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Historical-Critical Pedagogy in the Chemistry degree course at the Federal Institute of Paraná/*campus* Palmas: what the institutional documents reveal

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ABSTRACT

Objective: This study aims to show how Historical-Critical Pedagogy has been appropriated in the documents that guide the Chemistry degree course at the Federal Institute of Paraná/*campus* Palmas, due to the institution's declared commitment to developing practices based on this pedagogical theory. **Methodology:** a categorical content analysis was carried out with the construction of four indicators that were classified according to their proximity to and consistency with this pedagogy. **Results:** It was possible to see that the materials with a smaller scope had more elements related to the pedagogical theory. There were also cases of inconsistency between the texts and the theory assumptions and foundations, especially Historical-Dialectical Materialism. **Conclusion:** the institution's commitment to this pedagogy is present in the documents, but that there is still a need for further study on the part of the teaching staff to overcome the limitations found. In addition to complementary studies considering teaching practice *in loco*.

KEYWORDS

Teacher training. Historical-Dialectical Materialism. Content Analysis. Federal Technological Education Network.

A Pedagogia Histórico-Crítica no curso de Licenciatura em Química do Instituto Federal do Paraná/campus Palmas: o que dizem os documentos institucionais

RESUMO

Objetivo: Este estudo tem como objetivo evidenciar como a Pedagogia Histórico-Crítica foi apropriada nos documentos que orientam o curso de Licenciatura em Química do Instituto Federal do Paraná/campus Palmas, em razão do declarado compromisso da Instituição para o desenvolvimento de práticas embasadas nessa teoria pedagógica. **Metodologia:** foi desenvolvida uma análise de conteúdo categorial com a constituição de quatro indicadores que foram classificados de acordo com a proximidade e a coerência com essa pedagogia. **Resultados:** foi possível perceber que os materiais com menor escopo apresentavam mais elementos relacionados à teoria pedagógica. Ainda, observou-se casos de incoerência entre os textos dos materiais e os pressupostos dessa teoria e de seus fundamentos, em especial o Materialismo Histórico-Dialético. **Conclusão:** o compromisso da Instituição com essa pedagogia se faz presente nos documentos, mas ainda é necessário maiores estudos por parte dos docentes, a fim de superar as limitações encontradas, além de estudos complementares a este, considerando a prática docente *in loco*.

PALAVRAS-CHAVE

Formação de professores. Materialismo Histórico-Dialético. Análise de Conteúdo. Rede Federal de Educação Tecnológica.

La Pedagogía Histórico-Crítica en la carrera de Química del Instituto Federal de Paraná/campus Palmas: lo que dicen los documentos institucionales

RESUMEN

Objetivo: El objetivo de este estudio es mostrar cómo la Pedagogía Histórico-Crítica ha sido apropiada en los documentos que orientan la carrera de Química en el Instituto Federal de Paraná/campus Palmas, debido al compromiso declarado de la institución con el desarrollo de prácticas basadas en esta teoría pedagógica. **Metodología:** se realizó un análisis categorial de contenido con la creación de cuatro indicadores que fueron clasificados de acuerdo con su proximidad y coherencia con esa pedagogía. **Resultados:** se pudo observar que los materiales de menor alcance tenían más elementos relacionados con la teoría pedagógica. También hubo casos de incoherencia entre los textos de los materiales y los presupuestos de esa teoría y sus fundamentos, especialmente el Materialismo Histórico-Dialético. **Conclusión:** el compromiso de la institución con esta pedagogía está presente en los documentos, pero que aún es necesario un mayor estudio por parte del profesorado para superar las limitaciones encontradas. Además de estudios complementarios que consideren la práctica docente *in loco*.

PALABRAS CLAVE

Formación de docentes. Materialismo Histórico-Dialético. Análisis de Contenido. Red Federal de Educación Tecnológica.

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1 Introduction

The Federal Institute of Education, Science, and Technology of Paraná (IFPR), with a rectory in Curitiba, has among its objectives the expansion and internalization of degree courses, including Chemistry; with the justification of meeting regional demands in this area of training and considering the percentage of these courses in institutions of the federal network (IFPR, 2014; 2018). In this sense, the institution is made up of 20 campuses, 6 advanced campuses and 4 reference centers throughout the state, with 8 Chemistry courses located in: Cascavel, Irati, Jacarezinho, Palmas, Paranavaí, Pitanga and Umuarama.

The Chemistry Degree offered in the city of Palmas (PR) is the oldest and has the peculiarity of having continuity links with the Natural Sciences - Chemistry Degree of the former University Center, which was federalized as part of the IFPR. This means that both the course and the campus have distinctive features from the others, including the experience with historical-critical pedagogy (IFPR 2015; 2017a).

A feature of the IFPR presented in its Institutional Political Project is its adherence to Historical-Critical Pedagogy, developed by Dermeval Saviani, to guide its pedagogical practice to criticize traditional and reproductive pedagogies, such as the technician trend that is strongly linked to professional training (IFPR, 2014, 2018). In this way, it is understood that the regulatory norms that guide the training processes developed in the institutions, such as Resolution 19/2017 on the initial and continuing training of teaching professionals, appropriate this pedagogy to direct them (IFPR, 2017b).

In light of this, the campuses, when constructing political pedagogical projects and, consequently, the courses in their pedagogical projects, ratify this choice and tend to be guided by it, as can be seen, given the scope of this study, in the documents related to the Palmas campus (IFPR, 2015) and the Chemistry course offered there (IFPR, 2017a).

However, the experience of the first author of this article in training sessions for teachers at the campus made it possible to see how difficult it was for most of the staff to understand the theoretical assumptions of this theory, largely due to its foundation in historical-dialectical materialism and historical-cultural theory, as indicated by Saviani (2013; 2018). Given this finding, and based on the statements made by colleagues in these training spaces, we can first infer that the staff of the Palmas campus have not yet properly grasped these concepts, which may therefore explain the difficulty in finding a way to articulate them with their practice.

Difficulties both in understanding Historical-Critical Pedagogy as a whole and in organizing and developing teaching practice with it are common (Dominschek; Silva; Souza, 2016; Galvão; Lavoura; Martins, 2019; Marsiglia; Martins; Lavoura, 2019), especially regarding the phenomena of didacticization and demethodization of this pedagogical theory, when curricular organization is characterized by fixed and sequential steps and/or confusion between teaching and learning methods and strategies.

For this reason, this study aims to understand how the institutional documents that guide the teaching practice in the Chemistry program have appropriated the central elements of PHC, based on a content analysis following Bardin (2016).

2 The assumptions of Historical-Critical Pedagogy in the context of teacher training

To understand the assumptions on which Historical- Critical Pedagogy is based, it is necessary to understand how the concepts of its theoretical foundations have been appropriated, especially historical-dialectical materialism and historical-cultural psychology, since critical theories do not consist in uncritical replication, but rather in the conditioned appropriation of their elements.

Regarding the historical-dialectical materialist understanding of reality, we highlight the understanding that the reality in which individuals live has a concrete and knowable existence and is characterized by the unity between the social dimension and the natural dimension, the latter being the material basis of the former (Della Fonte, 2011; Galvão; Lavoura; Martins, 2019). This means that concrete reality is made up of the synthesis of different determinations that are established by the contradiction between the elements that make up these dimensions. It is from these that the essential characteristics of the totality can be perceived and understood.

In this sense, the historical-cultural understanding of human development considers the unity between the process of hominization, which refers to the biological dimension that characterizes the human species, as a material basis for the process of humanization, which refers to the appropriation of cultural instruments produced and systematic throughout history and essential for the understanding and performance of the subject in society, as a social being that appropriates and produces cultural elements (Martins, 2011; 2020).

Focusing on educational practice, it is possible to understand the centrality of content in historical-critical teaching practice, since it is considered essential for human formation in a given society, since it contains content in essence and form, beyond appearance, which makes it possible to understand and consequently transform concrete reality (Galvão; Lavoura; Martins, 2019; Saviani, 2013; 2019).

With this, it is possible to understand that, in this pedagogy, the educational process consists in problematizing the social practice of the students to highlight the need for instrumentalization, based on essential content, in order to promote a qualitative change characterized by catharsis, the way in which these subjects relate to the same reality from which they cannot be separated (Saviani, 2013; 2019). Thus, it is clear that the moments of historical-critical pedagogy are not marked by times, but by ways of interacting with reality.

Therefore, in this context, pedagogical work aims at enabling the process of humanization through the acquisition of systematized knowledge, which can be considered essential for overcoming common sense, strongly characterized by immediate empirical thinking, mediated by the necessary cultural tools (Marsiglia, 2011; Saviani, 2019). Thus, it is up to the teacher to organize the class in such a way as to allow the necessary mediations for the students' learning process.

Therefore, by adopting this pedagogy, the teacher starts from the premise that the integral formation of the human being requires the systematic articulation between theory - represented by scientific and philosophical knowledge and by socially constructed, systematized and essential artistic and cultural productions - and practice, represented by productive activities, in general, considering the different specificities of work. In this way, the dialectical relationship between theory and practice is established in the constitution of educational practice (Dominschek; Silva; Souza, 2016; Lavoura; Martins, 2017).

By adopting this conception, teachers are expected to seek to establish in the educational process the relationship between production and its means and the division of labor, in addition to understanding how this division manifests itself in the gap between theory and practice (Campos, 2017; Lavoura; Martins, 2017). Thus, in the process of humanization, we seek to carry out practices that make it possible to perceive the material and socio-historical character of social relations and the class struggle that determines the development of society (Dominschek; Silva; Souza, 2016; Zuck; Bortoloto, 2019). Thus, given that reality is the synthesis of multiple determinations, it is understood that human education must take them into account in an articulated way and, therefore, is constituted as a unilateral education (Saviani, 2013; Zuck; Bortoloto, 2019).

Looking at the educational context in an even more specific way, Massucato, Akamine and Azevedo (2012) understand that the process of teacher training, from this perspective, must promote the recognition of the importance of social and material conditions as conditioning factors in the transmission-appropriation process, with a view to transforming the forms of relations of reproduction of human existence by society. To this end, the dialectical unity between theory and practice must be considered in relation to the educational process, in order to overcome the empiricist immediacy and allow the discussion of the essence of what to teach and how to teach it (Marsiglia, 2011; Saviani, 2019), in order to overcome the limitations of this process and establish the necessary actions and resources (Antes, 2020; Lobo-Santos, 2020).

In short, a critical pedagogical stance is based on sufficient knowledge of the theoretical foundations that underpin critical pedagogy so that the teacher can act intentionally. In addition, teachers are expected to be able to select the classical knowledge needed to understand reality at different levels, to appropriate this content and the appropriate means to translate it into school knowledge, as well as to recognize the dynamic nature of reality and its relationship to the educational process. In addition, teachers must mobilize

students to develop learning activities that allow them to move from syncretic to synthetic thinking.

Given the concepts presented in this section, it is clear that historical-critical pedagogy is not just a set of ready-made definitions and/or universalized procedures to be merely replicated in the classroom. On the contrary, historically situated concepts are established, and their function is to provide a basis for discussion among teachers about the appropriate organization for their concrete conditions. In this way, it is understood that the documents that guide practice, from this perspective, will bring particular ways of understanding these dimensions and articulating them in the educational process to be developed within them.

3 Methodological approaches

In order to understand how the central assumptions of Historical-Critical Pedagogy were appropriated by the IFPR, the Palmas campus and the Chemistry degree course offered there, a content analysis was carried out (Bardin, 2016) in order to categorize elements of institutional documents that would make it possible to understand this movement.

To carry out the study, indicators were selected to represent the essential elements of this theory, in order to reorganize the texts and compare them homogeneously, given the difference in length and scope. The indicators were delimited a priori, with the understanding that they would be sufficient to highlight approximations and distances in relation to Historical-Critical Pedagogy in the documents that guide teaching practice at the Institute. Based on this premise, the organizational elements of the research were defined during the pre-analysis stage:

- *corpus*: the Institutional Pedagogical Project (IPP, IFPR, 2014), Resolution 19/2017 and its annexes (IFPR, 2017b), the Political Pedagogical Project (PPP) of the Palmas campus (IFPR, 2015) and the Pedagogical Course Project (PCP) of the Degree in Chemistry of the Palmas campus (IFPR, 2017a)¹;
- *registration unit*: thematic;
categorization criterion: semantic;
- *context units*: assumptions of Historical-Critical Pedagogy listed in the theoretical framework;
- *indicators*: training objectives; conception of human beings and society; conception of educational work and teaching practice; and curricular organization;
- *categories*: proximity to or distance from the pedagogical theory listed.

¹ We would point out that more up-to-date versions of the campus' PPI and PPP are already available, however, these documents were not analyzed in this study because they were not used in the construction of the PPC of the course analyzed, which could lead to anachronistic analyses in relation to the foundations used in the construction of the latter document.

- *The subcategories of the proximity category: coherent and incoherent.*

Thus, in the analysis stage, the selected documents were read in full and in detail, starting from the largest to the smallest in scope, and the excerpts, in relation to the indicators, were transposed into an analysis table. Next, each indicator was constituted from the selected excerpts and characterized according to the assumptions of Historical-Critical Pedagogy previously discussed.

In this way, an indicator was considered to be close to the theory when the elements mentioned in it were not in disagreement with Historical- Critical Pedagogy and allowed the intended intentions to be differentiated from other conflicting pedagogical strands. In this category, two subcategories were delimited, indicating coherence, when the indicator did not present definitions in conflict with the pedagogical trend, and incoherence, otherwise. This need emerged a posteriori when it was noticed that, although there was an apparent intention to consider the elements of Historical-Critical Pedagogy, difficulties arose in characterizing the indicators, especially in concepts related to Historical-Dialectical Materialism, as discussed in item 2.

On the other hand, when the meanings presented were incoherent in relation to the reference, the indicator was considered to be distant from the theory. In one case, there was no classification when the indicator was characterized by dimensions not present among the essential elements of Historical-Critical Pedagogy, such as the inseparability between teaching-research-extension, for example.

4 Results and Discussion

The results of the content analysis, carried out because of the documents listed, were organized by indicators that allowed for a comparison between the text fragments, bearing in mind their heterogeneity determined by their scope and the way they were written. The excerpts presented below, which characterize the indicators in each source, were compiled from clippings listed in the supplementary material. Based on these excerpts, the elements were categorized in relation to the assumptions presented in item 2 of this article, making it possible to infer the appropriation of Historical-Critical Pedagogy in the context of the IFPR, especially the Chemistry degree course at the Palmas campus.

4.1 Indicator 1: Training objectives

In this indicator (Chart 1), we grouped together the parts of the document that refer to the objectives of the institution, campus and course, in relation to the teaching and learning process developed and the graduate profile in general, in teacher training courses and in the course that is the subject of this study.

Based on the characterization in Chart 1, it is possible to see that the IPP, although it considers the need for training to understand reality in terms of the result of social relations, does not establish that these relations result from the actions of individuals and that their transformation also requires the practice of these subjects. In this sense, it cannot be inferred that the document presents the relationship between individuals and society as a transformative praxis, or that it resembles critical-reproductive theories which, despite understanding society as determined, do not establish ways of overcoming it (Saviani, 2018; 2013). For this reason, this indicator for the IPP was understood as being far removed from the assumptions of Historical-Critical Pedagogy, as we infer that, by indicating as a training objective the meeting of social demands and the ability to understand social complexity, it does not explain the need for structural changes or the Institute's potential to make them. In this way, we infer that this indicator distances itself from the pedagogical theory it claims to defend, and could even achieve these objectives through critical-reproductive pedagogy which, despite recognizing the need for change, does not believe that the school is capable of mobilizing subjects to make them (Saviani, 2018).

Chart 1. Characterization and categorization of indicator 1 - training objectives

Document	Essential characteristics of the indicator	Categorization
IPP	Meeting social demands by forming subjects who are aware of their roles in society, ethically oriented and socially responsible and capable of understanding the complexities produced by social relations	Distance
Resolution 19/2017	To develop emancipation, based on an understanding of the contradictions of the subjects' reality, forming autonomous and critical citizens, committed to a more dignified and ethical country. In this way, unilateral training is sought as a way of overcoming purely technical training and enabling an integral professional profile. To this end, the training process must enable the appropriation and representation of theoretical and practical knowledge related to the teaching profession, such as knowledge of pedagogical processes, contextualization between knowledge and society and the development of research and innovation	Incoherent proximity
PPP	To train hard-working, ethical, autonomous, reflective citizens who are aware of their historical role in order to act politically to overcome obstacles to building a more democratic, inclusive and less unequal society.	Incoherent proximity
PCP	To prepare professionals to work in education and teaching, combining specific knowledge of chemistry with mastery of educational practices and who are capable of analyzing and solving problems relating to teaching and learning, creating appropriate and innovative methods. This will favor the human and citizen training of professionals who aim to transform society.	Incoherent proximity

Source: the authors.

The other documents were understood to be close to the pedagogical theory in focus, but with points of incoherence in their indicators. In this sense, Resolution 19/2017 mentions unilateral education as an objective, but does not indicate the understanding of this dimension, defining it as non-lateral, which, together with the idea of integrality of the professional profile as a function of theoretical and practical knowledge and the relationship between knowledge and society, does not allow us to infer how this term was appropriated in the sense of considering unilaterality as synonymous with integrality and, in this case, rather limited to the issue of knowledge, which may not be enough to understand the totality of the

educational process, given that, although the aim of the school is the transmission and appropriation of systematized knowledge, this must be considered in terms of the social practice of the individuals involved (Saviani, 2013; Zuck; Bortoloto, 2019).

In relation to the PPP, it was inferred that the delimitation of training for the worker, even as a transforming agent of society, can limit pedagogical action to a context related to capitalist work, since this term is not used to designate an individual whose ontological characteristic is work as a form of mediation with reality (Saviani, 2013).

Finally, the PCP aims to articulate the specific contents of Chemistry with the mastery of educational practices and, it seems, disregards the theoretical nature of educational theories and the practical nature of chemical content in relation to professional practice. In this way, as in the previous ones, unilateralism seems to be understood as the union of several independent identity dimensions, instead of understanding it as multiple determinations, marked by dialectical unities, which make up the totality (Zuck; Bortoloto, 2019).

4.2 Indicator 2: Concept of the human being and society

The second indicator was constructed as a way of aggregating the assumptions used to explain how the documents consider the constitution of human beings and society, the relationship between these elements and, in particular, how education interacts with these dimensions (Chart 2).

Table 2. Characterization and categorization of indicator 2 - conception of human beings and society

Document	Essential characteristics of the indicator	Categorization
IPP	An understanding of an unequal and non-human society that can only be transformed with economic and political changes and the democratization of science and culture.	Distance
Resolution 19/2017	It understands human beings as historically constructed through the appropriation of knowledge and idealizes an egalitarian society.	Coherent proximity
PPP	Understanding society as marked by major social differences between the ruling class and the working class. Also in the context of a knowledge society, based on information rather than a solid theoretical foundation. The human being is idealized as critical, autonomous and transformative	Coherent proximity
PCP	There were no essential indications in this category that did not refer to the larger documents analyzed	Coherent proximity

Source: the authors.

The classification of the IPP text in relation to this indicator (Figure 2) was similar to the previous one, because although it understands the need for change in an unequal society, it does not explain the role of the individual in this change, as discussed above. In this sense, we understand the lack of commitment to structural changes in the relations of reproduction of human existence, towards a society without private ownership of the means of production and, in particular, of scientific knowledge. We conclude, therefore, that without this clearly defended commitment, the text is incapable of guiding teachers toward the construction of a

practice from a historical-critical perspective.

Resolution 19/2017 and the PPP, on the other hand, show indicators that are coherently close to the assumptions of historical-critical pedagogy. In the first case, by understanding the human being as historically constructed through the appropriation of knowledge (Martins, 2011; 2020) and idealizing an egalitarian society, although without the relationship with praxis. And in the second document, for bringing an understanding of society demarcated by class struggle (Dominschek; Silva; Souza, 2016; Zuck; Bortoloto, 2019).

In relation to the PCP, no new extracts were found for this indicator; all the existing extracts refer to the other documents analyzed, which are more extensive. For this reason, this document has been characterized in the same way as the previous ones.

4.3 Indicator 3: Concept of educational work and teaching practice

This indicator considered all elements related to the understanding of educational work, which is considered synonymous with educational practice or process, both in terms of teachers and students (Figure 3).

Indicator 3 was the only one that showed a proximity, albeit inconsistent, with the assumptions of historical-critical pedagogy in all the documents (Figure 3). This relationship occurred mainly in the use of the terms "work" and "praxis" as characteristics of social being (Saviani, 2013).

In relation to these terms, the IPP understands work as an ontological characteristic of the human being, but does not link this category to teaching practice or to the student learning process. Resolution 19/2017, on the other hand, presents work as the object and materiality of teaching practice, whose goal is unilateral education. In this sense, within the scope of this source, the work synthesizes theory and practice in teaching praxis. In this case, it is understood that there is an inconsistency in considering work as the object or material expression of praxis, when work represents the intentional and planned relationship between man and nature (Saviani, 2019).

On the other hand, in relation to the explicitness of the teaching practice, the IPP presents an apparent confusion about what was already known but should still be appropriated, which in itself leads to the constitution of new meanings and concepts, which seems to indicate difficulties in understanding the initial social practice (Galvão; Lavoura; Martins, 2019; Saviani, 2013).

In this regard, the resolution understands teaching practice as the mediation of the practice-theory-practice process, considering practice as the starting and ending point of praxis, which may indicate a partial understanding of the synchrony-analysis-synthesis or

concrete-abstract-concrete movement, since social practice cannot be understood as something apart from theory, since it is considered as praxis (Della Fonte, 2011; Galvão; Lavoura; Martins, 2019; Saviani, 2013).

Table 3. Characterization and categorization of indicator 3 - conception of educational work and teaching practice

Document	Essential characteristics of the indicator	Categorization
IPP	The assumption of work as a constitutive dimension of social being, as an educational principle guiding training through work and in life, aimed at the exercise of citizenship and cultural ascension. Teaching practice must break with traditional methods and provide students with the means to appropriate the content and method they already know, as a preliminary stage for the production of new meanings and knowledge.	Incoherent proximity
Resolution 19/2017	Work is considered an educational principle and the object of teaching praxis that aims to emancipate subjects, provide unilateral training and develop collective thinking and attitudes. Work represents the materiality of pedagogical action and synthesizes theory and practice in reflective praxis. Historical-Critical Pedagogy understands teaching practice as the mediation of the practice-theory-practice process, considering practice as the point of departure and arrival and praxis as formative and transformative	Incoherent proximity
PPP	Adoption of " Historical Critical Pedagogy of Content"	Incoherent proximity
PCP	Practice aimed at building conscious and active citizenship and the teacher as a professional with the main task of looking after students' integral learning.	Incoherent proximity

Source: the authors.

The PPP indicates adherence to "Historical Critical Pedagogy of Content", which seems to have been a confusion of nomenclature between the Historical Critical Pedagogy presented by Saviani and the Critical Social Pedagogy of Content organized by Libâneo, although both are understood as critical theories (Saviani, 2013).

And finally, in the PCP, teaching practice is said to be aimed at building conscious and active citizenship and the teacher, as a professional, has the main task of looking after the students' integral learning. In this case, it is not possible to establish a direct relationship with the pedagogy in question, as the description is quite broad. In addition, the term "caring" gives the image of a less participatory work in the teaching and learning process, different from that envisaged in Historical-Critical Pedagogy, as well as centering it on the teacher.

4.4 Indicator 4: Curriculum organization

Finally, the fourth indicator (Chart 4) aimed to highlight the curricular organization indicated in the documents, as a way of fostering educational practices whose function is to materialize the previous assumptions through educational work. It is important to note that the Political Pedagogical Project of the Palmas campus (IFPR, 2015) does not indicate curricular organization; in the context of the campuses, this dimension is allocated to the Course Pedagogical Projects.

Table 4. Characterization and categorization of indicator 4 - curriculum organization

Document	Essential characteristics of the indicator	Categorization
IPP	Inseparability between teaching, research and extension with a view to innovation	Not directly related
Resolution 19/2017	Training that works on the preparatory content in depth, guaranteeing solid training for the profession and for life, with preparation for the world of work. Training in disciplines must include moments of interaction to allow analysis of the totality of teaching practice and must consider the theory-practice relationship; hence the curriculum organized into nuclei and the inseparability between teaching-research-extension.	Incoherent proximity
PCP	The course is organized in a comprehensive and interdisciplinary way to overcome the dichotomous models of teacher training, exploring chemical knowledge in its epistemological and historical aspects and organizing it through the inseparability of teaching-research-extension. It reinforces the adoption of "Historical Critical Pedagogy of Content"	Incoherent proximity

Source: the authors.

In this regard, it was noted that the assumption of curricular organization that is particularly present in the IPP is the inseparability between teaching, research, and extension, which is also present in the other documents. This premise was considered to have no direct relationship with the principles of Historical- Critical Pedagogy because although it touches on issues similar to the process of socialization of systematized knowledge, this point, which is not exclusive to this pedagogical theory, was not accompanied by the other characteristics related to it, which is why this document was classified as having "no direct relationship".

In the Resolution, it can be seen that the curriculum is organized in such a way that the training process can be considered in two dimensions: content and preparation for the world of work. Although the document considers the concomitant and articulation between theory and practice through the teaching-research-extension nuclei and activities, it can be inferred that there is an understanding of the dichotomy between theory and practice, rather than understanding these dimensions as the essential dialectical unity of practice (Saviani 2013; 2019; Zuck; Bortoloto, 2019) and, if this is the case, acting in such a way as to intensify the division of labor opposed by critical strands (Campos, 2017; Lavoura; Martins, 2017).

The PCP, in turn, fails to directly relate the historical and epistemological aspects of chemical knowledge to teaching practice. Moreover, there is still confusion about the nomenclature adopted by the campus PCP.

Comparing the classification of the indicators of each document, it can be seen that the IPP shows the greatest distance from historical-critical pedagogy, showing inconsistent approximations in relation to work as an essential characteristic of social being and distance in the other indicators. In the other documents, there is a clearer intention to characterize teaching practice because of this theory, with most of the elements being close, even if there are important inconsistencies.

In relation to the greater proximity, it is understood that the closer relationship of the Resolution, the campus' PPP and the course's PCP with the concepts related to teacher

training is conferred by the very scope of the documents aimed at this type of course, in the first and last cases. The unique condition of the Palmas campus in hosting six degree courses, including Pedagogy, plays an important role in the appropriation of the assumptions of Historical-Critical Pedagogy.

Finally, regarding the inconsistencies in relation to the theory's assumptions, the reported difficulty in understanding the concepts related to materialist-historical dialectics (Frigotto, 2018; Netto, 2011) and in materializing these assumptions in teaching practice (Dominschek; Silva; Souza, 2016; Galvão; Lavoura; Martins, 2019; Marsiglia; Martins; Lavoura, 2019).

5 Final considerations

The commitment to adopting Historical-Critical Pedagogy as a pedagogical reference, especially in course and institutional projects, implies an understanding of the principles of Historical-Dialectical Materialism and Historical-Cultural Theory. It is well known that these principles are sometimes difficult to understand due to their dialectical nature, which is fundamentally different from the formal logic that underpins the usual practice, especially in natural sciences courses.

This aspect in particular ends up culminating in the misappropriation or partial appropriation of the essential assumptions of these references, leading to the repetition of misunderstandings and reductionism in various dimensions, especially in the relationship between the philosophical assumptions and the local context and in the didactic-methodological organization.

The distancing from the principle of Historical-Critical Pedagogy was found in the IPP, which aims to provide pedagogical guidance at the institutional level and is directly linked to institutional policies at the Rectorate level, which is why we believe that it should be more committed to the assumptions of pedagogical theory in order to direct the campuses towards the development of pedagogical work from this perspective. These distances are markedly related to the potential for social transformation, a commitment that must be intentional and explicit in historical-critical teaching practice.

On the other hand, in the parts of the documents that were coherently close to the assumptions of the pedagogical theory in focus, the concepts of understanding the human being and the constitution of class society stand out, highlighting the importance of theoretical knowledge - even if this term can reveal intellectualism understandings of systematized knowledge - for the transformation of society. However, if we consider the documents as a whole and try to respect another assumption of historical-dialectical materialism, we conclude that these considerations are not materialized in other provisions of the documents analyzed, revealing difficulties in organizing the pedagogical process as a

whole.

Most of the fragments were categorized as incoherently close to the foundations of historical-critical pedagogy because they considered concepts that are common to various pedagogical theories, without explaining the essential elements that highlight the pedagogical theory elaborated by Saviani. In this sense, we emphasize that it was not possible to detect any intention to establish or make explicit the political commitment necessary for historical-critical pedagogical work.

In addition, some distancing and inconsistencies were found in the documents analyzed, indicating possible and important weaknesses in the appropriation of Historical-Critical Pedagogy in the PCP of the Chemistry program at the Palmas campus of the IFPR. This is also empirically confirmed by our impressions of the difficulties faced by other teachers and colleagues from other courses and campuses². These characteristics do not indicate a special situation, since they reflect difficulties encountered in other contexts.

However, it is necessary to consider the limitations of this analysis, which only takes into account the texts of the official documents that underpin the organization of the course analyzed, and which, although they express to a certain extent the vision of the officials, cannot encompass all the dimensions of educational practice, which can only be fully understood when articulated with practice - a possibility for future work.

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² These experiences derive from the professional practice of the first author of this article, who is a member of the staff of the IFPR Palmas campus and has already coordinated the course in question.

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