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TEACHER INDUCTION IN REVIEW: CONCURRENT MEANINGS AND PREVAILING PRACTICES

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Abstract

This article presents an integrative summary of conceptions, policies and practices of teacher induction during teachers' early career stage, based on a systematic literature review. The purposes for this review were: to analyze the teacher induction trends featured in international research; to discuss the correspondence, integration and independence relations between mentorship and induction; to understand the place of teacher induction programs and policies within the reviewed research; and, finally, to systematize the production of knowledge about the subject with regard to prevailing theory and methodological approaches.

TEACHER EDUCATION • TEACHER INDUCTION • PROFESSIONAL DEVELOPMENT • LITERATURE REVIEW

INDUÇÃO DOCENTE EM REVISÃO: SENTIDOS CONCORRENTES E PRÁTICAS PREVALECENTES

Resumo

O artigo apresenta uma síntese integrativa de concepções, políticas e práticas de indução docente durante o período de inserção de professores na carreira, tendo por base uma revisão sistemática de literatura. Conduziu-se tal revisão na intenção de: analisar as tendências de indução docente inscritas na produção internacional da área; discutir as relações de correspondência, integração e independência entre mentoria e indução; compreender o lugar das políticas e programas de indução profissional docente no âmbito das pesquisas localizadas; e, finalmente, sistematizar a produção de conhecimentos sobre o tema com referências às teorizações e abordagens metodológicas prevalecentes.

FORMAÇÃO DE PROFESSORES • INDUÇÃO DOCENTE • DESENVOLVIMENTO PROFISSIONAL • REVISÃO DE LITERATURA

INDUCCIÓN DOCENTE EN REVISIÓN: SENTIDOS CONCURRENTES Y PRÁCTICAS PREDOMINANTES

Resumen

El artículo presenta una síntesis integradora de concepciones, políticas y prácticas de inducción docente durante el período de inserción de docentes en la carrera, a partir de una revisión sistemática de la literatura. Esta revisión se realizó con la intención de: analizar las tendencias de la inducción docente en la producción internacional del área; discutir las relaciones de correspondencia, integración e independencia entre la tutoría y la inducción; comprender el lugar de las políticas y programas de inducción profesional docente en el ámbito de la investigación localizada; y, finalmente, sistematizar la producción de conocimiento sobre el tema con referencias a las teorizaciones y enfoques metodológicos imperantes.

FORMACIÓN DE PROFESORES • INDUCCIÓN DOCENTE • DESARROLLO PROFESIONAL DOCENTE • EVISIÓN DE LITERATURA

L'INDUCTION DES ENSEIGNANTS SOUS REVUE: LES SENS CONCOURANTS ET LES PRATIQUES PRÉDOMINANTES

Résumé

À l'aide d'une revue systématique de la littérature, cet article présente une synthèse qui intègre les conceptions, les politiques et les pratiques de l'induction des enseignants débutants. Cette revue a pour but d'analyser les tendances de l'induction des enseignants présentes dans la production internationale; de débattre les rapports de correspondance, intégration et indépendance entre mentorat et induction; de comprendre le lieu des politiques et des programmes d'induction professionnelle des enseignants dans le cadre des études localisées; de systématiser la connaissance sur ce sujet par rapport aux théorisations et aux approches méthodologiques prédominantes.

FORMATION DES ENSEIGNANTS • INDUCTION DES ENSEIGNANTS • DÉVELOPPEMENT PROFESSIONNELLE • REVUE DE LITTÉRATURE

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ever greater attention from researchers of teacher education. This is due to recurrent findings indicating that teachers' early years are marked by experiences that will define their permanence in the career and affect their professional development. For this reason, there is an increasing interest in what the literature in the field has denominated as teacher induction (Marcelo et al., 2021; Cruz et al., 2020), a process aimed at beginning teachers and whose meanings can vary considerably, as they are situated in different conceptions.

The teacher induction occurring in one's early years in the profession can be associated with the following: informal monitoring; mentorship; an instituted support and retention policy; and even probationary internships (Alarcão & Roldão, 214; André, 2012; Flores, 2021; Marcelo & Vaillant, 2017; Wong, 2020). Mentorship stands out among the most recurrent induction strategies, and it is usually conducted by a more experienced teacher who is an expert in teaching and in the discipline, holds a teacher educator position and is responsible for monitoring and supporting the beginning teacher in their classroom. There are several modalities of mentorship and varied research on its effectiveness (Wong, 2020; Beca & Boerr, 2020; Souza & Reali, 2020).

In the Brazilian context, André's (2012) study about policy directed to beginning teachers revealed that there are few new teacher support initiatives, and they are limited to local and regional contexts. These initiatives are provided as courses and seminars connected to the entrance exam for the job (in the public sector), or as training for those who pass the exam, or as a specific training program during a three-year probationary internship.

In the same vein, Marcelo and Vaillant (2017) analyzed teacher induction policies and programs in Latin America. In the Brazilian case, they built on the findings of Mira and Romanowski (2016), Mira et al. (2014), Leal and Maya (2014), and Gatti et al. (2011) to demonstrate the inexistence of institutional induction programs. The Brazilian experiences they identified based on the studies above consist in specific initiatives by universities or local government education departments. As an example, Marcelo and Vaillant (2017) highlight three initiatives in the context of initial teacher education which showed some likeness to a possible induction program, with one of them being the Institutional Program for Teaching Initiation Scholarships (Pibid).

In Latin America, according to Vaillant (2021), despite the growing interest in the subject, manifested in the exponential growth in studies focused on teachers' early years, which have produced a considerable range of analyses, few education systems have formal induction policies in place. The existing ones are discontinuous, fragmented and lacking effective connection with initial and continuing teacher education. As shown by Ávalos (2016), assistance to new teachers varies significantly between neo-Latin countries, and is marked by interventions with a narrow scope, even in cases of instituted policy. Analyses resulting from studies by the same author (Ávalos, 2012; 2016) and by Beca and Boerr (2020), Marcelo et al. (2021), Vaillant (2021) and Marcelo and Vaillant (2017) indicate important evidence about the effectiveness of induction programs, which calls for discussions about, among others, the right to induction, the conditions to provide it, and mainly the conception of teacher education that guides it (Ávalos, 2012).

Given this scenario, we seek to analyze what counts as teacher induction in international publications, in order to answer the following questions:

- 1. What conceptions and notions of teacher induction underpin the studies on the subject?
- 2. What mentorship-induction relations are expressed in these conceptions?
- 3. How are teacher induction programs and policies addressed by the analyzed works?
- 4. What are the theoretical-methodological approaches that found these studies?

Defining a scope that comprehends international research is justified by the weak presence of induction programs among us, which leads us to turn to foreign literature for studies analyzing the conceptions that underpin its concretization. Thus, the purposes for conducting this study were: to analyze the teacher induction trends featured in international research; to discuss the correspondence, integration, and independence relations between mentorship and induction, based on the mapped literature; to understand the place of teacher induction programs and policies in the studies identified; to systematize the production of knowledge on the subject with regard to prevailing theory and methodological approaches; and thus to discuss possibilities of delimiting the specificity of the concept of induction in teacher education.

The present article derives from this study and is situated in the context of investigations conducted by our research group, which result from concerns with teachers' early career stage and with the need to understand the approaches to induction directed to it. We have discussed (Cruz, 2019, 2020), in interface with authors such as André (2012, 2018), Ávalos (2012, 2016), Cochran-Smith (2012), Alarcão and Roldão (2014), Marcelo and Vaillant (2017) and André et al. (2020), the importance that this stage, which is constitutive of teachers' development process, be addressed more carefully by teacher education institutions, teaching schools and teacher education programs and policies. Considering that such assistance for beginning teachers has been translated as teacher induction, we believe it is necessary to take inventory of its conceptions and practices.

Methodology

In view of the proposed objectives, we chose to conduct a systematic literature review for purposes of research evidence summary based on Newman and Gough (2020) and with attention to the recommendations of Romanowski and Ens (2006) for works dedicated to mapping the production of knowledge in teacher education. According to Newman and Gough (2020), a study that aims to summarize evidence must use a formal, rigorous and explicit method in order to interconnect findings of research already conducted on a given subject, so as to establish an integrate view of the knowledge produced about it. Thus, a summary of evidence presents what is or is not known about a particular research question. For Romanowski and Ens (2006, p. 41), such studies help to develop an overall, necessary view of research produced in a particular field, which allows "those who are interested in it to see the evolution of research in the field, as well as its characteristics and focus, and to identify the remaining gaps".

In the same vein, our review is anchored in the field of teacher education (André, 2010) and builds on professional development theories (Day, 2001; Marcelo, 2009a; Cochran-Smith, 2012; Fiorentini & Crecci, 2013; Roldão, 2017), with a focus on the career entry stage, to look at what happens and how in terms of teacher induction.

Methodologically, some strategies for selection and analysis of studies were defined by delimiting the studied period, the type and breadth of the review, and the empirical corpus. The analyzed period was set between 1980 and 2020, in order to encompass four decades of review, starting with the years that marked the emergence of the subject in debates of teacher education. As for the type and breadth, we chose a non-exhaustive review, with no pretension to reach multiple databases, prioritizing instead two different sources, though with a theme-oriented scope.

Thus, the empirical corpus was delimited considering two search points. The first is located in the publications by professor Carlos Marcelo Garcia and collaborators, as their work is central to the establishment of teacher induction as a subject in teacher education research. Carlos Marcelo was the creator of the International Congress of Beginning Teachers and Teacher Induction (Congreprinci), which was held for the first time in 2008 at the University of Seville, Spain, progressively building

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a network of educators and researchers concerned with the professional development of novice teachers. Since then, the meeting has been held on a biannual basis in partnership with universities and education systems in Latin America and the Caribbean, as an in-person event until 2016, and in virtual format in the latest two editions. Congreprinci has helped to disseminate among us scientific publications on beginning teaching and teacher induction, with significant influence by professor Carlos Marcelo's writings. For this reason, we decided to begin our search in international literature by analyzing the bibliographic references found in this author's publications.

Complementarily to the bibliographic references cited in professor Carlos Marcelo's works, we decided to also conduct a review of teacher induction research in the database of *Teaching Education*. We chose this journal for a systematic literature review because it is an international, peer-reviewed journal that publishes, on a quarterly basis, original works and academic essays dealing mainly with debates on teacher education. Thus, the articles published in about 32 volumes during the period from 1987 to 2021 fostered debates and insights at the international level about questions related with teacher education by means of publications that explore a spectrum of research methodologies and theoretical and practical questions in the field. Our goal then was to identify the pattern of distribution of works about induction in this journal, since due to its scope, it constituted the most suitable base for the intended discussion.

In sum, the empirical corpus of this systematic literature review was constituted by studies extracted from two central sources, one of them being the bibliography considered by Carlos Marcelo, a prominent author and curator to the Congreprinci, an international event on the subject; and the other located in *Teaching Education*, an international journal recognized for its emphasis on addressing themes related with teacher education.

For the selection of studies from the former source, we chose ten titles¹ published by Carlos Marcelo in the period from 1988 to 2018 with explicit mention of beginning teaching and/or teacher induction. The steps to organize this collection were the following: attention to the temporal scope (1980-2020); analysis of the titles published in the period by professor Carlos Marcelo in the form or articles, available at the University of Seville's database; selection of articles whose title referred directly to beginning teaching and/or teacher induction.

Subsequently, we read their abstracts in order to select articles whose subjects were beginning teachers and whose object were teacher induction policies, programs and/or contexts. Based on he combination of both criteria, we selected three studies, which were temporally situated in different decades, and then examined their bibliographic references in order to identify the authors of their interlocution. The three works were: (i) "Estudio sobre estrategias de inserción profesional en Europa" (Marcelo García, 1999); (ii) "El profesorado principiante: Inserción a la docencia" (Marcelo, 2009b); (iii) "Políticas y programas de inducción en la docencia en Latinoamérica" (Marcelo & Vaillant, 2017).

Based on the same criteria, we then examined the bibliographic references of the three selected texts in order to identify the titles that would finally compose our review. Thus, we were directed to the following works: Bolam et al. (1995), Wong (2004), Smith and Ingersoll (2004), Totterdell et al. (2004), Bickmore and Bickmore (2010) and Alhija and Fresko (2010). Following the same procedure of analysis of bibliographic references for these titles, we found that two of them had in common a literature review organized by the Michigan State University, published in 1999, namely Feiman-Nemser et al. (1999). By analyzing its references, with attention to the same selection procedure, we arrived at the following works: Kearney (2019), Kearney and Lee (2014),

¹ Marcelo García (1988, 1991, 1993, 1996, 1999), Marcelo (2009b), Marcelo García et al. (2016), Marcelo and Vaillant (2017), Marcelo et al. (2018), Murillo Estepa et al. (2018).

Kearney and Boylan (2015), Rippon and Martin (2006) and Darling-Hammond (2017), thereby composing a set of twelve titles from the former source.

As for the latter source, centered on *Teaching Education*, the selection procedure consisted in examining all articles available online in digital format, which was possible from volume 9 (1997-1998) onwards. The selection considered the presence, whether in the title, abstract or keywords, of terms such as teacher induction or beginning teachers. In this way, we accessed the works whose object were teacher induction processes, as well as works whose subjects were teachers in their early years. As a result of this selection, we reached a total of seventeen articles, and by reading their full texts, eight were eliminated, as their contents touched teacher induction only briefly, focusing rather on questions related to internships and pre-service practices. We therefore turned our review of this source to nine titles, namely Peeler and Jane (2005), Tobin (2006), Craig (1997), McCluskey et al. (2011), Garza and Werner (2014), Clandinin et al. (2015), Haim and Amdur (2016), Kolman et al. (2016) and Schaefer et al. (2021).

In order to analyze the total collection of 21 studies, we wrote article reports with key information based on the goals and research questions that guided our review, which comprehended conceptions of teacher induction, the mentorship-induction relationship, induction policies and programs, and theoretical-methodological research approaches. By reading the articles' full texts and the information systematized in the reports, we organized the analysis of data by main themes related to each question, and the findings pertaining to them will be discussed in the following sections.

Induction: Concurrent meanings

The review of selected studies with a view to analyzing the induction trends expressed in the kinds of support provided to beginning teachers allowed us to observe how different meanings of induction are gradually woven within policies, programs and more specific actions in various contexts. In keeping with the aforementioned methodological choices, we encountered research conducted in Australia, Canada, Singapore, Scotland, United States, Finland, Israel, New Zealand, Wales, United Kingdom, and though we observed characteristics specific to the reality of each geographic and political setting, we found a common understanding that the beginning of teaching is exceedingly complex, making it ever more necessary to reinforce the connection between initial teacher education, beginning teaching and professional development. As Darling-Hammon (2017) attests, countries that focus on building a strong teaching profession understand the need for continuity in teacher education through interdependence between recruitment, training, induction and professional development. However, it is important to discern the approaches to teacher education that underpin this understanding. What conceptions, notions and views of induction are featured in the reviewed studies?

Over the period that comprehends the studied articles, we observed a progressive increase in the volume of research on the subject, since of the 21 selected articles, three were written in the 1990s, this number rises to eight in the 2000-2010 period, and grows further in the 2010-2020 period, with ten articles. However, the notions that impart meanings to induction behave in a permeable way in each context over these three decades. Thus, the meanings we chose as paramount for discussion in this article coexist in the same reality, making it difficult to present clear-cut references of these trends in each period.

Thus, the meaning of induction as additional training for teachers in their early years, while concurring with the other meanings treated as paramount in this analysis, remains intertwined with the different programs described in the studied articles. In the United States, for example,

this idea of induction as teacher training seems to prevail in the various programs designed in school districts.

However, induction in this sense is seen to gradually recede over the decades that comprehend the studies, and to concur with other meanings we record here, which outline for this concept a course more intertwined with the socialization of teachers into the school culture and with teachers' professional development from the perspective of education investments to help novice professionals.

In this context, our analysis found three paramount meanings of induction which we will consider as the base for discussion: induction as additional training; induction as professional socialization; and induction linked to professional development.

Induction as additional training

Regarding the meanings of induction that pervade research on the subject in the international literature under analysis, a significantly frequent notion inclines towards *additional training* for teachers entering the career. It is what Feiman-Nemser et al. (1999) view as a single phase or stage in teacher development, a period strictly defined, with short-term support provided to help teachers survive their first year. The authors highlight that learning of teaching is reduced by this perspective, as it translates into short-time support, without recognizing the central position of induction in the connection between initial teacher education and continuing professional development. It is a narrow-scoped, brief form of assistance mainly geared to adapting novices to their schools.

Smith and Ingersoll (2004) help us advance our reflection by distinguishing between induction and "training" programs. Based on the US context, the authors say that pre-service programs are often designed in terms of training, with developments into in-service education, which is provided as additional training. Such understanding of induction programs as additional training, according to these authors, narrows the possibilities of its assimilation as a bridge in the sense of promoting the transition from 'student of teaching' to 'teacher of students' (Smith & Ingersoll, 2004, p. 683).

It is worth stressing that, while on the one hand the idea of induction as additional training is intertwined with programs and policies addressed by nine of the 21 reviewed articles, on the other hand, the review as a whole also finds the view that an effective, structured, systematized induction process for guiding new teachers must transcend a conception founded on additional training.

Thus, based on the analyzed reality, we consider that the need for a comprehensive form of support linked to a professional development-based approach is critical both for helping beginning teachers refine the professional dimension of their teaching and for placing them in their work contexts with care for socialization in their community of practice.

Induction and professional socialization

Another recurrent meaning of induction found in the examined articles is induction as a professional socialization process. Considering that for Dubar (2003), it is one's experiences with individual-group relations which translate into the feelings of belonging, clarity of codes, norms, symbols and values that form the so-called professional ethos, the transition from student to teacher cannot be said to take place by simply completing an undergraduate program. The constitution of a professional teacher identity, a professional "I", is associated with group belonging, with one's relationship with one's peers and professional domains.

The studies in this review present, in ten articles, a direct implication between induction and professional socialization. In another seven articles, we found the concepts of induction and

socialization to be interlinked in terms of the novice's integration into their work context. Thus, of the 21 articles under analysis, only in four did we not find references to this relationship.

Based on these studies, we highlight that Rippon and Martin (2006) argue that the induction of new teachers is part of a socialization process that takes place in any organization, a process involving institutional and social rules and practices. This view is corroborated by Alhija and Fresko (2010), for whom induction emerges as a socialization process of new teachers in the sense of making them more competent, and preventing beginning teacher attrition. Kearney and Boylan (2015) corroborate this view by attesting that the induction period is conducive to integrating the novice into their community of professional practice. These authors present a conceptual mechanism for understanding induction through an organizational socialization structure more commonly used in business. Thus, they explore the interconnection between organizational and professional socialization to think about the role that induction plays in socializing individuals in their workplace.

From the dialogue with Kearney and Boylan (2015), we highlight the idea of a model of socialization as a continuum that increasingly detaches from a linear process associated with a course, and settles as a dynamic process with a specific structure that both involves new teachers in the institutional culture and helps to introduce them in a community of learning or practice. On the other hand, it is necessary to highlight the dissimilarities between professional socialization in a business organization and in the particular context of the school, considering that the nature of teaching and the teacher-student, teacher-teacher and teacher-manager relationships are immersed in an educational setting marked by a process that involves teaching and learning.

In their conceptual view, Feiman-Nemser et al. (1999) also identified the notion of induction associated with professional socialization. The authors underscore three meanings linked to the discourse about new teacher induction, one of which is socialization, interrelated with a continuous professional development approach.

The review indicates that a comprehensive, structured induction program for introducing new teachers in their work context, among many other characteristics, implies professional socialization involving a frequent exchange of information and ideas between novices and veterans, as found in Wong (2004). Thus, becoming a teacher is not only an individual responsibility, but involves a peer group mentality and a collaborative culture conducive to professional development.

Induction linked to professional development

The link between induction and professional development is strongly disseminated in the analyzed literature. Even considering other concurrent meanings, induction integrated with professional development is an essential part of the concept, and strengthening this link is a structural indication for programs.

In light of this understanding, Wong (2004) affirms induction as the initial stage of professional development, with an emphasis on the need for sustained, consistent, life-long programs that allow new teachers to observe their peers, to be observed by them and to participate in networks or collaboration groups where practices are frequently shared.

Feiman-Nemser et al. (1999) also conceptualize induction in this direction, considering that the principles that emerge from an effective professional development translate into learning opportunities for new teachers.

In turn, Kearney and Boylan (2015) and Kearney (2019) propose an operational definition of induction based on a literature review that also links it to professional development. For these authors, induction constitutes the first stage of a continuous professional development that leads

to the teacher's complete integration in their community by means of continuing education throughout their career.

To cite another study that reinforces the idea of induction in connection with professional development, we have in Totterdell et al. (2004) the argument that induction can impact the new teacher professionally. However, in order to achieve this purpose, the authors reiterate that induction programs should begin at the end of initial teacher education and encompass the first three to five years of teaching, always aligned with a professional development approach, allowing teachers to engage in everyday practice as a source of professional learning. Thus, for these authors, during an induction process, new teachers need to take on reduced teaching responsibilities, with structured conditions of collective, collaborative, mentor-supervised work.

The trends are not mutually exclusive, with research indicating that the view of induction related to professional development incorporates the idea of socialization, and, depending on the assistance provided, it can also incorporate training as an education strategy. That is seen in Wong (2004), when he sustains that induction is a comprehensive training and support process that continues for two or three years and then becomes seamlessly integrated into the life-long professional development program of the education system, so as to keep new teachers teaching and improving in order to increase their effectiveness.

The different meanings linked to the term induction underscore that this is a concept in the making, polysemic and ambiguous in nature. Still, we agree with Smith and Ingersoll (2004) when they say that it is not the definition of induction which makes the difference, but rather the effectiveness of a program that ensures positive outcomes from the process with beginning teachers.

It is in light of the recognition of induction's role in developing future teachers' professional knowledge base that we add to the discussion the mentorship dimension of this process, given its being a recurrent strategy in all the identified trends.

Induction and mentorship: Correspondence, integration and independence relations

While an intrinsic relation is established between induction and mentorship, and authors such as Smith and Ingersoll (2004) say that both terms are used interchangeably, the conception expressed to the greatest extent in the studied literature understands mentorship as an important component of the novice induction process. However, it is the circumstances of the way this relation is conceived which will determine the links between induction and mentorship. What we found in the examined research evidence is that comprehensive induction programs founded on professional development should go beyond mentorship (Wong, 2004).

Thus, the independence relation between both terms makes sense, since authors like Smith and Ingersoll (2004) say that it takes much more than mentorship to improve induction programs. In turn, Kearney (2019) signals, in discussing the problems reported by new teachers in the Australian context, that an inadequate mentorship program can harm the induction process. In his research findings, the same author points out that in the programs that showed a mistaken appropriation of induction, some teachers confused the terms mentorship and induction.

Bickmore and Bickmore (2010) make a critique of research related with effective induction when studies focus on one-on-one mentorship during the transition of novices into professional practice, instead of focusing on multi-component support programs. To corroborate the idea that induction has an independence relation with mentorship, Totterdell et al. (2004) highlight that mentorship, or tutorship, is usually part of induction programs, though without defining or even encompassing them, since a program is, in itself, more comprehensive.

Just like this independence relationship does occur – since the simple fact that an induction program has mentors does not determine the quality of its work – the studies show that quality mentorship supports and can help new teachers with their needs. The literature indicates that quality mentorship involves, among other possibilities, the mentor's training, their experience as a teacher, the amount of time they can dedicate to knowledge of the function, the relation between their role and the context where they will work.

In this direction, an integration and correspondence relation also manifests between the terms induction and mentorship. This is outlined by Rippon and Martin (2006) when they address mentorship as an indispensable component of the induction process, making up two dimensions of the work: the first concerns emotional support, providing a comfortable relationship with and an environment for the novice so they can develop, and the second concerns professional support based on an understanding of principles of teachers and how they learn.

Thus, in line with Wong (2004), we found that mentorship is essential for many induction programs, but it is not useful per se. What we verified by looking at international research is that both the fundamental role of mentorship and its integration with the induction process assume the involvement of conscious mentors who take on the task in a collaborative manner, engage in planning, commit to teaching, take on shared responsibilities, evaluate the teachers they assist, and invest in communities of practice.

Teacher induction policies and programs

Under this theme, we look at the place of teacher induction policies and programs in the research contexts in the mapped literature. Further, the conception of induction we address here is one founded on public policy which, if well consolidated in the contexts where it emerges, enables an interconnected, coherent, consistent process of professional development.

The understanding of the concept affects how programs and policies are structured, Feiman-Nemser et al. (1999) observe. The authors highlight the consequences of viewing induction strictly as a form of short-term support or in connection with initial teacher education and continuous professional development.

In the latter case, induction presupposes program organization modes based on shared responsibility in and for the education of new teachers. But if it is reduced to support focused on helping new entrants fit in their schools, a system of short-term assistance so they can learn how to manage the job, then there are no prospects of change, but maintenance and continuity of the status quo that concurs for the precarization and deprofessionalization of teaching.

Both modes of understanding teacher induction are discussed in the articles that made up our analyses, indicating, on the one hand, the potential of programs that care for beginning teaching with support and evaluation so the teacher can develop through to become a full professional teacher. On the other hand, the literature indicates the limitations of different induction mechanisms that are not beneficial to the field, in the opposite direction of consistent policy whose centrality lies in education for teacher emancipation.

Thus, our analysis of the set of studies allowed us to compose three different groups. The first has as its main references Feiman-Nemser et al. (1999), Wong (2004), Bickmore and Bickmore (2010) and Kearney and Boylan (2015), with a focus on the concept and aspects that are indispensable for implementing an induction program with a clear, long-term plan that considers the professional development necessary to promote teacher skills that benefit student performance.

In general, the studies discuss the concept based on the identification of characteristics of induction programs that show or showed effectiveness in serving beginning teachers. They provide

a significant contribution to the conceptual and theoretical discussion about the subject, as well as evaluation of the teachers who constitute induction programs, reporting their dilemmas and tensions.

The articles of the second group present or examine teacher education policies and practices in different international contexts, based on aspects of induction such as recruiting, training, the mentor's role in the induction process, with some of these elements combining evenly or prevailing over the others in their contexts. In general, the studies deal with choices for teacher education paths or challenges faced by countries in transforming their teacher education systems.

The different texts address policies by considering important factors such the length, intensity and prevalence of activities that characterize induction. The paths of induction programs include: time of release from teaching; support from experienced teachers; setting targets and objectives linked to professional qualification activities and courses in order to meet new teachers' needs; and evaluation according to performance standards. This group is formed by works of Bolam et al. (1995), Smith and Ingersoll (2004), Totterdell et al. (2004), Rippon and Martin (2006), Alhija and Fresko (2010), Kearney (2019), Kearney and Boylan (2015), Haim and Amdur (2016) and Darling-Hammond (2017).

Finally, we grouped a third set of studies in which we did not find what may be considered specific to teacher induction. However, the group features reports of case studies or research that address professional learning based on activities developed within schools, discuss or analyze policy adopted in particular districts, such additional training, tutor/mentor-novice relationship, teacher residency programs; analyze factors affecting teacher attrition or retention in early years, or discuss beliefs, tensions and challenges experienced by beginning teachers in diverse contexts; recognize in induction a process of socialization and learning of institutional and social rules and practices. Also in this group are texts that advocate investigation approaches focused on beginner teachers' centrality and authorship as a way of helping them understand their practices and develop professionally. These approaches were highlighted in the texts of Craig (1997), Peeler and Jane (2005), Tobin (2006), McCluskey et al. (2011), Garza and Werner (2014), Clandinin et al. (2015), Kolman et al. (2016) and Schaefer et al. (2021).

Looking at these three sets of texts provides a path for analyzing and reflecting about the ways in which policies are incorporated in the contexts in which they are introduced and about the interests they serve. For example, the understanding of policy of some programs that aim to provide just a single guidance meeting at the beginning of the school year, while others are structured in multiple, frequent activities and meetings over a few years; mentorship programs that stand out for their aim to evaluate teachers and their permanence in or leaving the school; or the institution of induction programs for helping new teachers deal with the practical aspects of teaching, with the teacher-student relationship and with classroom management.

With different lenses and objectives, the mapped literature underscores the need to clearly define the relation between programs and education policies, and the implementation of their goals in practice. Induction policies are complex and require a great political effort to implement programs that should be guided according to district and school singularities, which is no obstacle to the existence of structured, sustained national programs for professional development which allow new teachers to be intentionally assisted and introduced in networks or groups where all share, develop together and learn to respect each other's work.

Theoretical-methodological approaches

One of the goals of this study was to systematize the production of knowledge about teacher induction regarding prevailing theory and methodological practices. In this direction, our analysis found four investigation approaches that underpinned the reviewed studies.

A first investigation approach regards the set of works that aimed to describe and analyze induction program initiatives (Wong, 2004; Bickmore & Bickmore, 2010; Kearney & Lee, 2014; Kearney, 2019; Smith & Ingersoll, 2004).

In their approaches, the analytical or descriptive paths that the authors followed based on the programs showed, as a significant characteristic of these studies, an overt concern for examining teaching in singular contexts founded on the professional networks involved by the policy – department managers, school-based managers, experienced teachers and beginning teachers.

This set of works suggests that, in teacher induction research, descriptive and comparative studies on different models of programs are seen as an established element in the literature. In addition, it signals the importance of these studies for diagnosing positive and negative aspects of the different approaches to education in various countries, which allows setting standards and desirable features not only in policy design but also in overcoming obstacles faced by programs already in place or being implemented.

A second investigation approach we identified refers to works that present a literature review about induction programs (Totterdell et al., 2004; Darling-Hammond, 2017; Feiman-Nemser et al., 1999) or aim to theorize about the concept/process of induction (Kearney & Boylan, 2015). In generic terms, the methodological paths taken by authors for their reviews can be divided as follows: works that are more descriptive, evaluative or comparative of studies focused on induction programs (Totterdell et al., 2004); studies that focus on the analysis of teacher education documents and policies in different countries (Darling-Hammond, 2017); reports on the effects of a program directed to beginning teachers (Feiman-Nemser et al., 1999); works that theorize about the induction process in terms of organizational socialization and of learning communities (Kearney & Boylan, 2015). In their specificities, however, they support the idea of comprehensive professional development programs, emphasizing the offer of teacher induction programs as essential for reducing new teacher attrition, for teacher learning, and thus, for student performance.

It should also be noted that studies of this type point to the theoretical maturing of teacher induction research, since they aim to conceptually develop the term and organize or propose debates about aspects that help to delineate more accurately empirical activities in this field. We highlight the recurrent discussion about the nature of the concept of induction. This debate, to which the present study also intends to contribute, shows that the use of the signifier induction is also as space of theoretical and conceptual discussion and goes through a process of negotiation of meanings.

A third investigation approach refers to works that address empirical studies on specific induction instances (Tobin, 2006; Alhija & Fresko, 2010; Bolam et al., 1995; Haim & Amdur, 2016; Kolman et al., 2016; Garza & Werner, 2014; Rippon & Martin, 2006).

Based on specific contexts, the authors build their approaches from diverse methodological paths: an ethnographic case study (Tobin, 2006); questionnaires directed to beginning teachers which show aspects of the functioning of a specific induction program (Alhija & Fresko, 2010); a combination of questionnaire and interviews, in the case of Bolam et al. (1995); a more descriptive approach, in the case of Rippon and Martin (2006), who analyze beginning teachers' perceptions about their mentors in their professional induction processes in Scotland; a combination of strategies that combine assistance to beginning teachers, description and analysis of output by participants in the programs (HAIM & Amdur, 2016; Kolman et al., 2016); or a questionnaire with open questions (Garza & Werner, 2014).

Thus, the studies emphasize the need to consider the purpose, design and specification of induction programs that aim to establish and adapt beginning teachers in diverse contexts. To this end, there is a prevalence of defenses of the concept of induction as part of a continuum that enables

a structured professional development from the beginning, and that such concept has no basis if the activities are merely episodic.

Finally, a fourth investigation approach refers to works that use methodologies of construction of subjects' narratives, and address these narratives as the object of their investigation with regard to the teacher induction process (Craig, 1997; Schaefer et al., 2021; Clandinin et al., 2015; McCluskey et al., 2011; Peeler & Jane, 2005).

Their specificities notwithstanding, the methodological strategies used by this group of authors in their works present, in their epistemic conception, the perspective of beginning teachers on their career entry process, and defend the emphasis on novices' active role as an effective path to help them understand their practices and develop professionally.

Two of the studies highlighted in this group adopt case study as their methodological procedure to approach, in the Australian context, the problems faced by foreign beginning teachers, whose mother tongue is not English, in establishing in the profession (MacCluskey et al., 2011), or immigrant teachers' establishment in the profession as they go through a pre-service preparation course to teach in the country (Peeler & Jane, 2005). While teacher induction is not the central object of these works, their authors develop pertinent reflections about aspects of teacher induction policy in that country in a context of multicultural inclusion.

Mapping these studies, with attention to their theoretical-methodological choices, allowed us to find that the narrative approach provided greater insight into induction questions compared to data based on large-scale questionnaires. While they comprise less participants, the nature of such narrative data shows in greater detail the problems posed to teachers in their early years. Thus, they showed aspects more closely related with the micropolitical dimension, based on the personal and institutional interactions that pervade induction spaces and which escape macro-level documents and policies on teacher induction.

Regarding data production strategies, we observed the occurrence of studies that used interviews, focus groups and questionnaires with the researched subjects (Kearney, 2019; Alhija & Fresko, 2010; Bolam et al., 1995; Smith & Ingersoll, 2004; Rippon & Martin, 2006; Garza & Werner, 2014; Schaefer et al., 2021; Clandinin et al., 2015), analyses of official documents (Darling-Hammond, 2017; Wong, 2004; Kearney & Lee, 2014; Smith & Ingersoll, 2004) and documents produced by the researched subjects (Kolman et al., 2016), analyses of narratives produced by the subjects (Craig, 1997; McCluskey et al., 2011; Peeler & Jane, 2005), and works that combine various forms and strategies of data construction (Bickmore & Bickmore, 2010). In the studies that involved questionnaires and interviews, data were typically organized based on the themes that emerged from the analysis of subjects' responses, and collected narratives were also interpreted mostly through thematic analysis.

With regard to theoretical frameworks, we found that the authors of the studies in this review are recurrently cited by one another, especially with Feiman-Nemser et al. (1999), Darling-Hammond (2017) and Wong (2004).

Conclusion

Based on this systematic literature review, it is important to note the aligned understanding of induction as a process that strongly influences the mindset, quality and development of new teachers entering the career. To this end, the literature discusses different types of support that appear in policies – *induction as additional training; induction and professional socialization*; and *induction linked to professional development*. It becomes evident that the best induction programs are only accomplished if there are working conditions for the new entrants and for those receiving

them in a culture of collaboration. In this direction, the research highlighted in this review advocates induction trends founded on continuous professional development, an understanding that moves away from the offer of short-term additional training with which induction is usually associated in some programs.

We found that the literature often recognizes mentorship as a key component in induction policy that needs to be part of educational policies organized for assisting new teachers. The discussions presented here indicate that mentors need to understand the purposes of the induction policy that defines their role. Once they understand their role, they need to develop a tutorship practice that allows them to guide new teachers, though to this end, mentors also need regular education so they can have a background that promotes and expands the possibilities of support for new teachers' learning.

Thus, the studies prioritized in this research discuss or present policies and programs based on their configurations in the school systems where they occur, usually evaluating their aspects and implications for the retention of teachers in schools. A conspicuous association is made in the literature regarding implemented programs, particularly in American schools and districts marked by poverty, in view of the high rates of new teacher turnover. This turnover becomes more evident when the United States is compared with other jurisdictions, such as Canada, Singapore and Finland. Studies with beginning teachers or with experienced teachers designated to a tutorship or mentorship function are associated with the impact of programs and policies, and show the relevance of assistance during the early years of a teacher's career, which emphasizes the importance of quality connections between novices and senior teachers.

The literature also indicates the importance of understanding the challenges and obstacles both to the implementation and integration of a program geared to the development of beginning teachers in schools. Commitment to policy maintenance and funding, combined with teachers' attitude and involvement in collaborative communities, is what studies highlight as the most significant aspects for integrating programs in schools in order to ensure the professional development of new teachers. Recognizing the characteristics of each school is fundamental in the implementation of any induction program, since education strategies need to be aligned with contextual elements. While a policy is generalizing in its creation, it needs to ensure specific nuances in view of the induction activities in schools, which includes from balanced resource distribution to ensuring activities that enable new teachers' development.

At its best, induction provides an individualized form of professional development situated in a particular context, guided around the systematization of a culture of collaboration and education, and aimed at helping new teachers in their relationship with the teaching-learning process and everything it involves.

Coupled with teachers' professional development, induction requires dedicated time, working conditions conducive to an educative environment, and well-planned strategies. This involves more than an experienced teacher standing by to evaluate an activity held by a novice, or available to give them advice. In the opportunity to learn from and in collaboration, new teachers not only develop individually; they also experience the power of collaboration and the joint solution of problems.

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TEACHER INDUCTION IN REVIEW: CONCURRENT MEANINGS AND PREVAILING PRACTICES

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Note on authorship

The authors participated equally in the conception of the study, in conducting the systematic review of the literature, in building the integrative summary and in writing the text.

Data availability statement

The data underlying this study is informed in the article.

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