



Article

Formative needs of beginning teachers in basic education: concepts, conceptions and literature review

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Abstract

The article aims at bringing to the debate the polysemy of the concept of formation needs and the relation between the conceptions of teacher education and the instruments used to map or diagnose these needs. Prompted by the following inquiries: what has been provided as theoretical references on formation needs to researchers of the theme? What concepts of formation needs, and based on what conceptions of teacher education, are presented in 10 years of production on the theme in the national scenario? What are the comprehensions of these researchers about the training needs of beginning teachers in basic education? For this, as methodological procedures, first it were conducted studies of theorists who could contribute for the comprehension of the object, followed by the analysis of articles, theses and dissertations available in data bases, selected through the criterions listed in a protocol of systematic review. The results show that the productions of theorists adopted for the comprehension of concepts about training needs contributed for deepening knowledge on the object. The systematic literature review pointed out the absence of the conception of the term formation needs in most of the analyzed productions, as well as the prevalence of an understanding of need as lack of knowledge resulting from the initial teacher education and linked to the challenges and personal tensions of the daily routine of the profession and of the period of initiation. The results also show the pertinence of the constitution of

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collaborative formation environments, as well as of the elaboration, by the school networks, of induction programs.

Keywords: Beginners, Formation needs, Educational research, Literature reviews.

1. Introduction

The continuing education of teachers has been pointed out by researchers as well as by education systems and networks as one of the main actions in the quest to improve the quality of public education. However, the proposals and formations programs have been thought outside the school, started from the logic of the trainer and a conception of training based on technical rationality, in which the effective participation of teachers in the discussion of the problems of their professional routine is disregarded.

Thus, teachers feel their formation invaded by themes that do not touch them, sometimes presented in the form of lectures, courses or "continuing education packages" offered by organizations and / or entities without ties to the educational area, which contribute little for your formation.

In this perspective, some researchers have pointed out the relevance of observing, when proposing programs aimed at teacher formation, the different phases of professional development and teaching career, so that continuing education moves from the model of closed proposals, elaborated vertically, for a proposition that starts from the diagnosis or analysis of the teachers' formation needs. (BRINKERHOFF et al., 1985; RODRIGUES; ESTEVES, 1993; CUNHA, 2010) reversing the hegemonic logic and privileging a conception of training as a continuous learning process throughout professional life, towards critical rationality, that "[..] has in itself a perspective of transformation, in which the education project in a given social context is strained" (SARDINHA NETTO, AZEVEDO, 2018, p. 12) and the teacher is involved in a political dimension, proposing research strategies systematic and continuous training and performance.

In this sense, this article aims to analyze the concepts of formative needs present in studies and research that address the topic of teaching initiation in basic education, as well as the concepts of training that support the methodologies used to survey or diagnose these needs.

For this purpose, we organized the article in three sections: in the first, we approach the available literature on the object, with the purpose of broadening the understanding of the discussion signaled by the authors who conceptualize formation needs and thus compose our theoretical framework; in the second, we bring to the debate the relationship between the conceptions of formation and the different instruments used to survey the teachers' formation needs; in the third, we present the results of the analysis of articles, dissertations and theses that investigate the formation needs of beginning teachers.

The discussions proposed in this article are part of the course of a collaborative and interinstitutional research, entitled "Processes of induction of beginner teachers in basic school⁵", which brings together researchers from

⁵ Project 42060/2018, approved by the National Council for Scientific and Technological Development (CNPq), according to Universal Call MCTIC / CNPQ n° 28/2018.

different Brazilian universities who seek to articulate knowledge produced in different contexts about design and implementation of formation processes aimed at teachers at the beginning of their careers and those who act as their trainers, which justifies the delimitation of this study to the theme of the formation needs of beginning teachers through a systematic review of the literature.

2. Formative needs: understanding the meaning

The term "formative needs"⁶ is polysemic and cannot be understood without studies of analyzes of needs, demands and challenges associated with it.

Estrela, Madureira and Leite (1999, p. 30-32) conceptualize the need for formation as "[...] the set of concerns, desires, needs and problems felt or perceived by teachers, in the development of the pedagogical process [...]". They state that needs are interpretive constructs that teachers manifest throughout their professional trajectory, which implies the use of dynamic methodologies that favor the effective participation of teachers in raising awareness of their needs. Lima (2015, p. 345), conceptualizes formation needs as "[...] connotations of an objective and subjective character - objective, because it reflects a natural and social need; subjective, because it only exists through the filter of the individual's perceptions about reality, dealing with therefore, of a mental construction".

The formation needs are in constant movement, they are not static or pre-defined, as they are influenced by the concrete conditions in which teaching practices are carried out and by the internal and external relationships that occur in educational spaces. Therefore, Dias Rocha and Marinho (2017, p.199) point out that they "[...] emerge from the subject's social relations in a given historical, political, social and cultural context". Therefore, they consist of "socio-historical productions, which arise in the context of the objective and subjective conditions of reality and, ultimately, are motivators of human self-realization".

Roegiers, Wouters and Gérard (1992) understand that it is necessary to validate teachers' statements about assumptions that make it possible to improve their practices and promote their professional development. It is these manifestations that can serve as a subsidy to the institutions for the elaboration and implementation of projects, programs and educational policies, in order to overcome the external interventions arising from the training packages that have been imposed on schools.

The consideration of formation needs is preceded by the survey or diagnosis of those needs, which presupposes the screening of how they were conceived. According to Silva (2000, p. 2), "any study on needs analysis therefore implies that there is a clear idea of what is meant by formation needs", as well as the explicit definition of the "model for determining needs that is taken as a reference [...]".

Marcelo Garcia (1999, p. 199), highlighting the political dimension of the analysis and diagnosis of teachers' training needs, asks: "who has the legitimacy to decide about the needs?" In this perspective, Silva (2000)

⁶ The terms "formative needs" and "training needs" are found in the literature, without distinction of meaning.

describes two models of needs analysis: what comes from the trainer (institution), which legitimizes and operationalizes the training from a technical-instrumental conception, and which part from the teacher, who points out his needs and requests the trainer to take steps to develop his formation process, through a negotiation between the trainer and the teacher to legitimize the training.

However, Silva (2000, p. 3) warns that, also in this last model of proposal, given the "difficulties that teachers have in expressing needs", those responsible for formation "can induce them to those they consider most pressing", taking into account the demands of education systems.

For Zabalza (2004), the expectations of the systems can generate demands, which needs to be critically reflected, as they may be insufficient for the desired training project, with regard to both the system and the educational agents. At the same time that the demand suggests prior knowledge on the topic - since a need cannot be felt about something that is not known - it can also be the result of an arbitrary imposition of the system, that is, changes in what understands as the teacher's role or function, new social understandings about what should prioritize school curricula.

According to Yamashiro (2014), educational policies are often thought from the analysis of demands, and not of the formation needs pointed out by teachers. The author cites as examples of demands:

[...] the need to expand teacher education, the updating of theoretical and methodological aspects of teacher education curricular programs, the adaptation of curriculum programs to new social demands such as the inclusion of those considered excluded (people with special needs and socially excluded) such as delinquents, minor offenders, indigenous people, Afro-descendants) and the contrast between the archaic, obsolete teacher and the innovative teacher, who dominates the use of information and communication technologies. (YAMASHIRO, 2014, p. 143).

Thus, the formation needs of teachers can accompany the demands that arise with the modification of education systems throughout history.

In this sense, Hees (2016, p. 109) advises that in addition to differentiating needs and demands, it is also necessary to avoid confusion between "needs and challenges". The challenges, as well as the anxieties, fears and uncertainties, may be related to the stage of professional development that the teacher is in (initiation or divestment, for example) or to some specific situation experienced, whether of a personal nature (diseases, maternity or paternity) , the performance of a new function or in another teaching modality) or structural (lack of material conditions for the performance of work, changes in the political or economic situation of the country, among others).

With regard to the period of initiation to teaching, it is necessary to observe its specific characteristics and needs. According to Marcelo Garcia (1999, p. 113), the professional teaching initiation consists of a "[...] period of intensive tensions and learning in generally unknown contexts and, during which beginning teachers must acquire professional knowledge in addition to being able to maintain certain personal balance."

In this perspective, considering the particularities of this phase, it is perceived the pertinence of the constitution of collaborative formation spaces, as well as the elaboration by the education networks of induction⁷, programs, which can contribute to:

1. Develop the teacher's knowledge of the school and the education system.
2. Increase the awareness and understanding of the beginning teacher about teaching situations and suggest alternatives to confront these complexities.
3. Provide beginning teachers with support services and resources within schools.
4. Help beginning teachers to apply the knowledge they already have and that they can obtain for themselves.⁸ (TISHER, 1984 apud MARCELO GARCIA, 1988, p.71, our translation).

There is no consensus on the length of the period called teaching initiation: Huberman (1995) considers the first three years, Cavaco (1995) up to the fourth year of exercise, Veenman (1988) the first five years and Tardif (2003) the seven initial career years, divided into two phases. In Brazil, this period is often correlated to the probationary stage, in which, more than the concern with offering specific support or monitoring programs or policies, educational institutions or networks subject the beginner to periodic performance evaluations.

We understand, therefore, that the important thing is not to establish a consensual delimitation of the maximum number of years for a teacher to be considered a beginner, but to create welcoming spaces, looking for ways to raise the specific formation needs of these professionals. Thus, in the next section we will bring to the debate the instruments for surveying, diagnosing and analyzing the training needs of teachers who are new to teaching in basic education.

3. Instruments that can help identify the formation needs of teachers in projects to induce teaching

The process of expressing, expressing or socializing formation needs by beginners is not a common activity, nor is it routine in proposals for continuing teacher education. The resistance to expose what is not yet mastered, considering this act as incapacity for the exercise of the position, despite being qualified in the degree, can lead the beginning teacher to become cloistered with his problems, weaknesses, difficulties, dilemmas and challenges.

This situation tends to be more worrying when the beginner is placed in a hostile and unfriendly school environment, in which both professional peers and

⁷ According to Marcelo Garcia (2017), induction programs or policies are those aimed at the insertion of teachers at the beginning of their careers in educational centers or teaching networks.

⁸ In the original text, in Spanish: "1. Desarrollar el conocimiento del profesor hacia la escuela y el sistema educativo. 2. Incrementar la consciencia y comprensión del profesor principiante respecto de la complejidad de las situaciones de enseñanza y sugerir alternativas para afrontar estas complejidades. 3. Proporcionar a los profesores principiantes servicios de apoyo y recursos dentro de las escuelas. 4. Ayudar a los profesores principiantes a aplicar el conocimiento que ya poseen o que podría obtener por sí mismo." (TISHER, 1984, apud MARCELO GARCIA, 1988, p.71).

those responsible for training do not show a predisposition to dialogue, guidance and monitoring.

[...] the study of teachers' narratives, both in oral and written form, proves to be an innovative methodology in educational research in general and in the field of continuing education in particular. Knowing and understanding the thinking, culture and perspectives of teachers is a relevant aspect in the identification and analysis of their training needs. (ESTRELA; MADUREIRA; LEITE, 1999, p. 31).

The authors help us to understand that constituting methodological paths that help in raising the teachers' formation needs remains a challenge in contexts of continuing education, as it implies overcoming the concept of technical-instrumental training, marked by the vertical model of knowledge transmission

The consideration of the thinking, culture and perspectives of teachers when proposing induction programs is directly related to a conception of formation as a continuous process, in the perspective of professional development, which is consistent with methodologies that use instruments to survey and analyze needs that allow the approximation of the beginners' subjectivities.

Among the instruments that are aligned with this concept of formation, we highlight the field diaries. According to Zabalza (2004, p. 23), they "build an excellent path to reach, at least as teachers wish and / or allow, the practical dilemmas of the profession". From a methodological point of view, the field diary "is part of approaches or lines of research based on personal documents or autobiographical narrations", and is established, according to the author, as a resource for reflection on the practice, contributing to personal development and professional. Thus, in follow-up processes, field diaries have been used successfully as one of the tools for surveying and analyzing the training needs of beginning teachers.

Another instrument that can help projects and programs that invest in the professional development of teachers to carry out a survey of the training needs of beginners is the formation memorial, understood by Câmara and Passeggi (2013, p.31) as an instrument that allows "an articulation between the teaching condition and the working and employability conditions, between the private and public, the mental, institutional and social structures, in which and with which the author of the memorial dialogues ". In this narrative of himself or autobiographical writing, the author describes himself in the situation he has experienced, revealing to himself and to the other the path of his formation and, consequently, of his formative needs.

The narratives of teaching cases also offer possibilities of contribution to the survey of needs, as they present a set of practical events connected in a text in which the teacher, considered the main subject in the school context, is expected to articulate theory and practice to the narrate the episodes. In the formation programs that use this instrument, the cases heard or narrated show the conflicts, crises and situations of difficulty experienced in practice by subjects (usually teachers), allowing participants to put themselves in the narrated situation and reflect on it, aiming at the search solutions and the joint

construction of knowledge that comes from reflecting on professional practice. (NONO; MIZUKAMI, 2002).

Following on this path of exploring narratives as instruments that make it possible to capture, explore and mobilize teachers to express their formation needs, we have the biographical project studio, which works with writing, dialogue and reflection on life and education stories, uniting the dimensions of past, present and future. The biographical studio allows the participant to build his personal professional development project, emphasizing the formative potential of writing and narrative production. as the construction of experience. (DELORY-MOMBERGER, 2006).

Thus, the narratives, whether in field diaries, teaching cases, memorials or biographical workshops, can present themselves as possibilities to mobilize and sensitize beginning teachers to the report of their formation needs, since, due to their high reflective potential, provide the construction and reframing of practices.

Thus, we understand that the use of these instruments for surveying and analyzing the formation needs of teachers, and especially for beginning teachers, can contribute to the formulation of induction policies that meet the specificities of teachers in the education networks.

In view of the above, after presenting the concepts of formation needs found in the literature and locating possible methodological paths for the survey or diagnosis of needs, based on a concept of formation in the perspective of teacher professional development, with a view to critical rationality, we will proceed to analysis the results of the systematic review of scientific productions on the object.

4. The use of the term "formative needs" in academic productions

The "systematic review", according to Medeiros et al. (2015, p. 95), it is a careful literature review procedure, anchored in "[...] a specific intervention strategy, through the application of explicit and systematic methods of searching, critical appraisal and synthesis of selected information."

In order to carry out a study characterized as a systematic review, a "systematic review protocol" is elaborated, in which are explained: the research question (s); the objective (s) of the search; the criteria for selecting the sources (keywords, types of texts, inclusion and exclusion criteria, space-time delimitation and quality criteria for primary studies, among others); and strategies for extracting and summarizing information.

Following the methodological procedures for conducting a systematic review presented by Medeiros et al. (2015), the search was carried out "[...] in indexed electronic databases (from the selection of keywords, also known as descriptors built with the keywords and Boolean operators AND, NOT, OR etc..)." The keywords used were "formative needs", "training needs", "teaching initiation", "beginning teachers", combined with each other through Boolean operators⁹.

⁹ "Boolean operators" or "logical search operators" are used to relate terms or words to a search expression", combining "two or more subjects, names or words, from one or more search fields." The search operators used in most sources of information are: AND, OR and NOT, where AND (intersection) is used to relate the words, making "documents that have both words occurring simultaneously" OR (union) and is used to add words, terms or names, retrieving documents that have one and / or another of the words in the field (s) where the search is being directed", and NOT (exclusion) is used to retrieve

To include a larger number of databases in the research, we use the Periodical Portal of the Coordination for the Improvement of Higher Education Personnel (Capes), which gathers 255 databases, including the Scientific Eletronic Library Online (SciELO), the Thesis Catalog and Dissertations, among others. The Federal Academic Community (CAFe) access tool was used, through which students and professors from federal institutions have access to documents that are not freely available in other databases. For theses and dissertations, in addition to the Capes Thesis and Dissertations Catalog, which gathers Brazilian productions, we access the La referencia repositories: Red of access repositories open to science, which makes productions from all over Latin America available, and Open Access thesis and dissertations, which provides access to academic productions from European and American universities, among others.

The inclusion criteria for the productions were: articles, theses and dissertations, produced between 2009-2019, which dealt with teaching initiation in basic education, used the term "formation needs" or "training needs" in their titles, keywords or summaries and explicitly defined the methodology for diagnosing these needs. Consequently, productions that used the terms / words "formative / a", "training" and "needs" separately in a statement were excluded, that is, not being configured as a single term that refers to the concept investigated here, or that dealt with formation needs related exclusively to the initial formation of undergraduates, professions not linked to teaching or teaching in higher education.

With regard to the exclusion of productions that addressed teaching in higher education, it is necessary to make a reservation. We understand that, although there may be situations in which a teacher starts his professional career directly in higher education, without having previously gone through other stages of teaching, which would characterize him as a beginning teacher in the sense that we used in this study, the most usual situation has teachers who, after initial formation at the undergraduate level, begin their career in basic education, continue investing in their formation, pursuing post-graduate degrees at the master's and doctoral level, and subsequently enter higher education institutions. In this case, we consider that it is an incoming teacher and not a beginner teacher, since in the literature we find by definition that the initiation to teaching refers to the period immediately after the end of the initial formation, whether or not followed by complementary training. (specialization or post-graduation *stricto sensu*).

As criteria for the quality of studies, scientific articles published in peer-reviewed journals and completed theses and dissertations were considered, that is, those that had already passed through examining boards, having been approved.

In order to analyze the contributions of these productions, according to the systematic review protocol that we elaborated, we focus our attention on the following questions: what is the concept of explicit or implicit training in research? How do authors conceptualize training needs? What are the most used references to theoretically support the concept? What is the target audience of the survey? How was the survey of formation needs carried out?

documents that include the first word while excluding the second word, thus avoiding ambiguities and refining the search. (BRASIL, 2009).

Following the aforementioned criteria, we found in the Capes Journals Portal 79 peer-reviewed articles that addressed teaching initiation and 51 that addressed training needs. Among these, only two (GIORDAN; HOBOLD; ANDRÉ, 2017; OLIVEIRA, 2018) simultaneously covered both themes, beginning teachers and formation needs.

Giordan, Hobold and André (2017) aimed to identify the formation needs of beginning teachers in the final years of elementary school in the Municipal Education Network of Joinville, SC. Regarding the concept of formation, they assume the perspective of teacher professional development, considering it "as a process of professional development and structuring the person, learning possibilities and experiences of the subjects" (GIORDAN; HOBOLD; ANDRÉ, 2017, p. 312).

In the research, the authors base the concept of formation needs from Marcelo Garcia (2009), defining it, in the objective scope, as the knowledge that complement or deepen the knowledge already internalized by the teachers in the initial formation, and, in the subjective scope, as the knowledge that involves being a teacher, with regard to motivation and self-esteem.

In the article by Oliveira (2018), the author presented the objective of analyzing the formation needs of teachers beginning secondary education in Uruguay, with a view to developing a professional development program in line with the specific needs and interests of these teachers. According to her, the "Formation of Trainers Program to accompany beginner teachers in Uruguay¹⁰", launched to improve the insertion of teachers in professional and institutional cultures through a collaborative monitoring experience, was not managing to reach a significant number of participants.

Like Giordan, Hobold and André (2017), Oliveira (2018) is also part of a concept of formation in the perspective of teacher professional development. The author conceptualizes formation needs, based on Pérez Juste (2006) and Tejada and Giménez (2007) and from a subjective and relational connotation, as the difference or relationship between the current development situation and the desired or ideal situation. Thus, he considers that "[...] the need can generate interest in your satisfaction, even though not all interests can be considered as needs. [...] The interest is neither in the object nor in the subject, but in the relationship between both.¹¹". (OLIVEIRA, 2018, p. 70, our translation).

In Chart 1, we present a synthesis of the aspects that were analyzed in the two articles: who were the research participants, how did the researcher (s) diagnose the formation needs and what were the needs raised in the research.

¹⁰ Our Translation: "Formación de Formadores para el acompañamiento de noveles docentes de Uruguay".

¹¹ In the original text: La necesidad puede generar el interés en su satisfacción, aunque no todos los intereses pueden ser considerados como necesidades [...] el interés no está ni en el objeto ni en el sujeto, sino en la relación entre ambos; supone que la atención se dirige en forma de actividad reflexiva hacia el objeto.

Chart 1. Summary of the results of the articles found in the database (2009/2019)

Articles			
Author (Year)	Survey participants	How did the needs diagnosis?	Training needs raised
Giordan, Hobold and André (2017)	22 teachers with up to three years of experience who worked in classes from 6th to 9th grade in the Municipal Education Network of Joinville, SC,	Individual interviews	Knowledge about inclusion (students with disabilities) and use of technologies. Specific contents of the areas (such as art, literature, science laboratory practice), and issues related to didactics, interdisciplinarity, oratory, indiscipline and interpersonal relationship with the adolescent.
Oliveira (2018)	91 directors and deputy directors of 42 public schools in Uruguay's high schools and 417 teachers with up to 5 years of profession responded to the survey. 21 beginning teachers and 12 principals or deputy principals were interviewed	Survey questionnaires (surveys); individual interviews,	Improve didactic-pedagogical practice, with an emphasis on planning and evaluation; knowledge and application of the rules of the educational system; the orientation of group work; motivational action and pedagogical strategies; the curricular adaptation of the subjects 'contents to the students' specific needs, in a context of diversity; strengthening links between teachers and students; dealing with teenagers, especially those who come from critical social contexts; and the interpersonal relationship between teachers who teach the same or similar disciplines.

Source: Organized by the authors based on data found in SciELO.

With regard to theses and dissertations, a search was initially carried out using only one of the keywords, in Portuguese (*necessidades formativas* and *professores iniciantes*), Spanish (*Necesidades de Formación* and *Profesores Principiantes*) and English (Beginning Teachers and Formation Needs), in order to compare the number of studies that addressed the themes separately with the number of productions that simultaneously dealt with the two themes. Then, the results were refined using the Boolean AND operator. As already reported, the repositories accessed were *La referencia: Red de repositorios de acceso abierto a la ciência*, Open Access thesis and dissertations and *Repositórios Científicos de Acesso Aberto* in Portugal. Table 1 shows the result of this mapping.

Table 1. Number of academic productions by keywords used in the search¹²

COUNTRY	Formative Needs		Beginning Teachers		Formative Needs AND beginning Teachers	
	T*	D**	T	D	T	D
Brazil	99	355	127	355	10	18
Colombia	0	10	0	11	0	0
Ecuador	0	171	0	5	0	0
Peru	3	8	3	6	0	0
Argentina	0	1	3	1	0	0
Mexico	1	7	0	0	0	0
Chile	0	0	0	1	0	0
El Salvador	0	2	0	0	0	0
Costa Rica	0	2	0	1	0	0
United States	11	13	11	23	0	0
England	10	4	0	0	0	0
Portugal	21	61	53	813	0	1

*T=Theses. ** D= Dissertations.

Source: Organized by the authors based on information from the Capes thesis and dissertations catalog, *La referencia: Red de repositorios de acceso abierto a la ciencia*, Scientific Open Access Repositories of Portugal and *Open Access thesis and dissertations*.

It is possible to observe that we have a significant amount of academic productions when considering the terms formation needs and beginning teachers in isolation, but with the combination of the terms the results are scarce, appearing productions only in Brazil (ten theses and eighteen dissertations) and in Portugal (one dissertation). Among these, six dissertations and four theses were selected for analysis that fit the criteria listed in our systematic review protocol. The others dealt with the training needs of teachers who enter teaching at higher education institutions, but who already had previous experience in basic education, which shows us that there is often the use of the term "beginner teacher" in contexts where, probably, the expression "new teacher" would be more informative.

The academic productions selected and analyzed addressed the formation needs of beginning teachers related to the teaching of specific subjects, such as English (CARDOSO, 2018) and mathematics (SANTOS, 2018), or to specific contexts, such as the school in the countryside (PEREIRA, 2017) or the early years of elementary school (LEONE, 2011; LIMA, 2014; DONATO, 2013; BANDEIRA, 2014).

Regarding the conception of perceptible formation in productions, the majority (LEONE, 2011; PAPI, 2011; LIMA, 2014; BANDEIRA, 2014; CARDOSO, 2018; SILVA, 2018; SANTOS, 2018) assume the concept of training as a permanent process of professional development, in which one seeks to overcome the dichotomy between initial and continuous formation, understanding that these two moments are intrinsically related within the same process, which extends throughout the teaching career. Donato (2013), on the other hand, bases the concept of training on post-critical curriculum theory, which, according to the author, seeks to guarantee social quality through formation that contemplates the cultural diversity of society.

¹² Research carried out between the months of July to August 2019.

As we did in relation to the articles mapped in this review, we sought to identify whether in the analyzed theses and dissertations the authors brought an explicit concept of formation needs and in which theoretical frameworks were based to present it.

Among the ten academic productions considered here, we found only three (LEONE, 2011; BANDEIRA, 2014; SANTOS, 2018) a conceptualization of formation needs.

Leone (2011, p. 93) brought a concept related to what Rodrigues (2006) calls "constructivist approach", which presupposes training needs "[...] as' an objective and eminently social phenomenon, elaborated by a subject particular, in a singular space-time context ', not directly observable ", the analysis of these needs being defined as " an operation of building needs " .

Santos (2018), from the ideas of Estrela, Madureira and Leite (1998) and Freire (2001), explains that the formation needs do not have an autonomous or external existence to the subjects, because, because they are a construction at the same time subjective, social and historical, are related to what is felt or perceived by the subjects, which includes their dreams and utopias, and not only the theoretical knowledge or practical skills that they do not have.

Bandeira (2014, p. 34), based on Afanasiev (1968), also makes explicit the character at the same time objective and subjective needs, which can suffer variations, as they are inserted in a dynamic context of changes. For the author, it is necessary to understand them "[...] beyond the classic perspective of gaps or discrepancies, as well as diagnostic identification", that is, to conceive them as "[...] enabling the appropriation of new knowledge for reflective and critical action."

The other productions (PAPI, 2011; CORREA, 2013; DONATO, 2013; LIMA, 2014; PEREIRA, 2017; SILVA, 2018; CARDOSO, 2018), did not present an explicit concept of formation needs, nor a specific theoretical framework for this theme , even though they have used the term throughout the text, as well as analyzing or diagnosing the training needs of the surveyed participants. Only Pereira (2017) brings in his list of references Rodrigues and Esteves (2006), two Portuguese authors who work with this concept, however throughout the text the researcher uses only one quote from the authors, related to the relevance of continuing education to respond to teacher formation needs.

Although they do not present an explicit concept, these productions make it clear that they relate formation needs to the knowledge that the teacher should have - in order to better perform their work - but they do not, either due to the weakness of the initial formation curriculum, or due to the demands of the students themselves. education systems. The needs, in this sense, were understood as lack, absence or disability, approaching the idea that continuing education would be a complement to initial formation, and not a process that begins with initial formation and continues throughout professional life.

In Charts 2 and 3 we present a synthesis of the ten researches found, highlighting: who were the participants, the location in which the research was developed, which methodology was used to make the diagnosis and what were the formation needs related after the analyzes.

Chart 2. Summary of the results of the dissertations.

DISSERTAÇÕES			
Author (Year)	Survey / location participants	How needs were diagnosed	Formation needs raised
Leone (2011)	9 teachers with up to five years of teaching experience who worked in the early years of elementary school in public schools in the municipal network of Rancharia – SP	Questionnaire application and two semi-structured group interviews, with four beginning teachers each.	Assistance in socializing with school culture; to deal with the teaching-learning process, interaction with parents of students, assessment of learning and choice of teaching methodologies.
Correa (2013)	5 Chemistry teachers from private schools in Campinas and Piracicaba, SP, with less than three years of teaching experience.	Interviews.	Dealing with indiscipline, students' lack of interest, lack of dialogue between peers and management, articulation between theory and educational practice, between general training (specific subjects) and pedagogical training and elaborating different teaching problem situations with performance methodologies.
Donato (2013)	42 beginning teachers of the initial years of Elementary School in the Municipal network of Curitiba / PR	Semi-structured interviews.	Knowledge of the educational reality, improving teaching methodologies, psychological knowledge about how to deal with classroom conflicts, research experience and theory-practice articulation (theory as an expression of practice).
Pereira (2017)	6 teachers, who work in a rural school located in an MST settlement, in the city of São José do Povo-MT.	Interviews and training memorials, using the biographical method.	Reduce the impacts caused at the beginning of the career;
Silva (2018)	6 pedagogical teachers who abandoned teaching in the period of initiation to teaching in Rondonópolis-MT.	Narrative interviews	How to deal with the number of students in class; meet the educational needs of all students and develop a lesson plan consistent with their cognitive diversity; knowledge to work with special students; relationship with peers.
Cardoso (2018)	2 beginning educators from the municipal network of Rondonópolis, MT.	Narratives extracted from the field diaries of the researcher and the participants; interviews.	Training to attend the curricular matrix that includes English in the 1st and 2nd cycles of elementary school. Knowledge of the contents of the English language course.

Source: elaborated by the authors from the production data.

Chart 3. Summary of thesis results.

TESES			
Author (Year)	Survey / location participants	How needs were diagnosed	Training needs raised
Papi (2011)	7 beginning teachers considered successful, 3 school principals and 2 managers of the municipal education department of Ponta Grossa, PR.	Focus group; participant observation (teachers) and semi-structured interview (directors and managers of the Municipal Department of Education)	To know and develop diversified methodologies, especially for students with special educational needs, organization of diversified works, selection and organization of contents, interpersonal and affective relationship with students, relationship with peers.
Bandeira (2014)	4 teachers from two public schools in the city of Teresina / Piauí, beginners of elementary school, a graduate student and a doctoral student.	Narratives in diaries and interviews and observation of the teaching practice of beginning teachers.	Relationship between theory and practice collaboratively; analysis of the contradictions of real teaching practice; collective and shared work in the school context.
Lima (2014)	7 beginner teachers graduating from the Pedagogy course of a public HEI in Maranhão	Questionnaires (to profile the teachers) and reflective narrative interviews.	Didactic-pedagogical subsidies and mastery of theoretical and practical knowledge; knowledge about management of real teaching situations in the classroom and articulation of the theory studied with teaching practice.
Santos (2018)	Mathematics teachers, 62 beginning teachers (general questionnaire) and 6 beginning teachers (interviews) from Boa Vista, RR.	Collective interview with trainers in the Mathematics Education area of the municipal network and the application of a general questionnaire to 62 beginning teachers; non-participant observation of the continuous training activities developed by the Municipal Education Department; interview with six beginning teachers who worked in the same school and had participated in the first phase of the field study.	Conditions for continuous training activities to take place. Overcoming the lightened training model that silences teachers and focuses on the instructions of the booklet system acquired by the municipal network, which not only defines the teaching process in schools, but also the content, methodology, pace and mode of participation of teachers.

Source: elaborated by the authors from the production data.

Given the above, we observed the prevalence of the interview as a methodology for surveying and analyzing the needs in all works, in addition, in some cases, questionnaires (LEONE, 2011; LIMA, 2014; SANTOS, 2018), memorials (PEREIRA, 2017), participant observation (PAPI, 2011), non-participant observation (BANDEIRA, 2014; SANTOS, 2018), diaries and narratives (BANDEIRA, 2014; CARDOSO, 2018).

Another element observed is that the formation needs mentioned by the participating beginning teachers, similarly to what Giordan, Hobold and André (2017) and Oliveira (2018) pointed out in the two articles previously analyzed, are also more related to the performance of common tasks, such as classroom management, interpersonal relationships with students, with peers and with parents or guardians, the preparation of lesson plans and assessments that address the specificities and difficulties of students, among others.

5. Final considerations

The study of the formation needs of teachers, can contribute to the formulation of induction policies that effectively meet the specificities of teachers in education networks. In this sense, we point to the silencing of this object in the general field of research on teacher formation and formation needs.

This article proposed to bring to debate the polysemy of the concept of formation needs and the relationship between the concepts of formation and the instruments used to survey or diagnose those needs. Thus, we point out that the formation needs were conceptualized by the theoreticians as interpretive constructs manifested by the teachers (ESTRELA; MADUREIRA; LEITE, 1999), mental constructions with objective connotations, linked to the natural, social and subjective environment, because it passes through filters of the individual about reality (LIMA, 2015), presenting themselves as socio-historical productions (DIAS; ROCHA; MARINHO, 2017) and statements validated by teachers about assumptions that can improve their practices and professional development (ROEGIERS; WOUTERS; GÉRARD, 1992). In the academic productions that were analyzed in this study, it was possible to observe that, although they all propose to carry out a survey of the formation needs of beginning teachers, a minority presented a concept of formation needs based on some theoretical study.

Regarding the conception of teacher formation, it was predominant to understand it as a permanent process of professional development in the search for overcoming the dichotomy between initial training and continuous teacher formation. However, when we relate this conception to the understanding of formative needs in productions that did not present an explicit conceptualization of that term, a certain contradiction can be observed, since in large part the needs were analyzed from the idea of complementing possible gaps left by Initial formation.

This contradiction is visible when we observe that, for the most part, researchers indicated that beginning teachers identified needs that do not necessarily refer to a gap in initial training, but linked to the common tasks of teaching and the challenges and tensions typical of the profession's daily routine.

With regard to the survey or diagnosis of the formation needs of beginning teachers, the methodology most cited in theoretical studies consisted of narratives (oral or written, teaching cases, field diaries, memorials), while the interview, accompanied by other procedures (questionnaire, focus group, narratives) was predominant in academic productions.

In this perspective, considering the particularities of this phase of professional development - initiation to teaching - the relevance of using instruments for the analysis and diagnosis of formation needs that take into account the active participation of teachers, as well as the constitution of collaborative formation spaces.

Thus, it would be up to those responsible for continuing education in educational institutions and networks, to seek ways to carry out a survey, diagnosis or analysis of the specific needs of the teachers who work in them and to make them basic in the elaboration of policies and / or structured induction programs. Which, as Marcelo Garcia (2017) analyzes, contribute to the entry of the beginner in the profession and in the school reality to happen with the support and monitoring of experienced professionals and trainers specifically prepared for this function, such as mentors.

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