the understanding of human development lays fertile ground for future research aimed at unravelling the enigmas of the human condition.

Katerin Tsenkov Asenov

Martínez Domínguez, L.M. *Pedagogical framework and educational spirit*. Córdoba: 179 pp. ISBN: 978-84-11312-93-6.

This book is not an informative text, but a brief and interesting work about a real concept which deserves consideration inside educational debate.

On this text, the writter closer to us the real educational framework of a new way to think about education, which is call by himself "sensitive education". It is important to say that this term has nothing to do with "feelings". It is not trying to appeal to any aspect related to emotions. In fact, the writter focus on identify a way to think about education that search going with human beings and make them link in a healthy way to themselves.

Once the concept is clarified, book structure's has three parts. A brief introduction, sensitive education basics in the first chapter and educational principles in the second one. Finally, conclusions take the future lines of work in terms of this new model.

In the first chapter, basics of sensitive education are explained. The writer makes a review from what sensitive education is, what it is looking for and, he highlights human genuity and his necessity of being conscious of that. So, through self-consciousness, selflearning and an opening mind to "the origin", whatever it may be, the man will be formed considering that for which he was made for. To make this substantiation, an antropological view is done, through different kinds of philosophical schools as Viena one. This is because he is trying to show how a search of meaning involves often, the way we have to face life.

The most interesting idea contained on this book, It is that the writter doesn't say the way to open ourselves to the mentioned "origin" but what he looks for, it is to show the need to achieve, each one, guided and advised by "sensitive" individuals, would be able to achieve his maximun level without being a victim of the system. On this way, It supports the idea of original life would be showed in spite of every bad circunstances around the subject. With this, a slow involvement of the subject in his own education through lower level of demands or by a soft education system is not search, but doing the learner looks for a new way to roll out his originality, which is good because it makes us going through our real plenitude.

Regarding the second chapter of the book, educational principles, the fact that it is not a methodology is again underlined. So, doing things in just one way is not considered as a solution. In fact, one of the most relevant ideas is the neccesity of being out of ideologies, religions or any other mental structure. This is because, If it could only be thought of in one sense, it could not be considered universal. This is the reason because of the writter takes every resources, begining by the teacher, which could be considered as a source of sensitive education.

According to the author, the most relevant virtue of sensitive education is that: it is the framework of everyone. This book highlights the danger of individuals, regardless of their age, simply reacting to the circumstances around them, seeking to cope with what they experience and not actually living it. That is the reason because possible benefics are considered such a respecting behaviour by every member of educative community. It could be the way, may be not to healing wounds, but to know what their origine could be and the way to care them. Once we achieve be closer to each one genuity version, may be we could, in some way, try to implement educational methodologies considered more appropiated.

In short, this book aims to propose a new way to think about some different, more human and less serial education, where we can consider our deepness and personal qualities to live situations of social life. It does not try to change the model in a bad way, giving more relevance to particular qualities in a bad sense of the word. In fact, it tries to show everyone has an origin and a different way to live. This new way to think education wants to make people consider an antropological view of human being, which makes us looking people as an educational agent, not just as a subject. It gives us the chance to apply our educational tools to change our view and to look to each one in a more "sensitive" way.

Mª Isabel de la Rubia

Policy Building and Generation of Knowledge in Education

Construcción de Políticas y Generación de Conocimiento en Educación

Salutation. Ministry of Education and Vocational Training.

Presentation. ALEJANDRO TIANA FERRER. Guess Editor.

FRANCESC PEDRÓ GARCIA. On the difficulties of incorporating international comparative evidence into educational policy making. Lessons that the education sector could learn from political science.

MANUEL FERNÁNDEZ NAVAS Y ANA YARA POSTIGO FUENTES. Evidence-based education. Scientific dangers and political advantages.

NÓRA RÉVAI, JORDAN HILL Y JOSÉ MANUEL TORRES. Strengthening research use in education policy: International landscape.

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GUILLERMO RAMÓN RUIZ. Federalism, School Reforms, and the Principle of Equality in Argentina.

INMACULADA SÁNCHEZ-MACÍAS, ALICE SEMEDO, GUADALUPE GARCÍA-CÓRDOVA. Asymmetries of cross-national regulatory laws on Heritage Education.

GOBIERNO DE ESPAÑA — MINISTERIO DE EDUCACIÓN Y FORMACIÓN PROFESIONAL