

# Medical models applied to teaching: the proposal of the “educational MIR” in the light of international experiences of initiation to the teaching profession

## Los modelos médicos aplicados al profesorado: la propuesta del “MIR educativo” a la luz de las experiencias internacionales de iniciación a la profesión docente

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### Abstract

In recent years, the idea of implementing a model of access and initiation to teaching inspired by the system used in the health professions, known as the educational MIR (medical intern or resident doctor), has gained strength in Spain. This paper examines this proposal in depth, analysing it from an international perspective. To this end, after a brief overview of the literature on the application of the preparation models used in medicine to the teaching profession, a literature review was carried out to identify the features that characterise the induction programmes based on the clinical approach that have obtained the best results in other countries, as well as the main recommendations of two international organisations, the OECD and the EU, on effective policies to support professional induction to teaching. These features and recommendations are contrasted with the proposal of the educational MIR, in order to infer the possibility of its application and the requirements that should be met to successfully implement the model in the Spanish educational system. Although this proposal is considered viable and could contribute to overcoming some of the problems that teacher preparation in Spain has been facing for some time, prior to its implementation it would be necessary to address some issues that the

international literature highlights as necessary conditions for the MIR to make a real contribution to the improvement of the teaching profession in our country.

*Key words:* Teacher profession, teacher recruitment, professional induction, professional learning, comparative and international education, educational policy, Spain.

### **Resumen**

En los años pasados cobró fuerza en España la idea de implantar un modelo de acceso e iniciación a la docencia inspirado en el sistema empleado en las profesiones sanitarias, conocido como el MIR educativo. Este trabajo profundiza en dicha propuesta, analizándola en perspectiva internacional. Para ello, tras un breve repaso a la literatura sobre la aplicación de los modelos de preparación utilizados en medicina a la profesión docente, se ha realizado una revisión bibliográfica destinada a identificar los rasgos que caracterizan los programas de inducción a la docencia basados en el enfoque clínico que han obtenido mejores resultados en otros países, así como las principales recomendaciones de dos Organismos Internacionales, la OCDE y la UE, sobre políticas efectivas de apoyo a la iniciación profesional a la docencia. Dichos rasgos y recomendaciones se contrastan con la propuesta del MIR educativo, con el fin de inferir la posibilidad de su aplicación y los requisitos que deberían cumplirse para implementar con éxito este modelo en el sistema educativo español. Si bien dicha propuesta se considera viable y podría contribuir a superar algunos de los problemas a los que se enfrenta desde hace tiempo la preparación del profesorado en España, previamente a su implantación sería necesario atender a algunas cuestiones que la literatura internacional pone de manifiesto como condiciones necesarias para que el MIR pueda suponer una contribución real a la mejora de la profesión docente en nuestro país.

*Palabras clave:* Profesión docente, acceso a la profesión, iniciación profesional, aprendizaje profesional, educación comparada e internacional, política de la educación, España.

## **Introduction: the educational MIR proposal**

Teacher preparation is one of the subjects most extensively studied in educational research. For decades, focus was particularly centred on the initial training, as it was considered the most relevant stage for acquiring the professional skills. However, the importance of the first few years of

experience as an essential period for quality teaching, even more than the training itself, has been highlighted for some time (Hanushek and Rivkin, 2006). It is at this stage of teaching integration, which lies between the finalisation of the initial studies and the independent professional practice, when novice teachers access the profession and form their stance on what 'being a teacher' means, given that this is where their socialisation and incorporation into the school culture takes place.

Accordingly, on the back of growing interest paid to integration into teaching, an increasingly greater number of countries have introduced support systems for the professional incorporation of new teachers (Eurydice, 2018). Said systems are often called 'induction', a reflection of the dominance of the English language on this subject (Kutsyuruba, Walker and Godden, 2019). In the case of Spain, the 2006 Organic Law on Education (LOE) commenced a timid attempt at reform by establishing the monitoring of newly incorporated teachers by a tutor during the first year of professional practice. However, in practice, there is no system that can be appropriately classified as induction for novice teachers (Álvarez-López *et al.*, 2019).

The possibility of introducing for teachers a procedure similar to the MIR (resident internal doctor) used in medicine, which would entail a substantial reform of the access model to teaching work and creation of an induction system for new teachers, has been considered over recent years in our country. In fact, this idea, initially formulated by education experts, managed to achieve certain consensus in the political field (Bolívar, 2012), which is unusual when discussing educational issues in Spain. In reality, it isn't a unique project, as, in addition to the aforementioned MIR, other models have been proposed with different levels of detail, such as the DIR (teacher intern or resident teacher), DEP (teacher in practice placement) PrIR (professor intern or resident professor) and Resident Professor (Bolívar, 2012; López-Rupérez, 2015; Marina, Pellicer and Manso, 2015; Moya *et al.*, 2019; Nasarre and López-Rupérez, 2011; Valle and Manso, 2018). Despite variations that exist among these options, they all seek to transpose to the teaching field, with the adaptations required, the method used for selecting and training healthcare personnel prior to entering unsupervised professional practice. In general terms, the most important characteristics shared by the proposals on the educational MIR are as follows (López-Rupérez, 2015; Moya *et al.*, 2019; Valle and Manso, 2018):

- It is a mandatory system for entry into the profession and theoretical-practical training for all teachers that are going to teach at pre-university levels, both in public, private subsidised and private schools.
- The selection of participating teachers is carried out on finishing their university studies. The admissions process is homogeneous throughout the country, although, depending on the specific proposal analysed, it may combine standard state-wide tests and specific tests developed by the autonomous regions. In any case, admission is restricted and the vacancies correspond to the need envisaged for teaching professionals in the education system.
- It is undertaken in real work environments, teaching centres that are selected according to a series of established requisites and that have the recognition to function as such.
- The residency period in centres is two academic years<sup>1</sup>, which combine training with supervised professional practice.
- The teacher in training is accompanied by an experienced teacher who acts as an accredited tutor or mentor, guiding and supervising the novice teacher throughout the period.
- The teachers who take part in the programme have an employment contract as practice placement teachers and are appropriately remunerated for their work.
- The new teachers are assessed to ensure they have acquired the professional competencies. If they pass the final assessment, they are given a certificate that allows them to work as a teacher.

The MIR system seeks to improve the process of incorporating individuals into teaching and professional activity. However, beyond that, it seeks to be an instrument for strengthening the teaching profession and, accordingly, contributing to improving the education system (López-Rupérez, 2018).

In light of this initiative, it is worth considering certain questions, the answers of which aim to contribute to this study: Why use a model created for the medical profession in the teaching field? Are there initiatives similar to the educational MIR in other countries that have obtained the results expected? Would this system fit in with the current lines of

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<sup>(1)</sup> The educational MIR outlined by Nasarre and López-Rupérez (2011) includes, as a prior phase to the residency, a one year's Master's course taught in higher teacher training centres.

reform in the policies on entering the teaching profession? What can the international experience tell us about effectively applying a model like the educational MIR in Spain?

The purpose of the article is, therefore, to explore the proposal of the educational MIR in more depth, analysing it in the light of international experience. This analysis allows us to explore the use of medical models in the professional preparation of teachers and to find out if the project is aligned with current trends in relation to entering teaching and the corresponding induction. Furthermore, the comparative perspective may help to deduce both the viability of the educational MIR and the conditions required for its successful application in the case of Spain.

## Method

To respond to the questions posed, an exploratory search was initially conducted on the international literature on the application to the professional field of teaching of the preparation models used in medicine. The aim of said search was to investigate the main arguments that back or, conversely, question their use, as well as to identify the most important experiences gained in this regard in other countries.

Once a general overview of the subject was obtained, a literature review was undertaken, the details of which are set out in the corresponding section of the text, specifically focussed on two types of sources: (1) work that identifies the characteristics shared by the teaching induction programmes based on medical models that have obtained the best results in other countries, and, (2) OECD and EU publications in which recommendations are formulated on effective support policies for the professional initiation into teaching. Both sources are contrasted with the central elements of the educational MIR in order to delve into the possibilities and requisites required to properly implement this model in the Spanish education system.

## The preparation models of medical professionals applied to teachers

The idea of applying models used in the medical profession to preparing teachers cannot be considered as new, given that it goes back at least to

the start of last century, when Dewey pointed to the need to use in the field of education the training systems used in more mature professions, especially medicine (Dewey, 1904). However, it wasn't until the final few decades of the 20th century when this approach started to gain traction in some contexts, which continues today (Booth, 1995; Darling-Hammond, 2006; Hargreaves, 2007; Rickards, Hattie and Reid, 2020; Shulman, 1998).

The analogy between teaching and medicine is based on the fact, despite the differences that may be found, that there are many similarities between both professions. Both have as a central element people towards whom their activity is geared (patients or students), both require specialist knowledge and skills, and both require the use of critical thinking above the use of technical abilities (Alter and Cogshall 2009; Becher and Lefstein, 2020; Foster-Collins, 2020; Philpott, 2017). Specifically, a number of features that both fields share is the difficult transition that their respective new professionals experience, as they have to translate the knowledge acquired during their training into real-life practise in dynamic and ever-changing work environments. Given the complexity of the professional practice in both cases, integrated training models are needed that eliminate the separation between theory and practice, and that accentuate the connection between cognition and experience through in-situ learning, with guidance by experienced professionals (Kriewald and Turnige, 2013).

This parallelism with healthcare professionals has been used in education to re-conceptualise the teaching profession as a "clinical profession" or a "clinical practice profession" (Alter and Cogshall 2009; Becher and Lefstein, 2020). The notion of clinical practice in education lies in the fact that teacher activity must clearly focus on student development and learning, be based on evidence and use reasoning processes that lead to decision-making. Although this model in itself does not require a radical reform in the teacher preparation systems, it does imply a significant change in the traditional way of understanding practical teacher training (Kriewaldt and Turnige, 2013). Also, said change must not be limited to the initial preparation, but rather must extend to the first years of professional practice and, in general, to the entire teaching career (Peters, Cowie and Menter, 2017).

At the core of the proposals, aimed at modelling the initial and continuous preparation of teachers based on the example of healthcare professionals, is the idea that professional learning in medicine is more

effective than professional learning in education. In fact, it is considered that the training model of doctors has largely contributed to the progress of medical sciences, while said progress has not materialised in the case of teaching. As such, the reform of teacher training based on the principals of clinical practice is proposed as a route to continue renovating education and the teaching profession, as occurred in medicine at the beginning of the 20th century (AFT, 2013). The use of the medical model not only contributes to better teacher preparation, but it can also serve to elevate the professional status of teaching and to enrich educational research, linking it to action undertaken in schools (Hargreaves, 2000; Thorpe, 2014).

However, not all positions relating to the use of medical models in education are favourable, and this approach has been criticised. Although it is not possible to address in detail the arguments of opposing positions, it is evident that between both professions there are obvious differences and certain tension is noted on applying medical practices and language to the educational field. Occasionally, the transposition is based on an idealised concept of medical preparation, underpinned by a traditional and positivist vision of the profession, which looks more at biomedicine than areas closer related to education, such as public or mental health (Philpot, 2017). Furthermore, it is considered that this approach could be an instrument that leads to the standardisation of teaching, focussing on objectives and results above educational purposes, which would deteriorate the teaching profession (McKnight and Morgan, 2020). However, despite these objections, the clinical approaches for the professional learning of teachers have gained international recognition and have received both academic and political support in recent years (Philpot, 2017). To cite just one example, the OECD has echoed the idea, committing to "clinical experience" as a suitable mechanism for articulating the theory and practice in teacher preparation (OECD, 2010). Recently, in a review on effective teaching policies, this organisation concluded that one of the elements shared by the countries with the best results is the existence of a period of mandatory and extensive clinical practice for teachers, whether during the initial training or the induction (OECD, 2018). Specifically, the OECD has stated that the creation of a residency system similar to that in medical training should be priority in all countries and "could represent a political milestone in building

continuous growth and the professional development of teachers (Paniagua and Sánchez-Martí, 2018: 4).

In the middle are some experts who deem that the appropriateness of the medical model in preparing teachers must not be considered in dichotomous terms, but rather they propose productively adapting the mentioned model to the inherent characteristics of teaching work. They believe this approach complements rather than substitutes the most humanistic concepts of teaching (Becher and Lefstein, 2020) and would therefore entail using the medical metaphor as a new paradigm to reconceptualise the practical preparation of teachers (McLean *et al.*, 2015).

In the international field, examples can be found of experiences in which the clinic models were applied to teacher preparation in different countries, such as Australia and Scotland (Peters *et al.*, 2017), although greater presence has been achieved in the US and England. In the US, said experiences go back over four decades, since the mid-1980s when so-called Professional Development Schools (PDS) for teachers began to be created. The idea was fostered by The Holmes Group, an alliance of a hundred deans of the most prestigious faculties of education in the country, which proposed increasing the quality of teacher training, closely connecting it with research on teaching and learning, and with practice placements in education centres (Holmes Group, 1986). Borrowing the medical model of university hospitals, a Professional Development School is an exemplary public centre that includes, among its main functions, providing new teachers an introductory period of supervised teaching (Holmes Group, 1986). Although the PDSs were not a totally new idea in the education system, as there were some precedents, from that moment onwards all the universities in the group created this kind of centre, which subsequently spread throughout the country (Fullan *et al.*, 1998).

Teacher residencies are also used in the United States, which have been implemented in different states since the beginning of the 2000s. They were created to meet the needs of hiring teachers in some districts in which it was difficult to cover vacancies and find candidates with the appropriate qualifications. Residencies were considered as a channel for certifying teachers based on clinical training adapted to the needs of the schools in which they were going to work (Guha, Hyler and Darling-Hammond, 2016). In practice, there is extensive variability among residencies as regards organisation, financial backing and duration.



While some are limited to a school year, others establish a subsequent follow-up after entering professional teaching through specific induction programmes (Coffman and Patterson, 2014).

In the case of England, the idea of emulating the medical model was adopted in the improvement policies of the teaching profession from 2010 onwards, a year in which the national network of Teaching Schools started to be created to lead the training and professional development of teachers and head teachers. According to the white paper that established said initiative, the increase in educational quality requires "giving outstanding schools a much greater role in teacher training in the same way that our best hospitals train new doctors and nurses" (DfE, 2010: 3). From then on, a network of Teaching Schools was created that comprises over 750 recognised centres and that is currently envisaged to be replaced by hubs of Teaching Schools of excellence for initial and continuous teacher training. These hubs will play an important role in the new reform programme of the first few years of the professional teaching career that will be implemented in the country from September 2021 and that will replace the current compulsory induction system lasting one school year for one lasting two years (DfE, 2019).

As regards the results obtained by these initiatives, the studies that have analysed the US experiences find, in general terms, improvements in the perception of self-efficacy of teachers and in the results of students. However, they also note limitations regarding this body of research (Clift and Brady, 2005). It has also been stressed that PDSs entail a heterogeneous set of programmes, with different levels of quality (AFT, 2013). Although some on them have contributed to improving the link between theory and practice in teacher training, they have been considered, at best, as "islands of improvement" (Fullan *et al.*, 1998: 25), that have not led to a substantial change in the system as a whole. One of the problems in terms of expanding the success of these experiences has been their high cost, as well as the difficulty in integrating the two cultures involved: university and school.

In the case of England, few studies on the impact of Teaching Schools have been conducted. The assessments carried out to date have been mainly funded by official bodies that promote the initiative and they are based more on the perception of participants than on the empirical results of their effects (Dowling, 2017). However, some exploratory studies have found benefits for new teachers in terms of confidence

levels in their work and in the perception of their practical improvement (Walker, Straw, Worth and Graysonen, 2018).

In the European context, with the exception of English-speaking systems, reference to the medical model is less common when talking about teachers. However, in the opinion of some authors, the approach of some training and induction programmes used in countries, such as Finland and The Netherlands, would allow them to be considered, within the teaching context, as clinical practice (Burn and Mutton, 2015). The results of these experiences point to the positive effects produced in the preparation of teaching work, given that they boost the confidence, efficiency and professional commitment of new teachers. However, the difficulty in establishing generalisations on programmes of such a diverse nature is also highlighted (Burn and Mutton, 2015).

## **Conditions for the success of the educational MIR in light of the international experience**

The educational MIR explicitly commits to a teaching access and entry model inspired by the system used in the medical profession. To contrast this proposal with the experiences designed with the same focus in other educational systems, a literature search was conducted. After disregarding studies of a descriptive nature, only two studies were found of an appropriately comparative and international nature that clearly identify the programmes in different countries and that contrast the corresponding common elements (Asia Society, 2014; Burn and Mutton, 2015). However, in addition to them, six publications were also identified that undertake a review of programmes on a national scale. One of them regards the English case and analyses the effective induction practices developed in different institutional contexts, among which Teaching Schools are included (Walker, Straw, Worth and Graysonen, 2018). The five remaining studies analyse the US Teacher Residency Programmes that have obtained the best results (Coffman and Patterson, 2014; Guha *et al.*, 2016; NCTR, 2018; Silva, McKie, Knechtel, Gleason and Makowsky, 2014; UTRU, 2015). Regarding the latter studies, it is important to state that it isn't always possible to precisely define the lines between initial training and professional incorporation, as some of the programmes

analysed have been designed to bridge the gap that exists between both phases and cover both simultaneously.

Given that the literature found fundamentally lies in the Anglo-Saxon context, in order to expand the perspective on the study topic, a review was conducted on the reports and publications of international bodies on the effective policies and practices of teaching profession access and entry. As such, identifying the extent to which the educational MIR proposal responds to the current reform trends in the teaching profession within the international panorama is sought. Specifically, the documentation produced by the OECD and the EU, due to being the two most influential organisations in the case of Spain, has been examined. From the vast number of publications that both organisations have dedicated to this topic over the last two decades, six documents have been selected in which specific recommendations and proposals are made for the development of effective policies on entry into the teaching profession (European Commission, 2010; 2019; European Commission-IFB, 2013; OECD, 2005; 2019a, 2019b).

Together, with these two complementary approaches, a total of 14 documents published since 2000 have been reviewed. The results obtained are summarised in Table I, in which the central components of the programmes based on medical models mentioned in the literature, as well as the characteristics of the systems that more effectively support the transition from the initial teacher training up to professional practice according to the international organisations, are set out.

TABLE I. Key characteristics of effective induction into the teaching profession

	Induction programmes based on medical models <sup>a</sup>	Recommendations of international bodies <sup>b</sup>
<b>Perspective/approach:</b> Integrated in the continuum of teacher development Precise definition of the objectives, structure and responsibilities of all involved Centred on student learning	6, 8 2, 5, 6 2, 3, 4, 5, 6, 7	9, 11, 12, 13, 14 9, 11 9
<b>Purposes and objectives:</b> Bolstering educational knowledge by reflecting on practice Introduction into the professional culture and development of the teacher identity	2, 3, 4, 5, 7, 8	9, 12, 13 9, 10, 11, 12
<b>Components of the programme:</b> Personalised support by a mentor Interaction with teaching experts and novices Structured observations Training sessions by experts	1, 2, 3, 4, 5, 6, 7, 8 1, 3, 8 1, 3, 8 3, 5, 6, 8	9, 10, 11, 12, 14 9, 10, 11, 12, 14 9, 10, 14
<b>Novice teachers:</b> Selection with clearly established criteria and according to system needs Reduced teaching workload Remunerated	3, 4, 5, 6, 7 8 4, 5, 7	7, 14 11, 14 11
<b>Tutor/mentor:</b> Selection based on criteria such as commitment and teaching skills Training for the task of mentor Reduced teaching workload/mentoring time	1, 3, 5, 6, 7, 8 1, 3, 5, 6, 7 8	9, 11, 13, 14 10, 13, 14 11, 14
<b>Centres:</b> Practice communities characterised by a culture of support and collaboration	1, 2, 4, 5, 7, 8	9, 12, 13, 14
<b>Assessment:</b> Continuous and formative assessment focussed on developing teaching skills Final summative assessment linked to the accreditation required to practice professionally Monitoring, assessment and accountability of own programme	1, 5, 6, 8 4, 5, 6, 7 4, 5, 6	10, 12, 14 11, 12 9
<b>Conditions for success:</b> Sufficient resources and appropriate budgetary planning Coordination between all interested parties and cooperation with the education administration	1, 3, 5, 7 3, 4, 5, 6, 7	9, 14 9, 14

1. Asia Society, 2014; 2. Burn and Mutton, 2015; 3. Coffman and Patterson, 2014; 4. Guha *et al.*, 2016; 5. NCTR, 2018; 6. Silva *et al.*, 2014; 7. UTRU, 2015; 8. Walker *et al.*, 2018.

9. European Commission, 2010; 10. European Commission, 2019; 11. European Commission-IFB, 2013; 12. OECD, 2005; 13. OECD, 2019a; 14. OECD, 2019b.

Source: own elaboration

The table reflects the features of the programmes in which there is a similarity in three or more of the documents reviewed. Other aspects, such as the remuneration of tutors or the commitment of head teachers, appear occasionally in some studies. The duration of programmes doesn't feature in the table, given that there is no agreement as to such regard in the literature reviewed. The time mentioned ranges from one to three years. As can be seen, there is much common ground between the features of the effective programmes based on the medical model and those mentioned by the international organisations, although some nuances are emphasized in some jobs to a greater degree than in others.

The contrast between the elements set out in the table and the essential aspects of the educational MIR allows us to establish that, at least from a theoretical approach, the proposal for Spain shares a good proportion of the characteristics of the successful programmes based on medical models and of the recommendations of the international organisations. In general, the MIR would be in keeping with the experiences obtained in other contexts and, therefore, could be considered a viable option for access and initiation into the teaching profession in Spain. However, a detailed examination of the elements contained in the international literature may also serve to make us aware of some issues to which special attention must be paid in order to effectively implement a system like that of the educational MIR.

One of the issues that is worth considering relates to MIR selection and access. Tailoring the number of places available for the MIR to the education system's need for teachers requires medium to long-term forward planning of the vacancies and teacher demand per stage and speciality, something which Spain does not currently have (Eurydice, 2018). As such, this planning will need to be created before implementing the model. Moreover, proposing restrictions on MIR places, beyond the access procedures to initial training institutions, is not realistic. If no selection process is undertaken prior to being accepted onto university teaching degree courses, but a limit is placed on MIR entrance, a large number of candidates would receive training without subsequently having access to a residency. This would not only be inconsistent with the rational use of resources, but would also be detrimental to quality and generate false expectations in people unable to work in the profession after graduating. The similarity with the healthcare MIR requires this issue to be considered, as, in medicine, a dual selection process is undertaken.

In relation to mentors, a large part of the documents reviewed point to, as a critical element for the success of programmes, their selection and accreditation according to merit linked to purposes, like their teaching abilities and commitment to the profession, and not based on criteria such as seniority. This once again entails a challenge for the implementation of the educational MIR in Spain, given that teacher assessment systems that allow the most suitable teachers for tutor roles to be identified do not exist.

Linked to the foregoing, it is also worth mentioning the selection and accreditation of education institutions in which the residency of new teachers would take place. To achieve the results sought, the MIR must be undertaken in schools that have the capacity to offer quality training, where there is a culture of experimentation and collaboration, and that operate like practice communities in which teaching is seen as a team task with shared responsibility. This is a major challenge, as having a vast number of schools that meet those requirements and that can offer real professional learning opportunities to novice teachers would be needed.

An additional aspect is the final assessment, linked to a professional certificate. In the medical programmes, residents often require a positive assessment to be able to enter professional practice. As such, the assessment mechanisms used and the duties of those responsible for putting them into practice are precisely established. In the education field, however, the support role and assessment role of tutors tend to be perceived as two conflicting demands (OECD, 2019a). Therefore, deep reflection is needed on how to assess the acquisition of the corresponding professional competencies by new teachers and to overcome cultural barriers that may arise when putting the model into practice.

Together with the foregoing, the successful implementation of the MIR would also have to ensure two necessary conditions for the system to work correctly, an aspect on which there is extensive consensus in the literature: coordination and funding. Moreover, the programmes must be based on agreement and collaborative work among of those responsible for designing the training, the schools in which the training is to take place, the education administration and the professional organisations, as well as the other sectors involved. The medical MIR has said coordination, but the educational MIR would require these collaborative relationships to be created, something that cannot be improvised and that is particularly

complex in a decentralised system such as that in Spain, where the autonomous regions have significant weight in education policy.

In terms of the cost of implementing the system, some estimations indicate that to cover the teacher demand in Spain over the next decade, the allocation of around 700 million euros, corresponding to the payment of the salaries of teachers on practice placements, would be needed. Furthermore, an additional 170 million euros would be required to compensate the reduction in workload of mentors and for other costs of the programme. Although it does entail a significant budgetary allocation, it is considered doable within an investment scenario of 5% of the GDP in education (Moya *et al.*, 2019). Even so, guaranteeing the allocation of these resources and their availability over time is an essential requisite for the sustainability of an initiative like the MIR.

In any case, without downplaying the issues mentioned, it is likely that the essential element for the success of the educational MIR is in one the characteristics particularly mentioned in the literature on medical models: the centrality of student learning as the key element of the design and development of the programme. For participating teachers, the MIR must entail the opportunity to follow a training plan aligned with classroom experience and geared towards facilitating student learning. If the parallels with medicine seek to go beyond rhetoric, novice teachers must participate in a search and experimentation process that serve to understand the specific needs of students, formulating and implementing pedagogical actions and assessing the results. That involves moving away from the practical training understood as a routine way of working or as imitating teaching experts (Burn and Mutton, 2015), which leads to the socialisation of students in maintaining the status quo and halting innovation, as often occurs in practicums undertaken by students during their initial training (Egido and López-Marín, 2016).

## Conclusions

The implementation of the educational MIR would be novel in the case of Spain, albeit the idea of applying preparation models used in medicine to the teaching profession has precedents on a theoretical level and in some experiences implemented in other countries, especially in the Anglo-Saxon context. However, the educational MIR is a more ambitious

proposal than the initiatives undertaken in the United States, given that only a small number of teachers participate in them (UTRU, 2015), while the Spanish plan would involve a universal model aimed at all teachers that join the profession, in line with the reform currently underway in the English education system.

The literature review shows that the educational MIR would be in line with best international practices on entry into the teaching profession and with the recommendations of the international organisations. However, it is not possible to ignore that the results of these international experiences are closely connected to the social, political and educational context in which they took place. Therefore, this study, aiming to go beyond the approach of policy borrowing, in which the uncritical transfer of practices from other places is considered feasible, has used the comparison to delve deeper into the proposal of the MIR and to identify problems that could foreseeably arise on implementing it in our school system. In this regard, issues like the access restriction of new teachers, the selection of tutors and schools, the coordination between the sectors involved and funding, among others, show that it is not possible to undertake a substantial reform of the teaching profession with an isolated intervention. It would, therefore, entail major changes to be undertaken in current teaching policies and would require time and strong determination to formalise agreements to apply the model with a number of minimum guarantees of success.

In addition to the foregoing, transferring the MIR model to teacher preparation would require a lot more than just consideration of the organisational elements or "architecture" of the programme, although that would be important (McLean *et al.*, 2015). If the aim really is to use the medical model to undertake a comprehensive transformation of teacher preparation, the most important element is covering the substantial aspects of the training, undertaking a programme that is clearly oriented towards cultivating in new teachers the professional learning that contribute to improving student education (Escudero, 2019).

Meeting the conditions stated, a system like the MIR, whether under this name or another, could help in overcoming some of the long-present challenges in teaching that the successive reforms undertaken in our country have not been able to resolve, such as the integration of theoretical knowledge and training experience, the imbalance between professional availability and demand, and the coexistence of parallel



channels through which to access the profession. It would also serve to contribute to redefining teacher professionalism based on collaboration, creating from the beginning of the professional activity the habit of teamworking (Bolívar and Luengo, 2019). Furthermore, it would favour greater social recognition of teaching and increase the standing of the prestigious profession (López-Rupérez, 2018).

Among the factors that could facilitate the implementation of a system like this is the fact that there is extensive agreement on the need to introduce an access and initiation system into the profession between the initial training and full professional practice. Furthermore, given that it is a new period in the professional trajectory of teachers in our country, it does not come up against the weight of established traditions or created interests. As such, from an education policy perspective, it could be the first step in reforming the teaching profession (Fernández-Enguita, 2019).

However, conversely, nobody is blind to the fact that important barriers would have to be overcome to implement the MIR. Beyond those already mentioned, the greatest obstacle would no doubt be the same old resistances that have stopped all other attempts to comprehensively change the teaching profession (Viñao, 2013). Strong opposition is expected by an opinion-based sector, which also includes politicians, who still think that teaching is not a profession in the strictest sense of the word, nor does it need to be, as extensive specialised pedagogical knowledge is not required, with disciplinary knowledge being sufficient (Thorpe, 2014).

Taking the foregoing into account, on putting a proposal like the educational MIR into practice, consideration should be given to the warning provided by Fullan and co., that «reform in teacher education is going to require years of intensive, smart, and hard work at all levels of the system. One could not underestimate the complexity of the challenge» (Fullan *et al.*, 1998: 15-16). In any case, it would be worth taking it into consideration as a possible path for a thorough reform of teacher preparation practices.

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