



## Practice as a Curricular Component: an Overview of Publications and Contexts of Scientific Production\*

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### ABSTRACT

Practice as a Curricular Component (PCC) was instituted in 2002 as a way to articulate the theoretical and practical dimensions in teachers education/training. In our bibliographic study of the state of knowledge, we aimed to investigate the contexts of publications in journals, indexed on the Portal de Periódicos da Capes (in english Capes Journal Portal), which deal with the PCC, providing an overview of them. Publications were analyzed via Content Analysis. We observed that most of the published studies took place in contexts of public institutions, concentrated mainly on the last 5 years, and sought to analyze how the PCC is described and how it is carried out in the institutions. From the results obtained, we could observe that teacher educators know little about the PCC or feel difficulties in carrying it out, confusion about the meaning of the practice and even devaluation of this component by students, which demonstrates the need for dialogues and clarifications on practice as a curricular component within institutions.

### KEYWORDS

Practice as a curricular component. Practical dimension. Trachers education.

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Submitted: 03 Mar. 2021

Accepted: 23 May 2021

Published: 19 June 2021

 [10.20396/riesup.v8i0.8664826](https://doi.org/10.20396/riesup.v8i0.8664826)

e-location: e022010

ISSN 2446-9424

Antiplagiarism Check



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## A Prática como Componente Curricular: Panorama das Publicações e Contextos da Produção Científica

### RESUMO

A Prática como Componente Curricular (PCC) foi instituída em 2002, como uma forma de articular as dimensões teóricas e práticas na formação de professores. Neste estudo bibliográfico, do estado do conhecimento, tivemos como objetivo investigar os contextos das publicações em periódicos, indexados no Portal de Periódicos da Capes, que tratam da PCC, traçando um panorama das mesmas. Os trabalhos foram analisados segundo a Análise de Conteúdo. Observamos, que a maior parte dos estudos publicados ocorreu em contextos de instituições públicas, concentrados, principalmente, nos últimos 5 anos, e buscaram analisar como a PCC está descrita e como se realiza nas instituições. A partir dos resultados encontrados, pudemos observar que os formadores de professores pouco conhecem sobre a PCC ou sentem dificuldades em realizá-la, confusões sobre o sentido da prática e, ainda, desvalorização desse componente por parte de licenciados, o que demonstra a necessidade de diálogos e esclarecimentos sobre a prática como componente curricular dentro das instituições.

### PALAVRAS-CHAVE

Prática como componente curricular. Dimensão prática. Formação de professores.

## La Práctica como Componente Curricular: Panorama de Publicaciones y Contextos de Producción Científica

### RESUMEN

La práctica como componente curricular (PCC) se instituyó en 2002 como una forma de articular las dimensiones teóricas y prácticas en la formación docente. En este estudio bibliográfico del estado del conocimiento, buscamos indagar en los contextos de las publicaciones en revistas, indexadas en el Portal de Periódicos da Capes (en español Portal de Revistas Capes), que se ocupan del PCC, proporcionando una visión general de las mismas. Los trabajos fueron analizados según el Análisis de Contenido. Observamos que la mayoría de los estudios publicados ocurrieron en contextos de instituciones públicas, concentrados principalmente en los últimos 5 años, y buscaron analizar cómo se describe el PCC y cómo se lleva a cabo en las instituciones. A partir de los resultados encontrados, se pudo observar que los formadores del profesorado saben poco sobre el PCC o sienten dificultades para llevarlo a cabo, confusión sobre el sentido de la práctica e incluso devaluación de este componente por parte de los egresados, lo que demuestra la necesidad de diálogos y aclaraciones sobre el tema. la práctica como componente curricular dentro de las instituciones.

### PALABRAS CLAVE

Práctica como componente curricular. Dimensión práctica. Formación de profesores.

## Introduction

The undergraduate course is the first formal and systematized step in teacher education and is therefore one of the pillars in the process of teacher development. During this period, the (re)construction and consolidation of practices around the teacher's work is sought. This is why initial teacher education deserves attention and reflections on the ways in which it is developed.

Throughout the history of Brazil, there were many conceptions of teacher education, such as the one taught in normal schools and the 3+1 model, based on technical rationality, which consists of 3 years of a kind of bachelor degree, followed by 1 year dedicated to didactics and teaching practice (DINIZ-PEREIRA, 1999). This last model has suffered several criticisms by scholars in the field of education, mainly because it highlights a dichotomy between the theoretical and practical dimensions and the relationship between both, the fragmentation of knowledge, the centrality in scientific knowledge, the disconnection with the reality of schools and the non-recognition of the teacher as a producer of knowledge (DINIZ-PEREIRA, 1999; 2011; GATTI, 2013).

In contrast to this training model, which is still widespread in Brazilian institutions, the National Council of Education (CNE) published, in 2001, the Opinion CNE/CP N. 28/2001 (BRASIL, 2001), which is the basis for the Resolution CNE/CP N. 1/2002 that "Establishes the National Curricular Guidelines (DCN) for the Training of Teachers of Basic Education, in higher education, full degree course." (BRASIL, 2002a, p. 1). These DCN propose teacher training based on practical rationality, in which the articulation of theoretical and practical dimensions is seen as a methodological principle, named in Opinion CNE/CP N. 28/2001 as Practice as a Curricular Component (PCC) and defined as:

[...] a practice that produces something within the scope of teaching. As practice is a conscious work whose guidelines are nourished by Parecer 9/2001, it will have to be an activity as flexible as other support points of the formative process, in order to account for the multiple ways of being of the academic-scientific activity. Thus, it must be planned during the elaboration of the pedagogical project and its happening must take place from the beginning of the formative process and extend throughout its entire duration. In intrinsic articulation with the supervised internship and with the academic work activities, it contributes jointly to the formation of the teacher's identity as an educator.

This correlation between theory and practice is a continuous movement between knowing and doing in the search for meaning in the management, administration, and resolution of situations specific to the school education environment. (BRASIL, 2001, p. 9).

Moreover, with the set of documents of the DCN, completed with the publication of Resolution CNE/CP N. 2/2002, the PCC, its workload and forms of development are instituted: 400 hours throughout the training course, since its beginning, distributed in cores or as part of disciplines or, still, in the form of other formative actions (BRASIL, 2002b).

In 2015, on the occasion of the publication of the Opinion CNE/CP N. 2/2015 (BRASIL, 2015a) that substantiates the Resolution CNE/CP N. 2/2015 (BRASIL, 2015b), after many discussions of several institutions and associations, such as ANFOPE (National Association for the Training of Education Professionals) and ANPED (National Association of Graduate Studies and Research in Education), the new DCN are published. In these new DCNs, which use the characterization of PCC, as it was in the repealed DCNs, maintaining the workload dedicated to this articulating axis, the unity and inseparability between the theoretical and practical dimensions, since "both providing basic elements for the development of knowledge and skills necessary for teaching" (BRASIL, 2015a, p. 11).

In 2019, just one month after the deadline for implementation of the 2015 DCNs, the CNE published, in a lighthearted manner, the Parecer CNE/CP 22/2019 (BRASIL, 2019a) that grounds the Resolution CNE/CP N. 2/2019, which revokes Resolution CNE/CP N. 2/2015, and "Defines the National Curricular Guidelines for the Initial Training of Teachers for Basic Education and establishes the Common National Base for the Initial Training of Teachers of Basic Education (BNC-Training)." (BRASIL, 2019b, p.1). Despite several criticisms (LOPES, AMESTOY, SCHMITZ and BOTON, 2021), the new documents, based on the development of competencies and skills, were divided into three dimensions, among which we highlight, in the context of this study, that of the Professional Practice dimension. According to the reporters, practice is the association between the object of knowledge and the object of teaching and, therefore, the learning of the objects of teaching and the procedures and objectives should be concomitant, since they aim at the selection, organization, and evaluation of the objects of teaching, which are fundamental in training and in the relationship between knowledge and practice (BRASIL, 2019a).

Thus, the PCC is configured as an important component for the formation of the teaching identity and the approach of the undergraduate to his practice as an educator, in the development of the articulation between the theoretical and practical dimensions of their initial training. However, although 18 years have passed since the institution of PCC, there are still difficulties in understanding and developing it. Some authors, such as Mohr and Cassiani (2017) reiterate that even though there is documentation regarding the conceptions of PCC, they are not sufficient for its effective realization. This is due to the confusions about the meaning of the word practice in the term PCC, especially in courses that have curricular components of practices in laboratories, although the Opinion CNE/CES 15/2005 has explained that the PCC should not be confused with the practices of the specific curricular component (BRASIL, 2005).

Thus, considering the relevance of the PCC, the different ways in which it can be developed and the difficulties pointed out to its realization, this study seeks to investigate the contexts of publications in journals that deal with the PCC, tracing an overview of scientific productions, considering that the academic and professional conceptions are reflected in scientific productions aimed at the study of the practice itself or the analysis of studies by others.

## Methodological Paths

### Research Methodology

The study is characterized by being of the bibliographic type, defined by Gil (2012) as research that is developed on already prepared materials, such as books and scientific articles. For the author, "the main advantage of bibliographical research lies in the fact that it allows the researcher to cover a much wider range of phenomena than he could research directly." (GIL, 2012, p. 50).

Furthermore, our study is a State of the Knowledge survey, which involves a considerable number of published works, aiming to describe the general aspects of a given field of knowledge, such as the main results and conclusions.

### Data Collection

In October 2020, we accessed the CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior) Periodical Portal database and searched for publications that contained in their content the term "Practice as a Curricular Component", published between 2002 and 2020. This interval was chosen because in 2002 the DCN that establishes the PCC was published.

Initially, the search resulted in 48 documents, whose abstracts were read and catalogued. From this first reading, 28 documents were discarded because they did not deal with the subject of PCC, resulting in 20 papers selected for analysis, described in Chart 1.

### Data Analysis

The publications were analyzed according to the Content Analysis methodology, proposed by Bardin (2011). Content analysis seeks to describe the content of messages, allowing inferences to be made about them (BARDIN, 2011).

In our analysis, the following items were observed: journal, year of publication, objective, data source used, course and discipline on which the research was conducted and results obtained. We emphasize that our study did not investigate the contexts in which the PCC occurred, but rather, we present a general picture of published research on the subject of PCC.

## Results and Discussions

Considering the objectives established in this study, the search for publications in periodicals, of papers published between 2002 and 2020, whose theme is PCC, resulted in 20 publications, presented in Chart 1.

**Chart 1.** Overview of studies on Practice as a Curricular Component published in Brazil between 2002 and 2020.

N. (code)	TITLE	AUTHORS	PERIODICAL	YEAR
1.	Practice as a Curricular Component in Mathematics undergraduate courses: multiple contexts, subjects, and knowledge	Mary Angela Teixeira Brandalise and José Trobia	Mathematics Education Research	2011
2.	Practice as a Curricular Component and its implementation in the classroom in the view of educators of a Language course	Luciana Cabrini Simões Calvo and Maria Adelaide de Freitas	Acta Scientiarum	2011
3.	Contents of the interface disciplines assigned to the Practice as a Curricular Component in undergraduate Chemistry courses	Ana Cláudia Kasseboehmer and Sidilene Aquino de Farias	Alexandria: Journal of Science and Technology Education	2012
4.	Relations between theory and practice in teacher education: investigating social practices in an academic discipline of a course in Biological Sciences	Gabriel Menezes Viana, Danusa Munford, Márcia Serra Ferreira and Luciana Moro	Education in Review	2012
5.	The Practice as a Curricular Component in the formation of the Biology teacher: advances and challenges at UFRPE	Alessandra Maria Pereira Martins da Silva, Zélia Maria Soares Jófili and Ana Maria dos Anjos Carneiro-Leão	Amazônia: Journal of Science and Mathematics Education	2014
6.	Practice as a Curricular Component and Supervised Internship in Physical Education Teacher Education	Willer Soares Maffei	Motrivivation	2014

7.	Practice as a Curricular Component: issues and reflections	Samuel de Souza Neto and Vandef Pinto da Silva	International Dialogue Magazine	2014
8.	Teaching practices and teacher education: notes on the experience of the Degree in Philosophy at UFABC	Marinê de Souza Pereira and Patricia Del Nero Velasco	Education	2015
9.	Theory-practice relations in science teacher education: a study of discursive interactions within an academic discipline	Gabriel Menezes Viana, Danusa Munford, Marcia Serra Ferreira and Priscila Correia Fernandes	Educational Policy Analytical Files	2015
10	The Federal University of Southern Bahia (UFSB) and the Universidade Nova project: what about the undergraduate courses?	Eliana Povoas Pereira Estrela Brito	International Journal of Higher Education	2017
11.	Circulation of meanings of the Practice as a Curricular Component in the graduation in Biological Sciences	Alessandro Tomaz Barbosa e Suzani Cassiani	Education & Training	2017
12.	A view on the Practice as a Curricular Component using pedagogical workshops and media resources in Chemistry Teaching	Taysa da Silveira Chrysostomo and Jorge Cardoso Messeder	International Journal of Teacher Education	2017
13.	Practice as a Curricular Component: understandings, possibilities and perspectives	Marília Zabel and Ana Paula dos Santos Malheiros	Mathematics Education Research	2018
14.	The Practice as a Curricular Component and its implementation in a higher education course for translators and interpreters of sign language	Neiva de Aquino Albres and José Ednilson Gomes de Souza Júnior	Unfaithful Beauties	2019

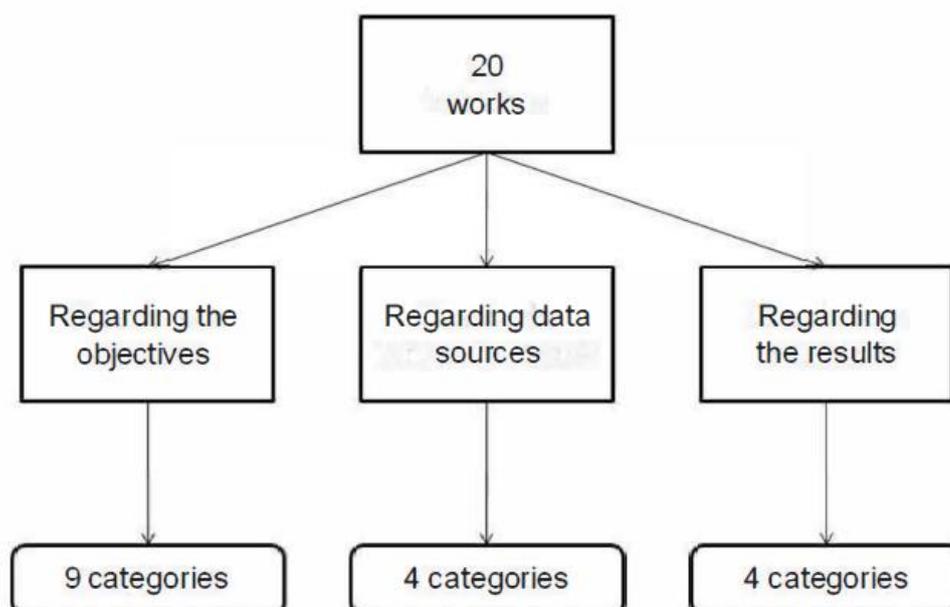
15.	Practice as a Curricular Component in the discipline Research and Educational Processes in the Pedagogy course: a differential in the relationship between research, theory and practice	Andressa Grazielle Brandt and Márcia de Souza Hobold	Education & Training	2019
16.	Characterization of Practice as a Curricular Component in Biology courses	Jaiane de Moraes Botton and Luiz Caldeira Brant de Tolentino-Neto	Actio: Science Teaching	2019
17.	Conceptions of Practice as a Curricular Component in the Chemistry Degree Courses of the Federal Institutes of Education, Science and Technology	Priscila Juliana da Silva Brasil and Orliney Maciel Guimarães	Brazilian Journal of Research in Science Education	2019
18.	What do the works about Practice as a Curricular Component say?	Jaiane de Moraes Botton and Luiz Caldeira Brant de Tolentino-Neto	Insignare Scientia Magazine	2019
19.	Possibilities of approaching the school scenario in initial training in Physical Education	Camila Rinaldi Bisconsini and Amauri Aparecido Bassóli de Oliveira	Journal of Physical Education	2019
20.	Practice as a Curricular Component: horizons of understanding of chemistry teachereducators	Vivian dos Santos Calixto, Neide Maria Michellan Kiouranis and Rui Marques Vieira	Investigations in Science Teaching	2019

Source: The authors.

From the panorama presented by Chart 1, we can observe that there were few researches conducted and published in journals about PCC, despite its creation 18 years ago. We can identify that the studies were published in 18 different journals, mostly national and all published in Portuguese, which is understandable, since the PCC is a teacher education policy of Brazilian origin. Furthermore, we can observe that publications were found starting in 2011 (2011 = 2, 2012 = 2, 2014 = 3, 2015 = 2), although PCC has existed since 2002. It is possible to notice, however, a growth in the number of publications in the last 5 years, totaling 11 papers (2017 = 3, 2018 = 1, 2019 = 7).

According to the objectives established in our study, content analysis (Bardin, 2011) was carried out in three sections of the analyzed papers: regarding the objectives, regarding the data sources used, and regarding the results obtained. This organization of the analysis and the number of categories obtained in each section is represented in Figure 1.

**Figure 1.** Representation of the organization of the analysis of the 20 selected papers and the number of categories obtained in each analysis section: Objectives, data sources, and results obtained.



Source: The authors.

Regarding the objectives of the studies, we found nine analytical categories, presented in Chart 2. The **Curriculum** category includes the studies that analyzed the curricula of courses and their implementation, as well as the organization of the PCC within the courses, demonstrating the concern with the form of curricular organization of the PCC. Meanwhile, the category **Attributing meanings** comprehends the works that sought to investigate which meanings were attributed to the PCC by teacher educators and undergraduate students. The next category, **Conceptions of Practice as a Curricular Component**, includes the studies that described what conceptions of PCC are held by teacher educators, future teachers, or even the literature. These last two categories explain that the meanings that are attributed to PCC and the conceptions of PCC can influence the ways in which this component is organized in the training course, performed by the trainers and received by the undergraduate students and, therefore, deserve the dedication of studies.

**Chart 2.** Synthesis of the categories obtained in relation to the objectives of the analyzed studies.

Category	Number of itens	Included works (code)	Category Description
PCC Concepts	5	3; 7; 8; 13; 17	It includes the papers that analyzed the conceptions of PCC present in courses and in the literature.
Resume	4	1; 10; 14; 16	It includes papers that have analyzed course curricula and their implementations in relation to PCC.
Attributing meanings	4	2; 4; 11; 20	It includes the papers that analyzed the meanings attributed to the PCC.
Analysis of publications about PCC	2	6; 18	Includes papers that have reviewed the published literature on PCC.
Potentials of PCC	1	5	Includes work that analyzed the potential of PCC for biology teacher training.
Processes of discourse construction	1	9	Includes work that analyzed the process of discourse construction in a PCC discipline.
Approaching the school scenario	1	19	It includes the work that analyzed the approach to the school setting through the PCC and the internship.
Didactic resources	1	12	Includes the work that analyzed the use of a didactic resource in a PCC discipline.
Training proposal	1	15	It includes work that analyzed a proposal for teacher training that includes, among others, PCC.

Source: The authors.

Some studies were dedicated to analyze the published works related to PCC and, therefore, were included in the category **Analysis of Publications on Practice as a Curricular Component**, demonstrating the concern to understand the literature produced in the area. In our analysis, other categories also emerged. Namely, **Potentials of Practice as a Curricular Component**, which includes a published work whose objective was to investigate the potentials of PCC in contributing to teacher education. We also observed the category, **Processes of discursive construction**, which investigated these processes in the theory-practice relationship within a PCC discipline. The category, **Approaching the school scenario**, includes a study that investigated the relations of approaching the educational environment by the students of a graduation course, both through the supervised curricular internship and the PCC. Also, the category Teaching resources emerged from a study whose objective was to investigate the use of a **teaching resource** in a PCC subject. Finally, the category **Training proposal** emerged from a study in which a teacher training proposal was investigated.

Regarding the Corpus of the studies, in particular the data sources used, four categories emerged, from the analyzed works (Chart 3). They are as follows: **Institutional documents**, which comprises the works that used the PPC (Pedagogical Course Project), the course menus and the institutional reports as sources of data collection. This is the category that includes the largest number of works, 45% of the analyzed works, showing that institutional documents are the main sources of data used in studies about the PCC. Next, the category **Teachers and students** includes the studies that used interviews and questionnaires, both with teachers of undergraduate courses and their students, as sources of data in their studies on PCC. This category also represents important data, because in order to discuss the PCC, it is important to consider the reflections and considerations of those who perform and experience it.

**Chart 3.** Summary of the categories obtained in relation to the data sources used by the analyzed papers.

Category	Number of itens	Included works (code)	Category Description
Institutional Documents	10	1; 3; 7; 8; 10; 11; 14; 15; 16; 17	It includes the works that used the PPC, the course menus, and the institutional reports.
Teachers and Students	6	2; 4; 5; 12; 19; 20	Includes papers that used interviews and questionnaires with teachers and students.
Publicações sobre PCC	3	6; 13; 18	It includes papers that used articles, dissertations, theses, and standards.
Class observations	1	9	It includes work that observed classes for data collection.

Source: The authors.

According to the objectives established in the studies analyzed here, the category related to Publications on Practice as a Curricular Component emerged. In this category were included the studies that used already published studies, legislations and norms about PCC as data sources, demonstrating the importance of understanding the existing literature in the area. Finally, one study used class observations as a source of data for its study, seeking to understand the teachers' conceptions of PCC.

Not all studies were carried out within an institution or in relation to any course, but we observed that the studies occurred within public institutions. This information leads us to a questioning, without a definitive answer: why are private institutions that offer undergraduate courses not included in the sample of studies? This questioning occurs, mainly, if the data sources are the PPC and these documents should be available for consultation, according to Law 12.527, of November 18, 2011, which regulates access to information, ensuring the publicity of documents (Brazil, 2011). Private institutions could also be part of a sample. Or do these institutions not grant permission for studies of this type to take place?

Regarding the courses in which the research was carried out, we could observe that most studies were carried out in Degree courses in Biological Sciences (5), Degree in Chemistry (4), Degree in Mathematics (2), Degree in Physical Education (2), Degree in Philosophy (1), Interdisciplinary Degrees (1), Degree in unspecified Letters (1) and Pedagogy (1). We draw attention to the work published by Albres and Souza Júnior (2019), because, although the PCC is a curricular component instituted for Brazilian undergraduate courses, the authors observed its implementation in a bachelor's degree course in Letras Libras. For the authors, the PPC of the course justifies the implementation of the PCC, since it advocates the relationship between the theoretical and practical dimensions of training, even though it is a bachelor's degree.

In our analysis, we also categorized the studies according to the results obtained. In this sense, we observed the existence of four categories of analysis (Table 4). The first category concerns the weaknesses observed in 75% of the studies we analyzed. In these papers, the authors reported that the courses analyzed are in accordance with the DCN, regarding the minimum workload of 400 hours for PCC and the distribution of this component from the beginning of the course (Brandalise and Trobia, 2011; Kassemboehmer and Farias 2012; Silva, Jófili and Carneiro-Leão, 2014; Maffei, 2014; Souza Neto and Silva, 2014; Pereira and Velasco, 2015; Brito, 2017; Barbosa and Cassini, 2017; Chrysostomo and Messeder, 2017; Zabel and Malheiros, 2018; Albres and Souza Júnior, 2019; Botton and Tolentino-Neto, 2019<sup>a</sup>; 2019<sup>b</sup>; Brasil and Guimarães, 2019; Bisconsini and Oliveira, 2019).

**Chart 4.** Synthesis of the categories obtained in relation to the results obtained by the analyzed papers.

Category	Number of itens	Included works (code)	Category Description
Observed weaknesses	14	1; 3; 5; 6; 7; 8; 10; 11; 12; 13; 14; 16; 17;18; 19	It includes the papers that pointed out weaknesses in conceptions, meanings, organization, and development of the PCC.
Relevance of PCC	2	2; 4	It includes the papers that highlighted the relevance of PCC in their results.
Teaching skills	3	9; 15	It includes those papers that highlighted, in their results, the development of teaching work skills.
Approximation between theory and practice	1	20	It includes work that highlighted, in its results, PCC as an approximation between theory and practice.

Source: The authors.

The authors Brandalise and Trobia (2011) pointed out that the Instrumentation disciplines, which include the PCC, have significant contributions in the education of students, since they provide, since the beginning of the course, the involvement with activities related to the teaching work. However, there are weaknesses in the development and implementation of the PCC, which may range from the teachers' lack of preparation, as also

reported by Chrysostomo and Messeder (2017), to the devaluation of the subjects by students and teachers. In addition, Kassemboehmer and Farias (2012), in their survey, observed that, despite fulfilling the workload, the PCC is a space of many doubts for those who built the PPC in question, because in the undergraduate Chemistry course analyzed, the PCC is not presented in a clear place or moment. Despite this, the contents corresponding to interface knowledge are in line with what is proposed in the literature for the training of science teachers.

There is also the study of Brasil and Guimarães (2019), which investigated the conceptions of PCC in undergraduate courses in Chemistry and observed that, for the most part, the workload of PCC is fully fulfilled, distributed in disciplines of the area of knowledge, specific disciplines for PCC, or, in some cases, in both. For the authors, the courses' interpretations of the norms are related to the contexts in which they are being developed.

The results obtained by Barbosa and Cassiani (2017) point a similar path to that of Brasil and Guimarães (2009): in the PPC of the course analyzed, the PCC has no clear definition. Besides other weaknesses, such as the workload being included in subjects that cannot, according to the DCN, receive the PCC and teachers who attribute a positivist sense to the PCC, linked to laboratory practices. This attribution of a positivist sense to PCC was also observed by Boton and Tolentino-Neto (2019b). For Zabel and Malheiros (2018), there is no total clarification as to why this workload is distinguished in the courses, nor how the PCC should be developed. Silva, Jófili, and Carneiro-Leão (2014) also observed that, in the development of the PCC itself, theoretical knowledge, whether specific or pedagogical, is prioritized to the detriment of the practice itself. These weaknesses are in accordance with the results found by Boton and Tolentino-Neto (2019b), when analyzing articles, dissertations, and theses published on PCC: although there is knowledge related to PCC, there is still a lack of understanding about what PCC is and how it should be developed.

Another weakness of PCC was highlighted by Bisconsini and Oliveira (2019), who observed that Physical Education graduates do not recognize PCC as a way to approach the teaching work, only the Supervised Curricular Internship, but that there is a need for other initiatives to intensify the contact with the school, throughout the training, in order to expand the repertoire of experiences that address the routine of the Physical Education teacher in Basic Education. These observations show that, although many years have passed since the regulation of PCC by the DCN of 2002, teacher educators still do not have a clear understanding of the role of PCC and, moreover, their students either do not recognize PCC as an educator or they devalue it.

Within the category Weaknesses observed, Brito (2017) observed that the interdisciplinary degrees analyzed, although they obey the regulations, subvert themselves for the sake of innovation, uniqueness, and originality attributed to these courses. Or, still, as observed by Souza Neto and Silva, in their study published in 2014, at the Universidade Federal Paulista, the PCC is addressed in specific content disciplines, disciplines of

fundamentals of education, in course subjects, and also in the supervised curricular internship. However, a Pedagogy course offered by the institution has no workload dedicated to the PCC, being outside of what is imposed by the norms (Souza Neto and Silva, 2014).

Albres and Souza Júnior (2019) reported that, despite being a bachelor's degree course, the PCC is present since the first phase of training, fulfilling the workload required in the DCN, although, in some disciplines, the planned PCC workload is 36 hours, in teaching planning it is reduced to 4 hours. For the authors, in some cases, the workload dedication is even redundant, because the subject in question already deals with practice by itself, requiring a better distribution of this workload.

This analytical category on the weaknesses of PCC pointed out in the studies analyzed is also in agreement with the results of one of the studies analyzed here. Maffei (2014) states that there are few publications that portray the PCC in undergraduate courses in Physical Education, but the studies are concerned with presenting the weaknesses found in relation to PCC and its role in teacher education. This is another factor to be observed, since it expands to the other undergraduate courses. However, despite all the weaknesses observed regarding the PCC, Pereira and Velasco (2015) pointed out that the PCC propose reflections on the Teaching of Philosophy, and attribute to the Degree course in Philosophy its own identity, which makes the course not to be confused with the bachelor's degree.

Another category that emerged from our analyses is the one that covers the studies whose results highlighted the **Relevance of Practice as a Curricular Component**, as Calvo and Freitas (2011) observed, in which the teachers of the Undergraduate Degree in Literature analyzed recognize the relevance of the PCC developed since the beginning of the course. For the authors, it is important to have clarity about the concept of didactic transposition in the development of the PCC, as well as collective actions among the teachers, favoring the commitment to the training of graduates. Viana, Munford, Ferreira, and Moro (2012) consider the teacher responsible for the subject observed, since he/she recognizes the importance of these contents, even if their practices agree with the technical rationality model. Recognizing the importance of the PCC proposal in articulating the theoretical and practical dimensions of training is important for its development and demonstrates concern with teacher training.

In the **Teacher Skills** category, the work developed by Brandt and Habold (2019) is included, in which they demonstrated that the PCC, with research as its axis, is indispensable for the development of future teachers' investigation skills, contributing to their professional, scientific, political, and artistic training. Another work included in the category is the one developed by Viana, Munford, Ferreira and Fernandes, in 2015, whose results pointed out that theory-practice relations are built at different moments of initial teacher education, especially in the discussion and mobilization of experiences in relation to the teacher's work.

Finally, the work published by Calixto, Kiouranis, and Vieira (2019) was included in the category **Approximation between theory and practice**. In the study, the authors reported that the PCC is conceived by teachers as a way to bring theory and practice closer

together, valuing knowledge related to aspects of learning in Chemistry Teaching (Calixto, Kiouranis, and Vieira, 2019). In this sense, the possibilities for the implementation of the PCC are referred to the curricular components that work these knowledges (Calixto, Kiouranis and Vieira, 2019).

## Final Considerations

From the analyzed studies, we could observe that there are still few studies published on the subject of PCC in journals indexed in the Capes Periodicals Portal. Of the twenty papers analyzed, what called our attention is that we observed that most of them focus on analyzing the consonance between courses and the DCN, while at the same time investigating the meanings and the development of the PCC. Despite the fact that the analyzed courses are in accordance with the requirements of the DCN, regarding the workload and distribution of the PCC, many are the weaknesses found inside the analyzed courses, as demonstrated by the high percentage of studies that highlighted them (75%).

Among the main weaknesses reported is the teachers' lack of knowledge - the texts found showed that the teachers in the undergraduate courses know little about the PCC. Or, even, they have difficulties in the development or fulfillment of the PCC activities. Despite the fact that 18 years have passed since the institution of the PCC in undergraduate courses, published works still report difficulties regarding the understanding of this curricular component, ranging from the lack of understanding of the PCC, the devaluation of this component characterized by the low evaluation value when compared to other evaluations of the subject, and the confusion in the meaning of the practice, suggesting the misinterpretation and the positivist meaning that the practice refers to laboratory practices, especially in courses of the area of Natural Sciences, which have practical components of specific knowledge of the area.

From our analysis, among the studies that searched for data beyond the official documents, most of them used reports from teachers and students. We observed that few studies are concerned with observing what really happens in the classroom during the PCC workload, even though this observation may be subjectivated by the researcher's interpretations.

It calls our attention that only one study was concerned with the didactic resources used in the PCC and, mainly, no study presented proposals for the implementation of the PCC in any of the courses or disciplines that comprised the sample. This suggests to us that, although PCC is studied by researchers, perhaps, for them, its development is a difficult issue. The literature on PCC lacks proposals of activities to carry it out, which is a fertile field for the development of works that could contribute in a very enriching way to the development of this component in teacher education.

In this view, we understand the need for dialogues and discussions among educators, both in the specific and pedagogical areas, seeking to understand the meaning of the PCC, as presented by the official documents of the DCN, in view of the real effectiveness of this component, as well as researchers and scholars of PCC. Since the results obtained here demonstrated the contribution of PCC in the training of future teachers, by leading to reflection on professional practice throughout the training, development of reflective attitudes and research, important for education in the current scenario.

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