CRITICAL THINKING AND TEACHING NARRATIVES: REFLECTION ON AN ONLINE TRAINING PRACTICE

PENSAMENTO CRÍTICO E NARRATIVAS DOCENTES: REFLEXÃO DE UMA PRÁTICA FORMATIVA ONLINE

PENSAMIENTO CRÍTICO Y NARRATIVAS DOCENTES: REFLEXIÓN DE UNA PRÁCTICA DE FORMACIÓN EN LÍNEA

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ABSTRACT: This study aims to disseminate good experiences and produce a re-reading of critical teacher reflection, through a practical activity developed within the scope of an online training course on Critical Thinking in two observation situations, which are: in a class without explicit promotion of the CP and a class with intentional and explicit stimulus to the development of the CP. It takes the theoretical assumptions of Ennis (1996) and other recent studies in the area as a basis for this study. From a methodological point of view, it is inserted in the qualitative research model for content analysis, as it is "one of the classic procedures for analyzing written material, regardless of its origin (Flick; Parreira, 2005, p. 193). To this end, did you choose as a research question, the possibility of showing, which good practices are identifiable, of teaching and learning, in the teachers' narratives? The results obtained indicate a positive sign for good practice actions by both students and teachers observed. The conclusions, obtained through the analysis categories, allow us to infer that, after a theoretical training of active methodology, with a view to the development of the CP, the participants can demonstrate in their narratives, the skills of a critical thinker.

KEYWORDS: Critical Thinking. Education. Teaching Narratives. Subjects in Training.

RESUMO*: Este estudo tem como objetivo divulgar boas práticas e promover uma reflexão crítica docente, por meio de uma atividade prática desenvolvida no contexto de um curso de formação on-line sobre Pensamento Crítico (PC). A atividade baseia-se em duas situações de observação: uma aula sem promoção explícita do PC e uma aula com estímulo intencional e explícito ao desenvolvimento do PC. O estudo fundamenta-se nos pressupostos teóricos de Ennis (1996) e em pesquisas recentes na área. Do ponto de vista metodológico, a pesquisa enquadra-se no modelo qualitativa para análise de conteúdo, sendo essa "um dos procedimentos clássicos de análise do material escrito, independente da sua origem" (Flick; Parreira, 2005, p. 193). A questão de investigação central é: quais boas práticas de ensino e aprendizagem podem ser identificadas nas narrativas dos docentes? Os resultados obtidos indicam positivamente a presença de boas práticas tanto por parte dos alunos quanto dos professores observados. As conclusões, derivadas das categorias de análise, sugerem que, após uma formação teórica e prática em metodologia ativa voltada para o desenvolvimento do PC, os participantes são capazes de demonstrar, em suas narrativas, competências de um pensador crítico.*

PALAVRAS-CHAVE*: Pensamento Crítico. Educação. Narrativas Docentes. Sujeitos em Formação.*

RESUMEN: Este estudio tiene como objetivo difundir buenas prácticas y producir una reflexión crítica docente, a través de una actividad práctica - desarrollada en el marco de un curso de formación en línea sobre Pensamiento Crítico en dos situaciones de observación, a saber: en una clase sin promoción explícita del POP y en una clase con participación intencional. y estimulación explícita del desarrollo de la PC. Se basa en los supuestos teóricos de Ennis (1996) y otros estudios recientes en el área. Desde un punto de vista metodológico, forma parte del modelo de investigación cualitativa para el análisis de contenido, ya que es "uno de los procedimientos clásicos para analizar material escrito, independientemente de su origen (Flick; Parreira, 2005, p. 193). Para ello, elegimos como pregunta de investigación la posibilidad de resaltar ¿qué buenas prácticas de enseñanza y aprendizaje son identificables en las narrativas de los docentes? Los resultados obtenidos apuntan positivamente a acciones de buenas prácticas tanto por parte de los estudiantes como de los docentes observados. Las conclusiones, obtenidas a través de las categorías de análisis, permiten inferir que, luego de una formación teórica en metodología activa, con miras al desarrollo del POP, los participantes son capaces de demostrar en sus narrativas, las capacidades de un pensador crítico.

PALABRAS CLAVE: Pensamiento crítico. Educación. Narrativas didácticas. Sujetos en Formación.

Introduction

The importance of knowledge, mastery, and immersion in critical thinking in any profession has become a recurring and consensual theme in studies and debates, both in academia and in other sectors. In the exercise of full citizenship, it is essential that individuals be capable of facing and dealing with the "continuous change of increasingly complex systems that characterize the current world" (Tenreiro-Vieira; Vieira, 2000, p. 14, our translation). Therefore, the use of critical thinking skills will be the distinguishing factor between right and wrong in the various choices imposed on us daily.

In this sense, no profession can fully prepare individuals to act solely with the initial specific knowledge of their field. This is because knowledge is not static; on the contrary, it has a short duration or half-life, which "is the period of time after which knowledge, once acquired, becomes obsolete" (George Siemens, 2005, p. 1, our translation) and thus needs to be updated critically and thoughtfully.

Consequently, in teacher training, other knowledge must be included alongside specific knowledge, such as technological knowledge, which increasingly "has caused significant impacts on teaching practices and learning, leading teachers, managers, researchers, and

technicians to seek innovative paths suited to this constantly changing context" (Souza; Bezerra, 2013, p. 12).

In the case of teachers, being in constant training "implies a personal investment, a free and creative work on personal journeys and projects, aiming at constructing an identity that is also a professional identity" (Nóvoa, 1992, p. 13, our translation). As such, they must observe and try to keep pace with the rhythm and evolution occurring around them, as well as the interests and behaviors of their students in relation to their learning needs.

Indeed, in teacher training, as in continuing education courses, the development of critical thinking (CT) only contributes to better performance in professional activities because "if teachers do not experience situations that promote their critical thinking abilities, the possibilities for such teachers to create opportunities for their students to use their critical thinking abilities are reduced" (Vieira; Tenreiro-Vieira, 2003, p. 234, our translation), in a systematic, ongoing, and gradual context.

Therefore, when we talk about continuing teacher education, it is because "in the educational sphere, more systematic and intentional actions are needed to develop this type of thinking in students" (Luz *et al.,* 2015, p. 2, our translation) and only from the knowledge obtained by teachers will they have the capacity to develop these skills in their students.

In this sense, we adopt the concept of competence as put forth by Fleury; Fleury (2001), supported by Zarifian (1999), when it states that "competence is the practical intelligence for situations that rely on acquired knowledge and transform it with increasing strength, the more complex the situations become" (p. 187, our translation), driving individuals to act and interact with various forms of knowledge, applying them in their practices.

It is no coincidence that in a teacher training program focused on teaching CT, it is imperative that the teaching of this mode of thinking be "explicit and deliberate, [...] so that teachers learn how to teach for critical thinking" (Franco; Vieira; Saiz, 2017, p. 98, our translation). Furthermore, this training must include theoretical components and the development of active teaching strategies, supported by practices that can be applied in professional daily life.

Based on this perspective, continuous training was developed with a group of teachers from a religious institution in the interior of São Paulo. The objective was to highlight good practices and competencies of critical thinkers in the narratives of the teachers, obtained through observation and reflection activities, as part of the assessment of knowledge concerning the posture and actions of teachers and students in the educational context.

In light of this scenario, the importance of formative practices that combine theories and active methodologies is emphasized, aiming at the development of critical thinking in the continuing education of teachers in any field of knowledge. This study seeks to contribute to the dissemination of good experiences applicable to teaching and learning situations.

Critical Thinking in Education

The term "critical thinking" may, for some, be considered something new or even a contemporary trend. However, Cohen (2017) explored the definition of this concept in a dictionary and found that Critical Thinking (CT) is described as a "philosophical examination of arguments." Nevertheless, Cohen argues that this definition does not fully encompass the complexity of the term, as CT "is linked to a range of skills and conceptions, including the ability to play with words, sensitivity to context, feelings, and emotions, and […] the type of open-mindedness that allows for creative leaps and insights" (Cohen, 2017, p. 9, our translation), thus exceeding the definition found in the dictionary.

The advocacy for the use of CT capabilities stems from the fact that this type of thinking enables us "to see things from the perspectives of others, which can be quite unusual and even strange compared to one's viewpoint" (Sternberg, 2010, p. 166, our translation). However, the application of CT has become an increasingly challenging exercise, especially in a context of inflated egos and manipulated information, widely disseminated on a global scale, contributing to distorting reality and directing focus according to private interests.

In the educational field, the definition of CT offered by Ennis (1996) as "a form of rational, reflective thinking focused on deciding what to believe or what to do" (Tenreiro-Vieira; Vieira, 2000, p. 27, our translation) is widely recognized and has gained prominence. Furthermore, Vieira and Tenreiro-Vieira (2014) legitimize the framework proposed by Ennis (1986) as one of the most used in studies, especially in Portugal, for the following reasons:

> (i) it is exhaustive, clear, and comprehensive; (ii) it encompasses CT capabilities recognized as inherent to scientific activity; (iii) it is operationalized in a taxonomy that lists the dispositions and capabilities that, according to the author, are encompassed in CT as a reflective practical activity aimed at deciding what to believe or what to do; (iv) it discriminates the capabilities within each category involved in CT, facilitating its understanding and dimensionality (p. 45, our translation).

Recent studies on CT in education stand out, focusing on different educational levels, such as kindergarten (Marchão, 2016), science education in elementary education (Sousa; Vieira, 2018), and science and mathematics (Tenreiro-Vieira, 2016), among others.

In the educational context, the use of CT skills increases the likelihood of achieving better cognitive outcomes, enhances the development of everyday activities, and promotes a special way of thinking about any subject or problem (Halpern, 2014; Paul; Elder, 2006; Navega, 2005). Segundo Warburton (2011), "one of the main objectives of critical thinking is to reach true conclusions based on good reasoning from true premises" (p. 54, our translation). However, in a world permeated by digital technologies and easily accessible social networks, not everything that is disseminated can be considered reliable, making CT essential for balancing choices between what is right, wrong, and dubious.

The continuous exercise of CT encourages individuals "to identify the main points of certain themes, to seek cause and effect, to identify patterns and relationships, to organize ideas, to develop timelines, to construct taxonomies or categories, to make comparisons and establish contrasts, to examine cost-benefit relationships, and to interconnect ideas" (Lucena; Fuks, 2000, p. 72, our translation), promoting a comprehensive analysis to decide what to believe or what to do.

Therefore, the use of CT significantly contributes to better outcomes in actions, attitudes, and decisions, both in professional, social, and personal spheres. Considering that "Critical Thinking involves both dispositions and capabilities" (Vieira; Vieira, 2005, p. 133, our translation), the analysis categories for the narratives were chosen as the capabilities of elementary clarification, focusing on the question, analyzing arguments, identifying irrelevancies, and seeking evidence, which are fundamental competencies of a critical thinker.

Moreover, Vieira (2018) proposes a systematic framework, through the acronym PIGES, which describes the five essential attributes for promoting Critical Thinking:

- Begin as early as possible, particularly in preschool education or the start of compulsory schooling;
- Intentionally, adopting a conceptualization for that purpose;
- Gradually and according to the potential and contexts of the learners;
- Explicitly identifying the dimensions of Critical Thinking to promote;
- Systematically throughout schooling and, whenever possible, articulately with different contexts of lifelong education (p. 83).

Teaching Narratives – Subjects in Formation

The term "narrative" or "life story" will be used in this study to designate "an oral or written account, collected through interviews or personal diaries, [...] to unveil and/or reconstruct historical and controversial processes experienced by subjects in different contexts" (Souza, 2006, p. 24, our translation). In this case, the narratives are analyzed based on the reflections developed during the practical activities of continuing education for teachers.

Based on previous studies by Santos, Maximiano, and Frossard (2016), Kishimoto (2007), Galvão (2005), and Lima and Lima (2007), it is known that narratives reflect the individual way of perceiving reality. As noted by Galvão (2005), "Each of us, in a very particular way, makes sense of situations through our universe of beliefs, elaborated from our experiences, values, and cultural roles inherent to the social group we belong to. Representations allow us to decode and interpret the situations we experience" (Galvão, 2005, p. 328, our translation).

In the field of teacher education, narratives play a fundamental role in deepening interests and knowledge and strengthening ties that transcend continental borders. This fact was evidenced in the seminar "*Narrativas na formação de professores – percursos na construção de saberes profissionais*[4]", held in 2018, as part of a homonymous project discussed among researchers from the University of Aveiro (UA) and the Federal Fluminense University (UFF). The seminar aimed to: i) contribute to teacher education with a more integrative perspective on the diverse dimensions of knowledge from the narratives and training trajectories of Brazilian and Portuguese students and ii) understand the relationship that future teachers establish in structuring their professional knowledge[5].

The importance that researchers attribute to narratives in research lies in the fact that this type of approach "allows the subject to speak about what touches them and what makes sense to them" (Santos; Maximiano; Matheus Lima Frossard, 2016, p. 745, our translation). Thus, the individual account of the subject gives meaning to the interpretation of action.

In this context, it is also important to highlight that "narratives can focus on the teacher themselves, thus taking on an autobiographical character, but they can also center on the students, the school, societal behavior, that is, everything that allows understanding the

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[4] Narratives in Teacher Education – Pathways in the Construction of Professional Knowledge.
[5] Available at: https://blogs.ua.pt/cidtff/wp-content/uploads/2018/01/seminario2018_narrativas_in.pdf acesso em 08/03/2022. Accessed on: 10 Feb. 2024.

purposes and educational contexts" (Alarcão, 2011, p. 58, our translation), providing a different view from the usual one.

The analysis conducted in this study focuses on narratives obtained in teacher training situations, aiming for better teaching performance. It starts from the principle that "the quality of education implies the ongoing training of educators. And ongoing training is based on the practice of analyzing practice" (Freire, 1996, p. 72, our translation), as expressed in the accounts and teaching experiences.

In narrative research, it is the researcher's role to carry out the "interpretation of what is said or written based on the interrelations between what is told and what they themselves carry in terms of knowledge" (Borges; Silva; Lima, 2019, p. 722, our translation). In this way, the researcher can perceive that, in the same situation, there can be different ways of interpreting a practice. It is precisely this diversified perspective that promotes professional growth in teaching.

Methodology

The methodology adopted in this study is based on the qualitative analysis of narrative content, considering that, according to Lankshear and Knobel (2008, p. 275, our translation), "the frequent use of certain words, or a specific form of expression, as well as the use of a particular vocabulary – or discourse – carries information about worldviews, ideologies, and social contexts." As a methodological strategy, a case study was chosen, justified by the fact that it is "a method that encompasses everything – with a planning logic incorporating specific approaches to data collection and analysis"(Yin, 2010, p. 33, our translation).

The data analyzed in this study were obtained through an ongoing research project conducted within the framework of a doctoral program, developed through an online training titled **Active Teaching for the Development of Critical Thinking**, offered by a university platform in the interior of São Paulo for teachers from a religious education network.

The basis for critical analysis comes from a practical activity of observation and reflection, which was part of the training tasks and aimed to observe the behavior of teachers and students in classes with and without encouragement for the development of critical thinking (CT).

The research sample consisted of 77 reports produced by the participants of the activity, in which they reflected critically on the observations made. The subjects of the research shared

the following characteristics: they belonged to the same religious education network, worked in education, and had initial training in the field of education, as presented in the representation of Graph 1.

Graph 1 – Area of Initial Training[6]
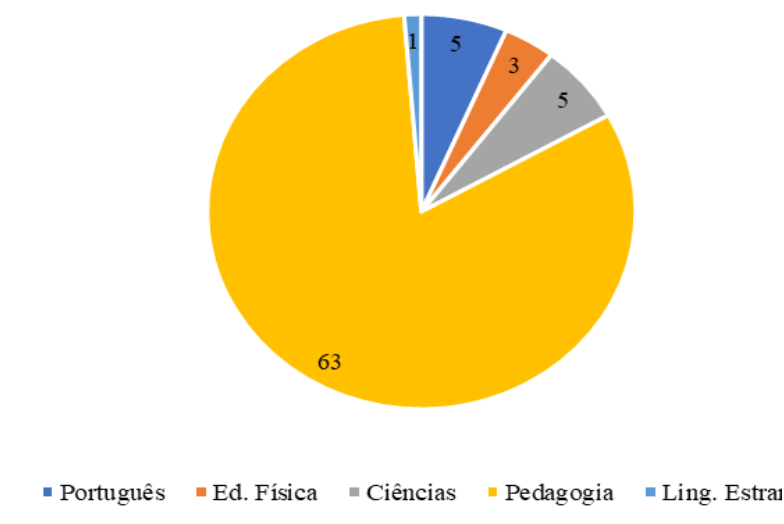
Source: Prepared by the authors.

The results presented in this study were analyzed using the webQDA software, a tool that allows the researcher to "edit, visualize, link, and organize documents. At the same time, it can create categories, code, control, filter, search, and question data to answer the questions that emerge from their investigation" (Costa; Amado, 2018, p. 31, our translation). In this context, the narratives were fully transcribed, categorized, and coded, aiming to obtain the results that will be discussed in the **Results and Discussion** section.

Results and Discussion

The data extracted from the critical reflections of the participating teachers in the training, fully transcribed, allowed for the creation of analysis categories that enabled the inference of the presence or absence of good teaching and student practices resulting from an intentional and explicit activity aimed at the development of critical thinking (CT).

To facilitate the understanding of the critical reflection process (narratives), the results were organized into two modalities of analysis. The first category is related to Critical Thinking

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[6] Translation of the text from left to right: Portuguese; Physical Education; Science; Pedagogy; Foreign Language.

(CT), encompassing: the ability to clarify elementary concepts (formulating a question); the ability to analyze and structure arguments; and the waiting time to argue or respond. The second modality refers to Good Practices/Experiences, including: dynamism in classes and participation; greater interaction between teachers and students, and among students; as well as active teaching and learning. These categories can be visualized in Chart 1.

Chart 1 – Analysis Categories

Categoria de PC	Indicadores
Questionamento	Identificar e formular uma questão de maneira criteriosa para avaliar possíveis respostas (Vieira & Vieira, 2005)
Argumentação	Identificar conclusões, razões enunciadas, lidar com irrelevâncias. (ibidem)
Tempo de espera	Refere-se ao tempo que o professor concede para a resposta do aluno antes de repetir, refazer, ou fazer outra questão diferente. (ibidem. p. 98)
Boas Práticas/Experiências	
Aulas dinâmicas/Participação	Com atividades integradoras, com atenção aos interesses dos alunos, respeitando o modo de aprender de cada um.
Interação	Como "os pressupostos essenciais para que ocorra aprendizagem" (Tiago Silva Borges, 2014, p.120)
Ens/Aprend. Ativa	"os alunos aprendem a aprender e se preparam para resolver problemas" (Neusi Aparecida Navas Berbel, 1998, p. 152)

Source: Prepared by the authors.

Regarding the analysis of participants' reflections on the students, it was observed that the narratives predominantly focused on the experience of observing classes with explicit and intentional encouragement for the development of critical thinking (CT). In these reflections, no negative aspects related to the classes without this encouragement were identified (see Graph 2).

Graph 2 – Relevant Aspects in Teachers' Narratives about Student Attitudes[7]
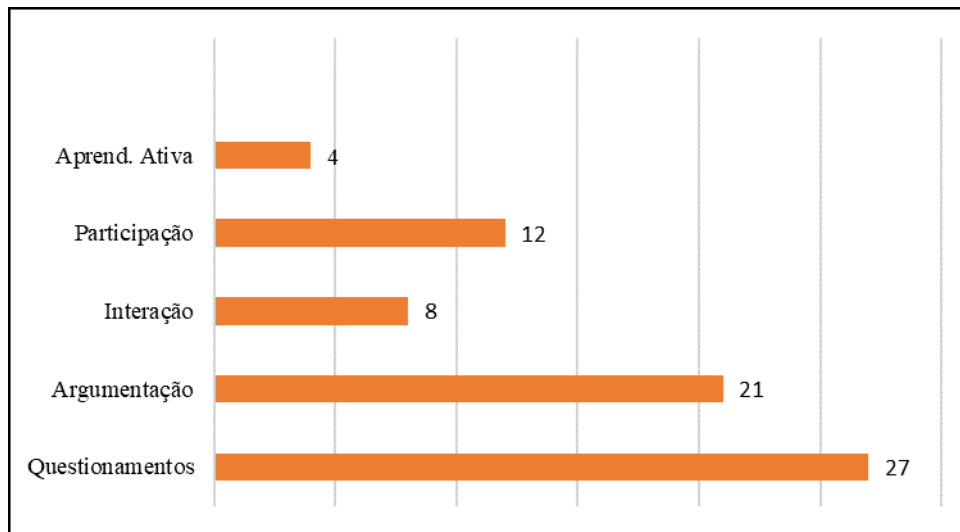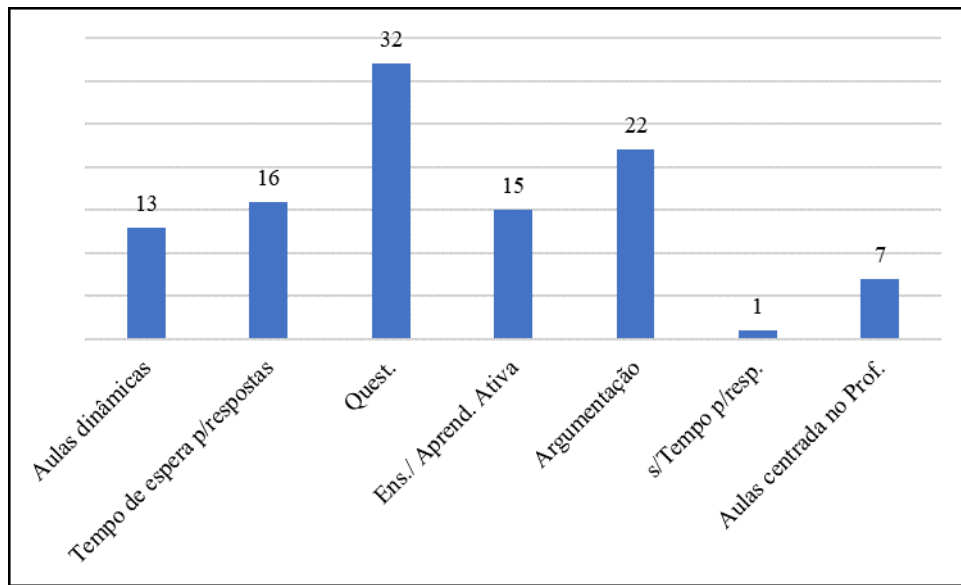

Source: Prepared by the authors.

Graph 2 presents 72 reflective references regarding the students, of which 67 were related to the capacity for developing Critical Thinking (CT). Within these, 37% indicated an increase in questioning from the students, who began to seek answers to everyday problems, and 29% referred to argumentation. This allows us to infer that when stimulated, students tend not to accept everything presented to them as absolute truth passively.

Regarding the good practices and experiences observed, it was found that 17% of students stood out for their participation and involvement in classes, demonstrating greater interest in the topics covered; 11% were noted for their interaction in the classroom; and 6% showed interest in learning through practice, actively seeking the path for this learning.

Similarly, the participants' reflections on teacher attitudes focused almost entirely on classes with intentional encouragement for the development of CT, as demonstrated in Graph 3.

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[7] Translation of writing from top to bottom: Active Learning; Participation; Interaction; Argumentation; Questioning.

Graph 3 – Relevant Aspects in Teachers' Narratives about Teacher Attitudes[8]

Source: Prepared by the authors.

The representation of Graph 3 consists of 106 references, of which 70 are related to Critical Thinking (CT) competencies, 28 refer to good teaching practices and experiences, and only 8 correspond to practices that do not contribute to the development of CT in students. The latter reflections were developed from classes without intentional encouragement for the development of CT.

In the context of the competencies of a critical thinker, teachers' narratives highlighted questioning in 30% of the reflections, argumentation in 21%, and wait time for responses in 15%. These competencies were evidenced in the analyzed pedagogical practices.

Similarly, good practices and observed experiences were emphasized, with 14% of observations indicating the presence of active, student-centered teaching, and 12% noting that classes with intentional encouragement for Critical Thinking (CT) become more dynamic and, consequently, more interesting. In contrast, 8 reflections were made regarding observations in which the classes did not represent good teaching practices. In this regard, 7% of the reflections referred to classes centered on the teacher's discourse, and 1% to the absence of adequate wait time for obtaining responses from students.

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[8] Translation of the text from left to right: Dynamic classes; Waiting time for response; Questionnaire; Active teaching/learning; Argumentation; No time for response; Teacher-centered classes.

Final considerations

The results obtained in the study allowed for the identification of good teaching practices in the narratives, both concerning the reflective competence of a critical thinker and in the reflections presented on observed behaviors that characterize good teaching practices aimed at better learning outcomes.

It is important to emphasize that the dissemination of critical thinking as a method of teaching and learning in the educational context is timely and necessary. However, to teach and develop critical thinking in this context, it is essential that educators have prior knowledge of the subject. In this sense, it is observed that in initial teacher training, this important competency has not received the necessary emphasis in academic curricula, leading to the question: how can one teach what one does not know? The answer to this inquiry is clear: one cannot teach what one has not learned.

Nevertheless, it is not necessary to adopt a pessimistic stance. Knowledge is not a closed field, and through complementary and ongoing training, it is possible to develop these competencies, initially in teachers, so that they can subsequently contribute as multiplicative agents of this practice in the educational landscape alongside their students.

In this study, which resulted from the implementation of a teacher training program aimed at the development of critical thinking, it was possible to positively answer the proposed research question, as the narratives of the teachers evidenced the presence of more than one competency of a critical thinker.

Thus, it can be inferred that in complementary and/or ongoing training focused on the development of critical thinking, the knowledge or learning acquired can be expressed more clearly in the narratives of its participants. Therefore, teacher training that concentrates on the development of critical thinking can, based on the analysis obtained from the narratives, bring individual knowledge closer to practices in different contexts and promote collective knowledge, with the potential to enhance the knowledge acquired during training and consequently lead to better professional practices.

In terms of contributions, it is expected that this study may enrich the field of knowledge, highlighting the importance of narratives and the interpretations that arise from them concerning experiences and learning.

In this context, it is also noted as a limitation of the study that the direction of the teachers' reflections did not equitably address the two situations of observed classes: one class

without explicit promotion of critical thinking and one class with intentional and explicit encouragement for the development of critical thinking.

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CRediT Author Statement

Processing and editing: Editora Ibero-Americana de Educação.
Proofreading, formatting, normalization and translation.