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WHAT DOES A TEACHER ACTUALLY DO IN THE CLASSROOM? ANALYSIS OF RESEARCH ON TEACHING ACTION

O QUE O PROFESSOR FAZ DE FATO EM SALA DE AULA? ANÁLISE DE PESQUISAS SOBRE A AÇÃO DOCENTE

¿QUÉ HACE REALMENTE UN DOCENTE EN EL AULA? ANÁLISIS DE LA INVESTIGACIÓN SOBRE LA ENSEÑANZA-ACCIÓN

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ABSTRACT

This article presents a mapping of theses and dissertations prepared by a research group that has been investigating Teaching Action for over ten years, from different perspectives. The data collection was conducted in the repository of the graduate program to which the research group belongs. The research, which adopted a qualitative and exploratory approach, followed the procedures of Discursive Textual Analysis to organize and interpret the collected data. Its objectives were to identify different contexts, investigative approaches, and theoretical foundations used by the researchers, as well as to analyze and seek new understandings regarding the categories of Teaching Action found in the theses and dissertations. The process of analyzing the categories of Teaching Action resulted in nine final categories, which express what the teacher actually does in the classroom: teach about the content; manage the class and time; engage students' attention; use different technological resources; supervise the completion of activities; socialize on various topics; assign activities; encourage students to complete activities; and evaluate activities developed by students.

Keywords: Teaching Action. Science Teaching. Teacher Training.

RESUMO

Este artigo apresenta um mapeamento de teses e dissertações elaboradas por um grupo de pesquisa que investiga há mais de dez anos a Ação Docente, por meio de diferentes perspectivas. A coleta foi realizada no repositório do programa de pós-graduação ao qual o grupo de pesquisa faz parte. A pesquisa, de abordagem qualitativa e caráter exploratório, seguiu os procedimentos da Análise Textual Discursiva para a organização e interpretação dos dados coletados. Teve por objetivos identificar diferentes contextos, abordagens investigativas e fundamentações teóricas utilizados pelos pesquisadores, bem como analisar e buscar novas compreensões em relação às categorias de Ação Docente encontradas nas teses e dissertações. O processo de análise das categorias de Ação Docente resultou em nove categorias finais, que expressam o que de fato o professor faz em sala de aula: ensinar sobre o conteúdo; gerenciar a aula e o tempo; chamar a atenção dos alunos; utilizar diferentes recursos tecnológicos; supervisionar a realização de atividades; socializar sobre

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diversos assuntos; atribuir atividades; incentivar os alunos em relação à realização de atividades e avaliar atividades desenvolvidas pelos alunos.

Palavras-chave: Ação Docente. Ensino de Ciências. Formação de Professores.

RESUMEN
Este artículo presenta un mapeo de tesis y disertaciones elaboradas por un grupo de investigación que ha investigado la Acción Docente durante más de diez años, desde diferentes perspectivas. La recolección de datos se realizó en el repositorio del programa de posgrado al que pertenece el grupo de investigación. La investigación, que adoptó un enfoque cualitativo y exploratorio, siguió los procedimientos del Análisis Textual Discursivo para organizar e interpretar los datos recopilados. Sus objetivos fueron identificar diferentes contextos, enfoques investigativos y fundamentos teóricos utilizados por los investigadores, así como analizar y buscar nuevas interpretaciones de las categorías de la Acción Docente presentes en las tesis y disertaciones. El proceso de análisis de las categorías de la Acción Docente resultó en nueve categorías finales, que expresan lo que el docente realmente hace en el aula: enseñar sobre el contenido; gestionar la clase y el tiempo; captar la atención del alumnado; utilizar diferentes recursos tecnológicos; supervisar la realización de actividades; socializar sobre diversos temas; asignar actividades; animar al alumnado a realizarlas; y evaluar las actividades desarrolladas por el alumnado.

Palabras clave: Acción Docente. Enseñanza de las Ciencias. Formación Docente.

1 INITIAL CONSIDERATIONS

The development and increase in the number of Graduate Programs in the area of Education and Teaching has generated a growing scientific repertoire. In this way, we believe that articles that have a view to the bibliographic review become relevant, as they allow the analysis of the state of knowledge, as well as the contributions and different research fronts that are being assumed by these programs.

In view of this, the present research was developed with the aim of putting on the agenda the theoretical and methodological discussions and some results that have been built by the Research Group in Science and Mathematics Education (EDUCIM)[4] in relation to Teaching Action, highlighting possible challenges for future studies. This line of research, which has been under development for more than ten years, seeks to investigate Teaching and Student Action through direct observation of events that occur in the classroom.

The members of this research group have been weaving understandings about the concepts of Teaching and Student Action, from perspectives that had not yet been explored in other productions. Such perspectives arose from the concern generated in the face of normative research "that is interested above all in what teachers should or should not do" (Tardif; Lessard, 2008, p. 36), thus proposing reforms that do not happen or that do not take hold in the universe of the daily practices of teaching professionals, because they leave aside what the teacher really is and does. Conceived outside of pedagogical practice, they contribute to the creation of an abstract view of the teaching work (Tardif; Lessard, 2008).

In this way, the research group has left its mark by turning its investigations to what actually happens in the classroom, without developing prescriptions and judgments. The stimulus to the movement of direct analysis of Teaching Action in the classroom gave rise to new instruments, which allowed us to understand the relationships with knowledge that occur in classrooms.

The growing number of investigations focused on the active analysis of Teaching Action has made the research group able to reach different levels and modalities of teaching, as well as areas of training. However, the need for alignment has been triggered, in order to avoid the production of dispersed categories in relation to the Descriptive Perspective of Teaching Action (Arruda; Passos; Broietti, 2021). Thus, in the present research we seek to highlight the possibility of groupings between some emerging categories according to the

[4] http://educim.com.br/

context behind these actions, so that they can be used in future research, avoiding the dispersion of new categories of actions that have existing meanings.

We consider that review studies are pertinent for directing new research. Understanding what has already been produced clarifies the intellectual trajectory and facilitates scientific work in a significant way, helping in the elaboration of research problems by identifying gaps to be filled, consequently contributing to the advancement of scientific knowledge (Jacomini; Penna; Bello, 2019).

From the investigative perspective, we intend to answer the following research questions: What is the context of the classes being analyzed? What investigative approaches and theoretical foundations were used for the analysis of the classes? What categories of Teaching Action emerged from these researches? In order to answer these questions, the main objectives of this article are to identify different contexts, investigative approaches and theoretical foundations used by researchers, as well as to analyze and seek new understandings in relation to the categories of Teaching Action found in the theses and dissertations produced by the research group.

In the next section, we present the theoretical-methodological bases that guide the research developed by the group.

2 A LOOK AT THE TEACHING AND STUDENT ACTION THROUGH DIFFERENT FOUNDATIONS AND INVESTIGATIVE APPROACHES

In general, the group's investigations are supported by two research questions: 1) What Teaching and Student Actions can be identified through the direct observation of Science and Mathematics classes in basic and higher education, how can they be interpreted, and how are they connected? 2) What implications can be extracted from the results found with regard to teaching, learning and teacher training? (Arruda; Passos; Broietti, 2021).

These general research questions (especially the first of them) have already been scrutinized and have given rise to new questions during the investigations that followed. In order to answer them, the group has sought to articulate its research with other fields, the first of which is teacher training, in particular the practices and intentionalities that teachers manifest in their classes. In some investigations carried out by the group, the articulation with the main theories that approach action from the point of view of sociology was also explored. Finally, the group has explored the possibilities offered by the Actor-Network Theory (ANTE)

as a theoretical-methodological basis in its most recent investigations (Arruda; Passos; Broietti, 2021).

Among the main authors that are being used for the theoretical foundation in relation to teacher training and pedagogical practice, we can mention: Schön (1997); Pimenta e Lima (2004); Gauthier *et al.* (2006); Tardif and Lessard (2008); Altet (2011) and Tardif (2014). These authors also sometimes point out the need for direct observation of the teaching practice, as highlighted by Schön (1997, p. 90):

> [...] We have to check what teachers do in direct and recorded observation that allows a detailed description of the behavior and a reconstruction of intentions, strategy and assumptions. The confrontation with directly observable data often produces an educational shock, as teachers discover that they act according to theories of action different from those they profess.

Regarding Social Theories of Action, the research group has been based on authors such as: Weber (1978); Coleman (1994); Bourdieu (1997) and Lahire (2002). In Weber (1978) it is found that action is determined by ends that are rationally calculated by the subject who commits the action, based on values, affections, feelings and traditions. Coleman (1994) considers that almost all actions are rational in relation to ends, action is directed to the maximization of utilities. Bourdieu (1997) considers that action is guided by the perception of the situation and the appropriate response to each situation. For Lahire (2002), actions are the result of practical sense, routine situations and rationality when the subject is faced with something new. We can understand through these references that there are conscious, planned actions and automatic actions.

The concept of teaching action can also be based on the Actor-Network Theory, with Latour (2012) as the main reference. By opposing traditional sociology and defending a new sociology based on associations, Latour (2012) presents a series of controversial points, two of which are linked to the studies that the research group has been developing in relation to Teaching Action: a) The questioning of what "action" is; b) The possibility of attributing action to non-humans, given the understanding that objects also interfere in the course of human actions.

In addition, according to the research group, different methodological approaches can be employed for the direct analysis of Teaching Action. The first is to describe the Teaching Action (Descriptive Approach), focusing on analyzing what teachers actually do in the classroom, what are their actions during the teaching process (Arruda; Passos; Broietti,

2021). Tardif and Lessard (2008, p. 237) have called this process identifying the "Nature of the Action". In view of this approach, researchers have spared no effort to record, transcribe and analyze the Teaching Actions (verbal and non-verbal), which has generated a large repertoire of categories for the Teaching Actions, since action verbs have been used for this categorization process.

This has been a thorough and exhaustive process, but it has produced good results in terms of the analysis of work and of being a teacher. The research presents the complexity of the Teaching Action through the analysis of the number of distinct actions that are carried out in short periods, as well as the number of Teaching Actions that are carried out jointly at the same time (Arruda; Passos; Broietti, 2021).

The second is based on the explanation given by the subjects about the actions performed (Explanatory Approach) (Arruda; Passos; Broietti, 2021). This perspective of analysis has been developed through interviews with questions focused on categories of Teaching Actions emerging during the teaching process in the classroom, with the objective of investigating the existence of intentionalities that trigger such actions, that is, the "objective or motive of the action" (Tardif; Lessard, 2008, p. 237). In addition to the interviews, the researchers have also developed autoscopy movements, which facilitate the recollection in relation to the actions developed. In this process, the teacher watches some excerpts from his class and tries to explain his actions, according to the questions asked by the researcher, based on the Descriptive categories that emerged in the analysis of these excerpts.

The Explanatory Approach seeks to be grounded both in themes of teacher training and in social theories of action, as well as in works that deal with intentionality. Based on the assumptions of Tomasello *et al.* (2005), it is understood that every intention has an action plan, with a view to achieving an objective: "[...] An intention is a plan of action that the organism chooses and to which it commits itself in the pursuit of a goal. An intention, therefore, includes the means (plan of action) as well as an objective" (Tomasello *et al*., 2005, p. 677).

In this way, the descriptive analysis of a class indicates what the teacher's action plan is; the explanations given by the teacher during interviews in which the researcher questions the reasons why he performed such actions, indicate the objectives of each action and thus a general overview of the intentionality of the Teaching Action is drawn. According to Romanzini, Arruda and Passos (2025, p. 17.097): "The effectiveness of teaching actions is directly related to the intentionality of these acts, to the teacher's ability to reflect on their

practice, the constant improvement of their pedagogical skills, and to adaptation, according to the needs of each context".

Therefore, the explanatory perspective does not leave aside the need to describe the Teaching Action, but goes further, seeking answers regarding the teacher's intentionality, allowing analyses that articulate the teaching thinking and doing. "Highlighting the mental processes that govern the teacher's thinking in various situations, for example, during class management, at the time of didactic transposition of the subject, in interactions with students" (Tardif, 2014, p. 231).

The third investigative approach seeks to identify Connections between the categories of Teaching Actions and/or the categories of Student Actions, and is therefore called the Connective Approach (Arruda; Passos; Broietti, 2021). Through this, it is analyzed how Teaching Actions can be related to the actions of other actors in the classroom, in particular the actions of students, which can converge to the same objective. This approximation has been made based on Tardif and Lessard (2008), who present three forms of interaction: Convergent; Parallel and Divergent.

It is understood as Convergent Interactions, therefore Connection, when the Teaching Action in question converges and is aligned with the Teaching and/or Student Action identified in the sequence or previously. "Peripherally, there are disturbing behaviors (deviant or divergent in relation to the main task and related tasks" (Tardif; Lessard, 2008, p. 247). It is concluded that Parallel and Divergent Interactions lead to Disconnection.

The Connective approach has also been based on the Actor-Network Theory (Latour, 2012), which defends the existence of connections between actions and stresses the need for the researcher to "follow the connections, follow the actors themselves" (Latour, 2012, p. 259), in the search to understand how the elements relate to each other and how an actor (human or object) can influence the actions of others. According to Latour (2012, p. 251),

> [...] we have only to establish continuous connections between a local interaction and other places, times, and agencies through which a place is led to do things. If we do this, we will make visible the long chains of actors that connect places with each other without missing a single step.

We can observe that the approaches can be employed simultaneously, however, the Descriptive approach, focused on the Nature of the Action, is essential to reach the other approaches (Explanatory and Connective). Advances in relation to the understanding of the

reasons that lead to the occurrence of certain actions are necessary and relevant, as well as the in-depth study of the connection between the actions developed by the teacher, however, neither of these two perspectives can be achieved without a correct description of the Teaching Action.

Having been the Descriptive approach that started the group's research, and considering its relevance to the other approaches, in this article we will turn our gaze to the theses and dissertations that used this approach, as well as to the categories in relation to Teaching Action that emerged from the process. We emphasize that although the group has been developing descriptions regarding Student Action, the categories emerging from this process will not be part of this analysis.

3 METHODOLOGICAL REFERRALS

The present research has a qualitative approach and was developed based on the principles of state-of-knowledge review studies, because "the study that addresses only one sector of publications on the topic studied has been called [this way]" (Romanowski; Ens, 2006, p. 40).

In order to answer the research questions, listed in the introduction of the article, we collected data from the thesis and dissertation database of the Graduate Program in Science Teaching and Mathematics Education (PECEM) to which the EDUCIM research group is interconnected. Through the search tool and using the following descriptors "ACTION" and "ACTIONS", we initially arrived at the number of 367 theses and dissertations. Then, through the preliminary reading of the titles and abstracts, as well as the analysis of the authorship of the theses and dissertations, we selected only those that belonged to the members of the research group and that analyzed the Teaching Action through the Descriptive approach, that is, describing categories of action.

Thus, we arrived at the number of twelve theses and nine dissertations, totaling 21 investigations that make up the *corpus* of this research. Data collection in the thesis and dissertation database took place until December 2024, that is, only the theses and dissertations available in the repository up to that period were collected.

The 21 theses and dissertations were analyzed based on the procedures described by the Discursive Textual Analysis (DTA) (Moraes; Galiazzi, 2011), which includes three cyclical stages: Unitarization; Categorization; Metatext Production.

Through the detailed reading of the *research corpus*, we began the Unitarization, which consists of the fragmentation of theses and dissertations in search of Units of Meaning (US), which were "identified according to a meaning pertinent to the purposes of the research" (Moraes; Galiazzi, 2011, p. 19). In this way, we highlight Units of Meaning for the three questions that guide the research, emphasizing the categories of Teaching Actions evidenced by the theses and dissertations, thus structuring our *corpus* of analysis.

In order to organize the data analysis, we developed identification codes for theses (T) and dissertations (D). Thus, the code "Q1, 2016", for example, represents the first thesis that was analyzed, followed by his year of defense. Finally, the acronym "US" was used with the addition of a number to identify the order of collection of the Units of Meaning in each thesis or dissertation. The Units of Meaning form the necessary elements for the establishment of relationships and the possibility of representing understandings in relation to the phenomena investigated (Moraes; Galiazzi, 2011).

The researcher's immersion with the Units of Meaning, through readings and rereadings, allows the identification of similarities and divergences between them; the grouping of the Units of Meaning, according to their similarities, results in a system of categories (Moraes; Galiazzi, 2011). With the completion of the process of grouping into categories, it is possible to start the Production of a Metatext that represents the researcher's effort to present his or her understandings, through arguments that justify the grouping of the Units of Meaning into such categories (Moraes; Galiazzi, 2011).

In the next section, we will seek to delve deeper into the analysis and present the results and discussions based on the analytical movement and the data obtained.

4 RESULTS AND DISCUSSIONS

To answer the first and third questions that guide the research, in relation to the context and the Teaching Actions that characterize the analyzed classes, we used the inductive method. When analyzing the *corpus* of the research, by identifying the theme, objectives, methodology and results, we seek to describe the areas of knowledge, levels of education, teaching strategies and Teaching Actions. The second question that guides the research will be answered based on the categorization of theses and dissertations, according to the investigative approaches and theoretical foundations presented in the second section of this article.

4.1 CONTEXT OF THE CLASSES ANALYZED IN THE THESES AND DISSERTATIONS

The classes that were analyzed by the researchers for the production of data from their research can be grouped according to the area of knowledge. Thus, we observed that most of the research analyzed focused on Mathematics and Chemistry classes, with seven studies in each of these areas. Investigations focused on Mathematics include works T1 (2016), D1 (2018), T7 (2022), T8 (2022), T9 (2022), T10 (2022) and D7 (2023). With regard to Chemistry, the studies D2 (2019), T3 (2019), T6 (2019), D3 (2020), T11 (2024), T12 (2024) and D9 (2024) stand out. Next, there are five researches dedicated to the teaching of Science, namely: T2 (2018), T5 (2019), D4 (2020), D6 (2021) and D8 (2023). Finally, less frequently, investigations were identified in the areas of Physics, represented by a single study (T4, 2019), and Biology, also with only one work (D5, 2021).

In addition to the diversity in relation to the areas of knowledge, we can verify that the analyzed classes are distributed in three levels of Education. Most of the studies analyzed (12) focused on classes held in Elementary and High School. Specifically, nine studies focused on Elementary Education were identified: T1 (2016), D1 (2018), T2 (2018), T5 (2019), D4 (2020), D6 (2021), T7 (2022), T9 (2022) and D8 (2023). Only two studies exclusively addressed high school classes, corresponding to works D3 (2020) and T11 (2024). In addition, a study (Q10, 2022) analyzed simultaneously classes taught in Elementary and High School.

With regard to Higher Education, nine surveys were identified: D2 (2019), T3 (2019), T4 (2019), T6 (2019), T8 (2022), D5 (2021), D7 (2023), D9 (2024) and T12 (2024). Among these, six studies investigated the teaching action of teacher trainers: T6 (2019), D5 (2021), T8 (2022), D7 (2023), D9 (2024) and T12 (2024). The other three researches focused on the analysis of the teaching action of Undergraduates, focusing on the planning and realization of simulated classes within the scope of the Supervised Internship discipline: T4 (2019), T3 (2019) and D2 (2019). Therefore, the research group has been committed to investigating the teaching action at different levels of education. However, so far, no studies have been developed that explore the performance of Teacher Trainers in contexts of continuing education.

The research group has also analyzed classes that were developed through different teaching strategies, as we can see in Table 1 below.

Table 1

Teaching strategies that characterize the classes investigated

Teaching Strategies	*Theses and Dissertations*	*Total searches*
Dialogued Expository	D3, 2020; D4, 2020; D5, 2021; D6, 2021; Q2, 2018; Q7, 2022; D8, 2023; Q12, 2024; D9, 2024	9
Experimental in the laboratory	D3, 2020; D4, 2020; D5, 2021; Q3, 2019; Q5, 2019; Q11, 2024; D9, 2024	7
Traditional Exhibitions	Q1, 2016; D2, 2018; Q4, 2019; Q5, 2019; Q6, 2019	5
Dialogued Exhibitions with Mathematical Modeling and Digital Technologies	Q9, 2022; D7, 2023	2
Exhibitions Dialogued with Games and Manipulable Materials	D1, 2018	1
Dialogued Exhibitions with Quizz Game	Q3, 2019	1
Exhibitions Dialogued with Chemical Jury	Q11, 2024	1
Dialogued Expository with Exploration of Learning Objects on the Interactive Whiteboard	Q10, 2022	1
Exhibitions in a Remote Environment	Q8, 2022	1

Source: The authors.

By analyzing Table 1 we can see that most of the studies analyzed dialogued lectures, traditional classes and classes with experiments. In addition, some research analyzed classes developed through only one teaching strategy, as is the case of T1 (2016), one of the first descriptive studies developed by the group, which was focused only on Traditional Expository classes. Other research focused on analyzing classes with differentiated strategies, as is the case of D3 (2020), which analyzed Dialogued Expository Classes and Experimental Classes, with the objective of comparing the emerging Teaching Action categories.

In order to clarify what is exposed above, we bring a compilation of categories, which represent the Teaching Actions in classes that are configured by a certain teaching strategy:

1. Traditional expository – Represented here by the T1 survey (2016), it culminated in four macrocategories of teaching actions: Bureaucratic-Administrative; Waiting; Explain; Write.
2. Experimental in the laboratory – Represented here by the D3 survey (2020), it culminated in 15 categories of teaching actions: Guides; Waiting; Question; Explain; Supervises; Displaces; Organizes; Answer; Informs; Demonstrates; bureaucratic-evaluative activities; Discusses; Distributes; Warns; Resume.
3. Dialogued expository – Represented here by the D4 survey (2020), it culminated in 17 categories of teaching actions: Combines; Informs; Question; It draws attention;

Conversation; Come in; Sai; Organizes; Make a call; Erase; Attends; It moves; Waiting; Question; Answer; Explain; Write.

4. Exhibitions dialogued with Games and Manipulable Materials – Represented here by the D1 research (2018), culminated in 20 categories of teaching actions: Thanking; threatening; Argue; Attract attention; Comment; Check; Displace; To write; Wait; Execute; Explain; Negotiate; Organize; Congratulate; Ask; Ask; Provide; Fail; Answer; Supervise.

Research has shown that different teaching strategies alter Teaching Actions and the frequency of actions during a class (D3, 2020; T9, 2022). The research described in T10 (2022) also highlights that, in addition to the different teaching strategies, the Contents of the classes can act as elements that change the number and Teaching Actions of a class. Other factors listed by the researchers are: the characteristics of the students, the profile of the teacher and the intentionality of the teacher (T2, 2018; D2, 2019; D4, 2020). From the analysis of the research, it is evident that the context of the class, as a whole, can directly influence the Teaching Action.

4.2 INVESTIGATIVE APPROACHES AND THEORETICAL FOUNDATIONS

As described in the second section of this article, the research group has assumed three possibilities of Investigative Approach (descriptive, explanatory and connective) and Theoretical Foundation (Teacher Training; Social Theories; Actor-Network Theory) (Arruda; Passos; Broietti, 2021). We will now present the choices made by the researchers of the research group, in view of their possibilities, at the time of substantiating and analyzing the Teaching Action. For this, we prepared Table 2, which allows the visualization of such choices.

Table 2

Investigative Approaches and Theoretical Foundations adopted

Codes	*Investigative Approach*			*Theoretical Foundations*		
	Descriptive	Explanatory	Conexiva	Teacher Training	Social Theories	Actor-Network Theory
Q1, 2016	X			X		
Q2, 2018	X	X		X	X	
D1, 2018	X			X	X	
Q3, 2019	X		X		X	
Q4, 2019	X			X	X	

Q5, 2019	X		X		X	
Q6, 2019	X			X	X	
D2, 2019	X			X		
D3, 2020	X			X	X	
D4, 2020	X			X	X	
D5, 2021	X			X	X	
D6, 2021	X				X	
D7, 2023	X			X		
D8, 2023	X	X		X		
D9, 2024	X		X	X		
Q7, 2022	X				X	
Q8, 2022	X			X		
T9, 2022	X			X	X	
Q10, 2022	X		X		X	
Q11, 2024	X		X	X		
Q12, 2024	X			X		

Source: The authors.

We can observe that most of the theses and dissertations present in the repository until 2024 used the Descriptive approach, and only five sought to bring, in addition to the descriptions, possible connections between the Teaching and Student Action. We also found that so far the Explanatory approach is the one that has been least explored. Regarding the theoretical foundation, we can evidence that Teacher Training and Social Theories have been the most predominant choices, many researchers have even chosen to use both strands in their research. The Actor-Network Theory, although mentioned by the research group as a possible line of foundation, especially in relation to the Connective approach, was not contemplated in any of the 21 theses and dissertations present in the repository until 2024.

It should be noted that, according to the research group, any of the investigative approaches and Theoretical Foundations listed is capable of supporting the results of research in relation to Teaching Action (Arruda; Passos; Broietti, 2021). The choice for articulation with a certain approach or theoretical foundation occurs mainly due to the objectives and problems of each research.

Some researchers, according to their objectives, chose to base their research only on the bias of Teacher Education, as is evident in D2 (2019, p. 27): "We looked for references that would help us in the intervention process and in its evaluation, considering that we intend to direct the research towards the training of more reflective teachers". Other research presents sections in its theoretical foundations that are based on two theoretical approaches, but specify their basis according to only one of them: "In this research we are influenced by

social theories of action, especially so as not to neglect rational actions and actions of practical sense" (T7, 2022, p. 30).

However, most researchers have interpreted the teacher's action through social theories of action, linking these to authors from the educational sphere, through which they seek to define their understandings of Teaching Action. For example, T2 (2018) stresses the need to initially outline some conceptual definitions for Teaching Action, emphasizing that this was only possible "through theoretical references based on Sociology and from the relations of this field with the educational area" (T2, 2018, p. 9). Thus, the thesis is based on both theories.

We found that, initially, the theses and dissertations of the research group focused exclusively on categorizations for Teaching Actions, according to the Descriptive Approach, anchored mainly in Social Theories of Action that were linked to the field of Teacher Education. We believe that the research group aimed to establish a solid foundation, which will allow proposals for future investigations, focused on the least explored approaches so far (Connexive and Explanatory).

4.3 CATEGORIES OF TEACHING ACTION: POSSIBLE GROUPINGS

As previously mentioned, one of the objectives of this article is to identify possibilities of grouping some of the categories of Teaching Actions present in the theses and dissertations produced by the research group, in order to avoid the creation of new categories that have the same meaning as existing ones.

The categories described by the researchers in their theses and dissertations are represented by verbs that indicate actions, however, sometimes these categories appear in the indicative (Espera; Explain; Writes), other times in the infinitive (Wait; Explain; Writing), which demonstrates a certain dispersion in the process of standardization of categories. In addition, the growing number of categories identified in the research is indicative that there may be more than one verb being used for the same meaning and context of Teaching Action.

Table 3

Number of teaching actions evidenced in each research

Thesis and Dissertations	*Quantitative of Teaching Actions*
Q1, 2016	4
Q2, 2018	78
D1, 2018	20
Q3, 2019	24

Q4, 2019	8
Q5, 2019	22
Q6, 2019	33
D2, 2019	4
D3, 2020	15
D4, 2020	17
D5, 2021	10
D6, 2021	36
D7, 2023	2
D8, 2023	11
D9, 2023	13
Q7, 2022	15
Q8, 2022	6
T9, 2022	6
Q10, 2022	22
Q11, 2024	22
Q12, 2024	7

Source: The authors.

During the Unitarization process, it was observed that the studies with a smaller number of categories of Teaching Actions had already sought to approximate their categories, in order to avoid dispersion and the creation of categories with similar meanings (T1, 2016; Q4, 2019; D5, 2021; T9, 2022). It is important to highlight that D2 (2019) and D8 (2023) chose to use categories defined *a priori*, since their investigation focused on the explanatory approach. The T8 (2022) survey, which analyzed the remote context, also presented a reduced number of categories, which can be attributed to the specificities of the context investigated. In the case of D7 (2023), only two categories were used, since the researcher chose to delve into the actions of "Ask" and "Explain", without contemplating other teaching actions. The surveys in Q7 (2022) and T12 (2024) focused exclusively on evaluative and argumentative actions, which may also explain the lower number of categories identified.

During the process of grouping the categories of Teaching Actions, represented in the research by action verbs, we felt the need to also look at the fragments of transcriptions of the analyzed classes, in order to identify the context of each of the categories. It was through these contexts that we evidenced some possibilities of approximations and arrived at nine final categories, namely: 1) Teaching about the content; 2) Manage the class and time; 3) To draw the attention of the students; 4) Use different technological resources; 5) Supervise the performance of activities; 6) Socialize on various subjects; 7) Assign activities; 8) Encourage students to carry out activities; 9) Evaluate activities developed by the students.

As a way of presenting the final categories, we have prepared some tables that demonstrate the categorization process, which took place based on the context of the Teaching Actions.

Table 4

Final Category: Teaching the content

Actions	*Context of the Actions*
Teaching	Teaching about the content (D1, 2018, US7)
Explain	Explain about vinegar analysis (D2, 2019, US10)
Argue	Argue about students' questioning of the contents (D5, 2021, US5)
Comment	Comment on the contents of the activity (D1, 2018, US12)
Exhibit	Expose the content (D4, 2020, US8)
Correlate	Correlate lab classes with classroom classes (D6, 2021, US9)
Instruct	Instruct on the content of the activity (Q4, 2019, US 10)
Suggest	Suggest that they perform the calculation before risking an answer to the AO activity (Q10, 2022, US15)
Discuss	Discuss the results obtained from the experiment (Q10, 2022, US20)
Exemplify	Exemplifying the movement of a parachute (Q5, 2019, US16)
Represent	Represent explanation on the board (Q5, 2019, US17)
Fix	Correct students' mistaken statements about the content (Q2, 2018, US35)
Notice	Realizing one's own conceptual error (Q2, 2018, US21)
Remember	Remembering the contents already studied (S6, 2019, US8)
Resume	Resume content from the previous class (D3, 2020, US5)
Retrospect	Retrospect of previous classes (Q2, 2018, US6)
Demonstrate	Demonstrate the experiment (Q3, 2019, US14)
Show	Show content through the game (D1, 2018, US7)
Run	Run the experiment (D3, 2020, US12)
Indicate	Indicate with hands to demonstrate content (Q2, 2018, US 20)
Present	Present the materials/ingredients to the students (S2, 2018, US 19)
Handle	Handle and explain about the procedure (D5, 2021, US20)
Reply	Answer students' questions about the content (D1, 2018, US9)
Guide	Provide guidance on the experimental procedure (Q5, 2019, US23)
Auxiliary	Assist in the resolution of activities (D3, 2020, US21)
Highlight	Emphasize the accuracy of the correction factor (Q6, 2019, US8)
Reflect	Reflect on the conditions under which the experiments are carried out (Q6, 2019, US13)
Dictate	Dictate the content (Q3, 2019, U25)
To write	Writing about the characteristics of the primary standards of substances (Q5, 2019, US15)
Read	Read exercises (D3, 2020, US17)
Communicate	Communicate orally the content present on the board or textbook (Q3, 2019, US28)
Ask	Ask about the analytical chemistry content taught (T5, 2019, US32)
Question	Ask about content (Q3, 2019, US29)
Arguing	Arguing about the content (Q2, 2018, US29)
Problematize	Problematize the discussion of the text in relation to research in initial teacher education (T6, 2019, US10)
Listen	Listen to the answer or explanation or reading about content and assignments from the student(s) (D2, 2019, US4)
Understand	Teacher listens and tries to understand students' ideas (responses) (D8, 2023, US21)
Wait	Wait for the student to respond or explain assignment result (Q10, 2022, US20)
Accept	Accept responses about content (Q3, 2019, US10)
Filing	Reconstructs responses from reaffirmation of students' opinions (S12, 2024, US5)

Source: The authors.

All action verbs that denote in their context the approaches adopted by the teacher in relation to the activities carried out, with a view to the objective of Teaching the Content to their students, were grouped and constitute this category. It comprises all the actions by which it is verified that the teacher was exposing the content, seeking to find out what the

students knew about the content, or helping them to understand the content through the realization of an activity or experiment.

We can perceive that the actions in this category have the character of dialogued expository classes (Explain, Ask, Listen, Read, Write, Dictate, Answer and Remember) and practical classes (Demonstrate, Correlate, Instruct and Guide), since these were the methodological strategies most adopted by the teachers who had their classes analyzed.

The categorization process without a deeper look at the context of the Actions has led many researchers in their theses and dissertations to create distinct categories, such as Waiting and Accepting, for the same context of action. We will exemplify through the following Units of Meaning: "Expects to answer your questions about the OA activity and content" (S10, 2022, US25) and "Accept answers about the content" (S3, 2019, US10). When we analyze the context of the different Actions, we realize that both converge to the same direction, the teacher's search to understand the students' knowledge, to later continue with the exposition of the content. We can say that in both situations the teacher's concern turns to the Action of Listening to what his students have to say in the search to understand their knowledge, which certainly permeates the objective of greater action, which corresponds to the movement of Teaching the Content.

The same was true of the action verbs Show, Execute, Indicate, Present, and Handle, although the actions were categorized differently. According to their context, it was possible to evidence that both were focused on Demonstrating the Content through a practical action, be it an experiment or a game. As we can see in the following Units of Meaning: "Run the experiment" (D3, 2020, US12); "Handle and explain about the procedure" (D5, 2021, US20); "Demonstrate the Experiment" (S3, 2019, US14); "Show the content through the game" (D1, 2018, US7); "Indicate with hands to demonstrate" (T2, 2018, US 20); "Introduce the materials/ingredients to the students" (T2, 2018, US 19).

We brought to the discussion only a few examples of different categories that present the same context of Action, Teaching the Content, we will not bring all of them to the discussion, since they are specified in Table 4. However, it is relevant to highlight that the category in question is present in all the theses and dissertations analyzed, comprising 40 action verbs, which were grouped according to their context and which represent, therefore, a relevant portion in relation to what the teacher actually does in the classroom.

Following the data analysis, the final category, Managing Class and Time, was also present in all theses and dissertations, but with a smaller number of verbs indicative of action (29), as shown in Table 5.

Table 5

Final category: Manage Class and Time

Actions	*Context of the Actions*
Manage	Manage Time (Q3, 2019, US4)
Combine	Combine the discussion time of the proposed text and the following activity (Q6, 2019, US22) manage class
Do	Take Break (Q8, 2022, US12)
Attend	Answer Doorbell/Intercom (Q8, 2022, US10)
Allow	Allow Third-Party Messages (Q8, 2022, US7)
Move	Shift to enter the classroom (D5, 2021, US17)
Get There	Time to Reach Classroom (Q3, 2019, US28)
Exit	Time to Leave Classroom (D5, 2021, US23)
Search	Search for the experimental apparatus used in the class (D3, 2020, US22)
Organize	Organize materials (D3, 2020, US13)
Arrange	Provide Materials (Q2, 2018, US14)
Tidying up	Tidying up the material (D6, 2021, US8)
Clear	Clean Laboratory Equipment (D3, 2020, US20)
Calibrate	Calibrate Led Blackboard Lamp (T4, 2019, US30)
Check it out	Check out the game cards (S9, 2022, US15)
Sanitize	Sanitize the room (D3, 2020, US26)
Interrupt	Interrupting class due to technical issues (Q8, 2022, US32)
Solve	Resolve Experienced Technical Issues (Q8, 2022, US33)
Fix	Repair the experimental apparatus (D3, 2020, US14)
Distribute	Distribute materials to students (D6, 2021, US34)
Deliver	Deliver Activity Sheets (Q5, 2019, US27)
Coordinate	Coordinate the realization of the activity (Q10, 2022, US35)
Collapse	Collect activities (Q5, 2019, US37)
Register	Register Attendance (Q10, 2022, US13)
Perform	Make a call (D2, 2019, US6)
Get Started	Start the Call (Q3, 2019, US22)
Time	Time the activity (Q3, 2019, US37)
Crop	Cut Activity Sheets to Deliver (Q9, 2022, US47)
Note	Write down the numbers already drawn (Q9, 2022, US42)

Source: The authors.

The category Managing Class and Time groups all the action verbs that denote in their context the teacher's choices to organize his class according to time, bureaucratic demands and the pedagogical activities proposed. This category includes actions aimed at getting to and from the classroom, which include the teacher's travel time, as well as the registration of student attendance, the organization of materials necessary for the development of the planned activity, the distribution and collection of materials. The actions also represent the management of the class and time through the permission or not of the intervention of third

parties: "Answer the bell/intercom" (T8, 2022, US10); "Allow third-party messages" (Q8, 2022, US7).

As in the final category described above, in the category that represents the context, Manage Class and Time, we again find different verbs used with the same general sense of action, such as: "Provide materials" (T2, 2018, US14); "Arrange the material" (D6, 2021, US8); "Clean the laboratory equipment" (D3, 2020, US20); "Calibrating the Led Lamp on the blackboard" (T4, 2019, US30); "Check the game cards" (S9, 2022, US15); "Sanitize the room" (D3, 2020, US26); "Fix the experimental apparatus" (D3, 2020, US14). We found that all of them, according to their context, converge towards the same direction, which is that of the Action of Organizing.

The category Managing Class and Time covers Teaching Actions that do not focus on the content itself, but that are necessary, and can be considered as activities aimed at management, such as: Organize, Arrange, Tidy, Clean and Search, among others that are specified in Table 5. We can also observe the existence of actions considered predictable, such as going to the classroom and making the roll call, as well as actions that denote the unpredictability of the teaching work: "Interrupting the class due to technical problems" (T8, 2022, US32). All of them denote the need for Management Action, whether in the class itself, or in relation to the organization, in view of the time.

The category that will be presented below comprises all the action verbs that denote in their context the teacher's need to Draw the Attention of the Students, so that they do not disperse during the class and keep their materials organized, as well as to discipline or warn for bad behavior. The category was present in all theses and dissertations and encompassed 20 action verbs, as we can see in Table 6.

Table 6

Final category: To get the attention of the students

Actions	*Context of the Actions*
Call	Draw attention to the organization of materials (Q3, 2019, US37)
Request	Asking for student attention (D5, 2021, US20)
Warn	Warn to be careful with the materials used in the laboratory (Q4, 2019, US 19)
Run	Run the bingo by telling drawn numbers (D1, 2018, US34)
Disciplinary	Disciplinary for misbehavior (Q4, 2019, US16)
Punish	Punish for Misbehavior (Q7, 2022, US28)
Threaten	Threatening about non-compliance with the deadlines for the delivery of evaluation activities (Q6, 2019, US42)
Summon	Convene the class to start class (D5, 2021, US3)
Warn	Warning about attention in the response or resolution of a task (D3, 2020, US44)
Highlight	Highlight the amount of ethanol in cotton (Q5, 2019, US35)

Scold	Reprimand the group of students who made the mistake in the experimental procedure (T5, 2019, US38)
Disapprove	Failing student attitude (D1, 2018, US14)
Reply	Answer about the date of the next test (Q6, 2019, US16)
Request	Ask the student to answer the call (Q10, 2022, US8)
Complain	Complaining about the conduct of some students in the internships they supervise (Q6, 2019, US12)
Comment	Comment on the lack of student engagement in learning activities (S8, 2022, US15)
Alert	Alert students to the subject studied (S6, 2019, US32)
Inform	Inform which part of the book should be read/viewed (D6, 2021, US29)
Negotiate	Negotiate Exam Date (D1, 2018, US45)
Indicate	Indicate the mistake made by teammates and other students during the AO activity (Q10, 2022, US13)

Source: The authors.

In addition to observing different verbs being used for the same context, we observed that the same action verb was sometimes used in different contexts. This is the case of the Teacher Action Respond, which appears immersed in the context of Teaching the Content, when we verify that the Teacher "Answers students' questions about the content" (D1, 2018, US9), as well as appears immersed in the context of Calling Attention, when the teacher answers about something that is not focused on the content, answering and calling attention "to the date of the next test" (T6, 2019, US32).

The final category, Using different technological resources, was present in all theses and dissertations, with 17 verbs indicative of actions, as evidenced by Table 7:

Table 7

Final category: Use different technological resources

Actions	*Context of the Actions*
Use	Using technologies for teaching (Q10, 2022, US36)
Go out like a light	Erase the slate (S4, 2019, US27)
Present	Introduce the *slide* (D5, 2021, US13)
Design	Project on the interactive whiteboard (T4, 2019, US 33)
Share	Share Screen (Q8, 2022, US18)
Verify	Check Message in *Chat* (Q8, 2022, US37)
Accept	Accept Student Access in *Google Meet* (Q8 2022, US9)
Access	Access *Websites* (Q8, 2022, US30)
Hang up	Turn Off Student Microphone (Q8, 2022, US12)
Save	Record Synchronous Lecture (S8, 2022, US9)
Shoot	Filming the class (D6, 2021, US6)
Manipulate	Manipulating the tape measure and protractor (Q4, 2019, US14)
Handling	Handling the blackboard (T4, 2019, US38)
Call	Turning on equipment (Q4, 2019, US21)
Consult	Consult textbook (Q3, 2019, US36)
Wait	Wait for the program to open/unlock (Q10, 2022, US24)
Operationalize	I'm going to put it for you now in *Classroom* (D9, 2024, US8)

Source: The authors.

This category includes all action verbs that denote in their context that the teacher, throughout his class, uses various technological resources. For example: deleting the board, presenting *slides*, checking messages in *chats* and *online groups*, accessing *links* with content for the class, manipulating equipment, accepting student access to *Google Meet*, waiting for the internet to load, or the program to open, or students to take a *screenshot*.

We can see from the analysis that the use of technological resources is part of the teaching action in conventional classrooms, however, several of the actions that make up the category are linked to the remote teaching context, where the digital technological resource has become essential for the teaching action (T8, 2022). This category also has a strong reference to class and time management, since the use of different technological resources influences the way the teacher manages his class, in which he sometimes needs, for example, to "wait for the program to open/unlock" (T10, 2022, US24).

All action verbs that denote in their context the supervision that the teacher performs, while the students develop the proposed activities, were grouped in the final category, Supervise the performance of activities. This category was present in all theses and dissertations, but with a lower number of action verbs (five), as we can see in Table 8.

Table 8

Final category: Supervise the performance of activities

Actions	*Context of the Actions*
Supervise	Supervise the realization of activity (D6, 2021, US10)
Move	Moving around the room and observing students (Q2, 2018, US47)
Move	Moving around the classroom and paying attention to students (D3, 2020, US29)
Observe	Observe students as they complete the LO activity (S10, 2022, US37)
Wait	Waiting for students to take exams (Q6, 2019, US15)

Source: The authors.

From the context of micro-actions, we understand that when moving and moving around the room, the teacher is paying attention and observing the performance of activities by the students, in order to identify possible difficulties, for example. In this way, we checked again action verbs, such as Move, Move and Wait, representing different categories according to the context of the action. Such nuances also allow us to interpret that, in addition to the action itself, its context and the teacher's intentionality are essential for the process of analyzing the teaching action, since the same action verb can contain different meanings.

The category presented below composes all the action verbs that denote in their context moments in which the teacher socializes with his students. It was present in 11 of the

21 theses and dissertations, but comprises a significant number of action verbs (21), as we can see in Table 9.

Table 9

Final Category: Socializing on Diverse Subjects

Actions	*Context of the Actions*
Socializing	Socialize with students about the weekend (Q4, 2019, US20)
Reflect	Reflecting on the formation of the citizen (T5, 2019, US23)
Ironize	Ironizing a student's speech (S6, 2019, US46)
Highlight	Highlight your experience as a graduate student (Q6, 2019, US27)
Justify	Justify on the fact of correcting the issues (Q6, 2019, US19)
Compare	Compare their initial training with that carried out at the institution where they teach (Q6, 2019, US22)
Reply	Answer about the disappearance of a student from the Internship classes (D2, 2019, US37)
Verify	Acknowledge the fact that almost all students want continuing education in education (Q5, 2019, US38)
Regret	Regret Experiment Result (D5, 2021, US25)
Comment	Comment on fun things while students play (S9, 2022, US31)
Play	Playing about the experiments in the natural sciences (S6, 2019, US20)
Reinforce	Reinforce the student's opinion with the experience in their initial training (Q6, 2019, US14)
Greet	Greet students at the beginning of class (D3, 2020, US2)
Say goodbye	Say goodbye to students (D5, 2021, US29)
Chat	Talking to students (Q3, 2019, US24)
Dialogue	Dialogue with students about personal experiences (D5, 2021, US36)
Discuss	Discuss your opinion on various topics (D3, 2020, US25)
Smile	Smiling with students (Q2, 2018, US49)
Dancing	Dancing with Students (D6, 2021, US22)
Interact	Interact with students in moments of relaxation (Q2, 2018, US29)
Report	Report on your life experience (Q6, 2019, US26)

Source: The authors.

We can verify that socialization occurs through conversations, discussions, responses and comments that have no direct relationship with the content of the class. They are, therefore, actions that have already been present in other categories (Comment, Respond, Highlight and Justify), but which reflect moments of relaxation, with laughter, dances and games, or even moments of reflection and life-oriented stories. The fact that it is not present in all theses and dissertations gives indications that not all teachers are able to socialize with their students, as well as the expressive number of verbs demonstrates that the way teachers socialize with their students can be diverse.

The following category encompasses all action verbs that, in their context, indicate moments when the teacher assigned activities to his students during classes. This category was identified in 10 of the 21 theses and dissertations analyzed and includes eight action verbs, as illustrated in Table 10.

Table 10

Final category: Assign activities

Actions	*Context of the Actions*
Assign	Assign Activities to Class (Q2, 2018, US25)
Indicate	Nominate student(s) to respond or solve or explain their or another student's task resolution (Q2, 2018, US37)
Inform	Inform which student will read the book (D6, 2021, US19)
Request	Ask students to help deliver materials that will be used in the assignment (Q3, 2019, US48)
Request	Request a student to read the activity script (D3, 2020, US31)
Propose	Propose about the activity that will be carried out with the dynamometer (Q6, 2019, US32)
Sort	Order the student to prepare the experiment/recipe (S6, 2019, US29)
Negotiate	Negotiate Division of Activities (Q10, 2022, US32)

Source: The authors.

This category includes verbs that are expressed, in the context of classes, when the teacher assigns functions to students during the development of activities. These functions can be assigned through requests, orders, indications, negotiations or agreements between the teacher and the class, determining which student or group of students will be responsible for a certain task within the proposed activity. We note again the reference to action verbs that have already been presented in previous categories (Indicate, Inform, Ask, and Request). However, considering the context focused on the mediation of activities and the protagonism of the students, the interpretations make it possible to group these verbs in the final category, Assign activities.

The final category, Encouraging students to carry out the activities, comprises eight action verbs and was found in only seven of the 21 theses and dissertations analyzed. This category includes all action verbs that, in their context, reflect the teacher's encouragement to the students and to the execution of the activities proposed by him. This incentive is manifested through praise and thanks for the accomplishment of the tasks, for the appreciation of the students' participation, for the gestures of affection and for the concern for the students' well-being, as we can see in Table 11 below:

Table 11

Final category: Encourage students to carry out the activities

Actions	*Context of the Actions*
Encourage	Encourage interaction among students (Q6, 2019, US27)
Praise	Commend for the accomplishment of the task (Q6, 2019, US35)
Demonstrate	Demonstrate concern for student well-being (S6, 2019, US24)
Congratulate	Congratulate the students who were awarded (D1, 2018, US46)
Thanking	Thanking for completing the task (Q10, 2022, US17)
Stimulate	Encourage the student to use their skills in acting as a future teacher (T6, 2019, US28)
Value	Valuing Student Participation (Q10, 2022, US32)

Collaborate	Collaborate with the student in the realization of the activity (S10, 2022, US19)

Source: The authors.

All action verbs that denote in their context meanings related to the evaluation process were grouped in the final category, Evaluate activities developed by the students. This category was present in only four of the 21 theses and dissertations analyzed and comprises ten action verbs, as evidenced by Table 12.

Table 12

Final category: Evaluate activities developed by the students

Actions	*Context of the Actions*
Evaluate	Evaluate the experience in the internship (D2, 2019, US34)
Reject	Reject the student's resolution or student-informed/written response (Q7, 2022, US12)
Validate	Validate student(s) response, outcome, or resolution (Q7, 2022, US19)
Agree	Agree with students' arguments (D5, 2021, US26)
Check it out	Check that the answers are correct (Q7, 2022, US32)
Return	Advice/feedback on the exercises (Q7, 2022, US14)
Look	Look at the activities developed in the notebook (S7, 2022, US27)
View	View the writing of mathematical expressions or the student's resolution or result on the board or notebook (Q7, 2022, US30)
Interpret	Interpret the student(s)'s response, resolution, explanation, or reading of content and assignments (Q7, 2022, US29)
Request	Request understanding of the subject or task (D4, 2020, US12)

Source: The authors.

Most of the action verbs that make up the category were collected from T7 (2022), which aimed to analyze the evaluative teaching actions, showing that the researcher's objectives and their interpretative perspective influence the data obtained. The other studies also carried out active observations of the classes, but did not present significant numbers of categories related to the action of evaluating.

As a general overview, we can see that some of the final categories were present in all theses and dissertations and comprise a greater number of action verbs. This is the case of "Teaching about the content" (40 action verbs), "Managing the class and time" (29 action verbs), "Drawing students' attention" (20 action verbs), "Using different technological resources" (17 action verbs) and "Supervising the performance of activities" (5 action verbs). The category "Socializing on various subjects", although present in 11 of the 21 theses and dissertations, also presented a significant number of action verbs (21). The other categories were not present in all theses and dissertations and presented a lower number of teaching actions: "Assign activities" (10 theses and dissertations and 8 action verbs), "Encourage

students to carry out activities" (7 theses and dissertations and 8 action verbs) and "Evaluate the activities developed by the students (4 theses and dissertations and 10 action verbs). By analyzing the theses and dissertations, we found evidence that the Teaching Action is strongly centered on the categories present in all the theses and dissertations: (1) teaching about the content; (2) manage class and time; (3) to draw the attention of students; (4) use different technological resources; and (5) supervise the performance of activities.

5 FINAL CONSIDERATIONS

The present research aimed to identify the different contexts, investigative approaches and theoretical foundations adopted by the researchers, as well as to analyze and promote new understandings about the categories of teaching action present in the theses and dissertations produced by the EDUCIM research group, which have been investigating what the teacher actually does in the classroom for more than ten years.

The theses and dissertations indicate that different teaching strategies influence both the nature and frequency of the Teaching Actions during classes, and that the contents covered also impact these actions. In addition, factors such as the characteristics of the students, the profile of the teacher and their intentionality have been pointed out as determinants in this process. It is evident that the context of the class, as a whole, can directly influence the Teaching Action. The research group has been dedicated to the analysis of teaching action at different levels of education. However, we observed that no investigations have yet been developed that specifically address the Teaching Action of Teacher Trainers in Continuing Education contexts.

We observed that most of the theses and dissertations predominantly adopted the descriptive approach. Only three studies sought to go beyond description, proposing possible connections between teacher and student action, the explanatory approach remains the least explored so far. With regard to the theoretical foundation, the predominance of themes related to teacher training and social theories is highlighted, and it is common for several researchers to choose both strands in their investigations.

The categories described by the researchers in their theses and dissertations are represented by verbs that indicate actions, however, sometimes these categories appear in the indicative (Espera; Explain; Writes), other times in the infinitive (Wait; Explain; Writing), which demonstrates a certain dispersion in the process of standardization of categories. In addition, the absence of a more in-depth analysis of the context of teaching actions led to the

creation of distinct categories, such as "Show", "Present", "Execute", "Indicate" and "Handle". Although named differently, these categories, when considered in their respective contexts, reveal themselves to be aimed at the same purpose: the teaching of content through Teaching Actions of a demonstrative nature.

During the process of grouping the categories of teaching actions, represented in the research by action verbs, it became necessary to also analyze the fragments of the class transcripts, in order to understand the context in which such actions occurred. From this contextual analysis, it was possible to identify approximations between the actions and, thus, consolidate nine final categories: (1) teach about the content; (2) manage class and time; (3) to draw the attention of students; (4) use different technological resources; (5) supervise the performance of activities; (6) socialize about various subjects; (7) assign activities; (8) encourage students to carry out activities; and (9) evaluate the activities developed by the students.

Throughout the analysis, we observed that the group's researchers, on some occasions, focused exclusively on the action verb when elaborating the categories, without considering the context in which these actions are inserted. As a result, all occurrences of the verb "wait," for example, were grouped into the same category, regardless of contextual variations. However, we understand that context plays a key role in the categorization process, as it offers clues about the intent and underlying meaning of the action. Thus, the same action verb can be allocated into different categories, as occurred with verbs such as "Wait", "Indicate", "Handle", "Present", "Accept", "Request", "Execute", "Respond", "Request", "Inform", "Comment", "Displace", "Demonstrate", "Highlight", "Resume" and "Check", among others. The identification of distinct action verbs, but with contexts that converged to the same meaning, allowed the grouping of such actions in the categories presented above.

We understand, therefore, that the descriptive approach could present more consistent results if it considered, during the process of grouping and construction of the final categories, not only the action verbs, but also the contexts in which the Teaching Actions occur. This is because, in addition to the action itself, the context and the intentionality of the teacher are fundamental elements for the analysis of the Teaching Action, since the same verb can assume different meanings, depending on the context in which it is used. In this way, we also perceive the relevance of descriptive analyses, which, although exhaustive, due to the

richness of details, are essential for future analyses through the explanatory approach of Teaching Action.

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