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# **Categorizing Teaching Knowledge from the Perspective of Students: Narratives about Memorable Teachers**

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Additional information is available at the end of the chapter

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## **Abstract**

The following article approaches, as an object of research, the teaching knowledge of memorable teachers from the perspective of the students; narrative analysis was chosen as a methodological strategy, by categorizing 28 texts written by undergrad students at the University of Veracruz in México, belonging to the bachelors in pedagogy program. The objectives were aimed at categorizing the meanings of teacher's educational knowledge, explaining those samples of knowledge that left a mark in the lives of pupils, describing educational knowledge in the technical and professional realms, and distinguishing between those categories that involved bad teachers. The results show eight categories that answer to the objectives in this research; these categories are didactic knowledge, human knowledge-patience-comprehension, the ability to explain—gift of teaching, educational knowledge strategies, educational knowledge specific to memorable teachers, planning and assessment knowledge, knowledge on strictness-tidiness-formats, and knowledge on good attitudes of teachers.

**Keywords:** teaching knowledge, narratives, university students, memorable teachers, higher education

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## **1. Introduction**

The educational system in Mexico was constituted, during the 2014–2015 school year, by a population of 36,060,653 students belonging to basic, middle, and higher education [1]. This great population of students is itself part of a greater population of 119.5 million inhabitants

in Mexico [2]. The total number of teachers that attend to this immense educational demand for this same school year cycle amounts to 1,905,722 teachers, from which 63.6% of teachers attend to basic education (initial, preschool, primary, and secondary education); 15.1% of teachers belong to schools in the middle superior level (high schools, vocational schools), and finally 19.1% of teachers attend to higher education institutions (undergrad and graduate programs).

The formation of teachers to specifically attend to basic education needs in the country takes place in the 485 teaching schools and, in the education, faculties of non-technology-related public and private universities which ascend to a total of 4389 institutions of higher education. The challenges that are involved in the improvement of basic education quality demand for teacher formation policies that put emphasis in the educational abilities and competencies for teaching; among these abilities is the importance of emphasizing the teacher's knowledge that has an impact on the profile, parameters, and indicators of teaching performance [3].

## 2. The perspective of students on teaching knowledge

The point of view of students about different educational phenomena in which they are involved is an essential and powerful component that can be useful to influence improvement processes, considering that including the perspective of those that learn educational processes "can help us to improve teaching, to weave the ties of coexistence and to make their stay in school meaningful" [4] (p. 27). In this sense, in accordance with [5], as well as [6], these highlight the need for the students' voices to be included in order to improve the practices and conditions of teaching and learning processes in schools.

On the same note, according to [7] (p. 40), it states that the information obtained from students can be useful to determine the dimensions of their learning, which commonly receives little consideration; furthermore, also [8] the perspective of students when researching the factors of success in their undergrad studies takes into account. It can be established, therefore, that the point of view of students has been a valid source of information to be considered in research pertaining teaching and learning.

However, in contrast to what was stated before, in [9], it is considered that the voice of students, specifically in relation to the evaluation of learning, has still a long road ahead and that the results of their research show a "lack of evidence on the real participation of the students" (p. 2).

Nevertheless, it is necessary to insist on the participation of students in order to develop a particular kind of research in which their perspective is fundamental; particularly, according to [10], it is important to incorporate the perspective of students to be able to "deepen in the construction and validation of the image or social representation of students on what is a "good teacher" and "quality teaching" (p. 5). In this same vein of agreement [11], there are some who maintain that to carry an investigation about teachers from the point of view of students

represents a great opportunity area to understand how the academic world functions, considering the actors who are more relevant and authorized, that is, the subjects of learning.

### 3. Teaching knowledge

According to [12], teaching knowledge relates to a “particular kind of day-to-day knowledge learned by teachers. It is the knowledge concerning the testing and solution of problems that the teacher’s workplace poses in the specific conditions that are presented and in the continuous and necessary reflection which at the same time, their work imposes” (p. 60).

Likewise, [13] agrees that the said teaching knowledge is contextually constructed as it is important to recognize a framework of relationships from which teachers construct their practices, which constitutes the basis for that body of knowledge. For [14], teaching knowledge must be built from within the profession and from dialog practices between teachers, constructing a professional culture (also refer [15]); along the same lines, in this topic [16], which points out in his research the results of dialog between two teachers in relation to the commitment toward their teaching practices—which in itself constitutes a teaching knowledge—it concludes that the professional knowledge of a good teacher achieves success when it manages to influence the lives of the students by maximizing the different ways in which they learn.

Terigi [17] proposes an analysis of the knowledge and teaching work using a neotaylorist approach to the evaluation of teaching competencies, which comes as a response to the demands imposed by a competitive and globalized context. This supposes a devaluing process of the teaching knowledge (pp. 7-8).

On the other hand, [18] establishes that “teachers articulate diverse knowledge coming from their professional training, disciplinary or curricular formation, experience or practice, built throughout their lives and career paths” (p. 5) and, above all, that this is not about elaborating a list like a recipe about the said knowledge, and later having the wrong idea to apply them mechanically to new contexts, because this would avoid a fundamental question:

“The key question is how to define and from what theoretical and methodological stand the construction of key knowledge and competencies for the XXI century can be approached, what characteristics must be met by those determining that list and what premises do they hold? Will they be able to avoid the temptation to protect their own values? Will they know how to do it? Will they want to do it? What group or groups will be charged with this task?” [18] (p. 20). Answering some of these questions might be the result from an informed dialog between researchers, academics, and teachers.

Teaching knowledge revolves around a professional “know how” that leads to a good “teaching.” On this same topic, [16], in his research, makes the following question: How does a teacher build “his knowledge” within the teaching phenomenon? This inquiry leads us to examine the different research that has been done about teaching knowledge and implicate among themselves those investigations that involve the perspective of the students.

#### 4. Research on teaching knowledge and the perspective of those who learn

In the research done by [19], which concerns the meanings that students associate to the terms *Good Teachers and Bad Teachers*, using the technique of natural semantic networks, the authors highlight implicitly diverse categories of teaching knowledge contained in the everyday work of good teachers. These categories are synthesized by a distinctive feature expressed by a key word in the natural semantic network: knowledge, preparation, responsibility, intelligence, organization, committed, punctuality, trained, communicator, and emphatic; in the same way, the absence of teaching knowledge is expressed in the categories such as irresponsible, unpunctual, ignorant, lazy, disorganized, arrogant, unprepared, boring, and unjust. It can be established that, in every category belonging to a good teacher, teaching knowledge is constructed in the procedural order and is presented as a “know how” in the teaching of students.

Along the same lines, [20] present us with a portrait of a good university professor from the point of view of the students in Tunes, using the technique of the focus group; in this “portrait” behind the features of the said profile, some teaching knowledge traits are also delineated. The authors propose a research question: What qualities, both human and technical-professional, should have a university professor? The answers point toward three categories. *Personality features*: sympathetic, honest, patient, tolerant, kind, and flexible; *their relationship with the students*: good communicator, motivational, respectful, widely noting students, adopting a participative style, and accepts different learning rhythms; and *their relationship with their discipline and knowledge*: competent, expert in the language of the discipline, pedagogic strategies, cultivated, disciplined, etc.

Again, the point of view of the students is taken into account, this time in a categorization of the teaching knowledge in an investigation about those who are considered to be good university professors; concerning this, [21], using the same technique as [19] of natural networks, finds three groups of answers or categories in their networks. First group: respectful/responsible; second group: sympathetic, emphatic, punctual, intelligent, and kind; and third group: precise, organized, and motivating. This research from [21] establishes that the teaching knowledge, which is part of the features of a good professor, is not present in clear-cut categories that are perfectly compartmentalized, but on the contrary are all intertwined; for example, the teaching and didactic knowledge from the third group unite with motivational skills and didactic attitudes, which are proper to the personality of the teacher.

Also in this topic, [22] researched on the proposals of what is considered a “good professor” at the Universidad de Sevilla, in order to maximize learning by their students; they found motivational strategies, reinforcement of student’s progress, monitoring of partial achievements, organization strategies, and systematization of classes to highlight relevant content of orientation toward students. One of the key questions made for this research with an ethnographic approach, was: What do teachers and professors offer to facilitate learning of their discipline? This question linked teaching knowledge to the diverse teaching strategies and proposals of what are considered “good professors,” aimed to improving academic performance.



In the same line of research, [23] describes expert teaching knowledge, being almost a form of art, which is described by Don Finkel in his proposal: Teach with the mouth closed. This work considers the subject of the genius teaching knowledge, on the part of a great teacher, *to teach with the mouth closed*; genius teaching knowledge entails according to this work, the avoidance of mere oral transmission, opting for innovating teaching methods. Hence, in this text, teaching knowledge emerges: “Let the great books speak” and “employ puzzles, paradoxes, and parables,” because these methods lead to active and creative thinking, solving problems in the classroom and transforming an oral class to an imaginative and alive class [24].

In contrast to the research already mentioned in [25], using the technique of observation carried out research on the teaching practices of those considered “the best evaluated teachers” at the Universidad de Vigo. The authors found that even among the best teachers there are some teaching practices which can be considered traditional, as they are focused on the contents or on the teacher. This might entail that any orthodox and strict proposal will convey teachers that even when considered to be good are also fallible and forcibly pushing the content of their disciplines, giving the privilege to the teacher.

## 5. The problem of teaching knowledge in schools

According to [26], in school environments, linger unpredictability, multidimensionality, immediacy, uncertainty, and weak institutional frameworks concern what a teacher should know and do in the classroom; this conveys the need to question teaching knowledge and review current strategies so as to undergo a renovation of professional work. Furthermore, the authors state that the complexity and requirements that are currently demanded from teachers by school authorities result in greater workloads, provoking feelings of impossibility and frustration on their part, which make it harder to generate knowledge and school achievements.

On the other hand, as stated by [27], teachers, in relation to their teaching knowledge, are facing difficulties. Every day they face a variety of difficulties, and with the help of this knowledge, they will arrive to possible solutions, not as a result of fast calculations or eliminations, but as the outcome of the analysis and reflection on problems of teaching and the most appropriate ways to solve them. Likewise, [28] adds to the discussion with the idea that teachers face multiple problems related to “how to teach,” which arise suddenly and unexpectedly; when facing these situations, teachers possess a so-called practical knowledge, which is constituted of a series of mental images responding to these problems, and from these, teachers choose what they consider the most appropriate manner to respond and apply it to the said problem or unexpected issue. Following this same line of research, [17] proposes what he calls “pedagogical knowledge by default” which is a teaching knowledge “that has problems when facing the current conditions where teaching work is produced” (p. 28) and, adding to this, above all, at the moment when determining the possible alternatives to the difficulties of teaching work.

In [29], the issue of the value of teaching work and the problems and frustrations related to it are addressed. This descriptive taken on this subject is first concerned with the teaching

knowledge, as for every conceived problem, there is a corresponding teaching knowledge that deals with the solution; and, hence, the author registers in descending order of importance of the following: problems with the relationship and collaboration between parents and teachers, little interest shown by students, poor or irregular assistance, problems with learning and academic performance, desertion, disobedience from the students, problems when attending children with special needs, etc.

This core of problems which points to the backward and marginalized faces proper of a poor and marginalized school environment forces us to consider if the presence of consolidated teaching knowledge on behalf of teachers has a relevant role in attenuating or solving these problems in schools.

The importance in this study of approaching categorizations that give meaning to teaching knowledge of memorable teachers allows us to arrive to the field of good practices [30]. Students remember their good teachers for their excellence in their pedagogical knowledge, and in their practices, good teachers from the generation preceding ours offer us their teaching knowledge from the systematized remembrances of their students, which constitute the main objective of this study; if this research contributes some principle or knowledge that could be incorporated to the state of the discipline, in this case the formation of teachers will have an added value.

## 6. Research questions

Once the background and problems regarding teaching knowledge and students' perspective have been considered, this study will be supported by the following research questions, which will guide the process of data collection and analysis:

- a. What categories give meaning to teaching knowledge of memorable teachers from the narratives of a group of undergrad students at the UV Pedagogy Faculty?
- b. What kind of teaching knowledge categorizations left a mark in the life of the students?
- c. What dimensions of teaching knowledge are implicated in the teaching process of disciplines that are specific to the technical and professional sphere?
- d. Considering the categorizations of teaching knowledge constructed from the narratives of students, which categories are implicitly related to bad teachers?

## 7. Objectives

In accordance with the research questions put forward in this study, the following objectives have been proposed:

- To categorize the meanings of teaching knowledge, from a set of narratives provided by students of the Pedagogy Faculty at the Universidad Veracruzana.

- To explain the teaching knowledge present in those categorizations that has left a mark in the life of students.
- To describe teaching knowledge that is implicated in the teaching process of different subjects and that are specific to the technical and professional realm.
- To distinguish those categorizations that are implicitly involved in the performance of bad teachers.

## 8. Methodological strategy

The method that was chosen to address the categorizations of teaching knowledge from the perspective of the students is *narrative inquiry*. As has been pointed out by [31], narrative inquiry is increasingly present in educational research; this owes to narratives being both an educational phenomenon and at the same time a research method. Hence, it is possible to do research through the narrative analysis method, and a particular phenomenon can be narrated from the perspective of narrative inquiry.

As stated by [32], “narrative inquiry has as its core the analysis of human experience” (p. 139), and it is about making those experiences understandable and above all to assign them meaning. Likewise, for [33], “narrative research, based on interpretative hermeneutics and phenomenology, focuses on the meanings that people attribute to their experiences” so that those meanings are integrated in a vision that reconstructs more complex meanings (p. 51).

Within the narrative inquiry framework, this study adopts the biographical narrative approach [34]. Consequently, this is an attempt to retrieve the biographical narratives provided by 28 undergrad students enrolled in the Faculty of Pedagogy at the University of Veracruz in Mexico, about their memorable teachers in order to make categorizations of their teaching knowledge. In addition to reading the narratives and constructing a primary document with them, the next phase involves the systematization of the texts to achieve the rationalization of the biographical narratives, that is, to reorder data and proceed to its coherent integration in a reconstruction or singular narrative of all the texts [35].

On this subject [36] make a notable contribution in their research about autobiographies of memorable teachers. In their study, the categorization of narratives goes through the process of identifying *in vivo codes*, that is to say, key words that capture a strong meaning in the narrative stories that are a product of several narratives or stories. These codes, with such a strong meaning, can express the name and content of a whole narrative categorization. In the case of this study, 28 narratives of undergrad students from the University of Veracruz, Faculty of Pedagogy, were processed using the software package for the qualitative data analysis ATLAS.ti in its version 7.5. The narratives were integrated into a primary document for its analysis and the creation of several categorizations.

At the end of this process, the description of the categorizations that were found was integrated into a macro-narrative which answers to the questions guiding this research in the section dedicated to results.



9. Results

What follows is the group of categories that retrieve the meaningful codes about teaching knowledge of good or memorable teachers, from the perspective of students in their narratives.

9.1. Teaching knowledge of memorable teachers

In this category, the teaching knowledge of memorable teachers is brought to light through the integration of six codes that describe a good teacher from the memories of the student. This category represents a recognition of the good performance, and the teaching knowledge of memorable teachers, their abilities, and dedication to applying effective teaching strategies are remembered: “My teacher’s name was Angelica, she was a very good teacher because she utilized very good and interesting ways to work” (Na17 UV, in Table 1).

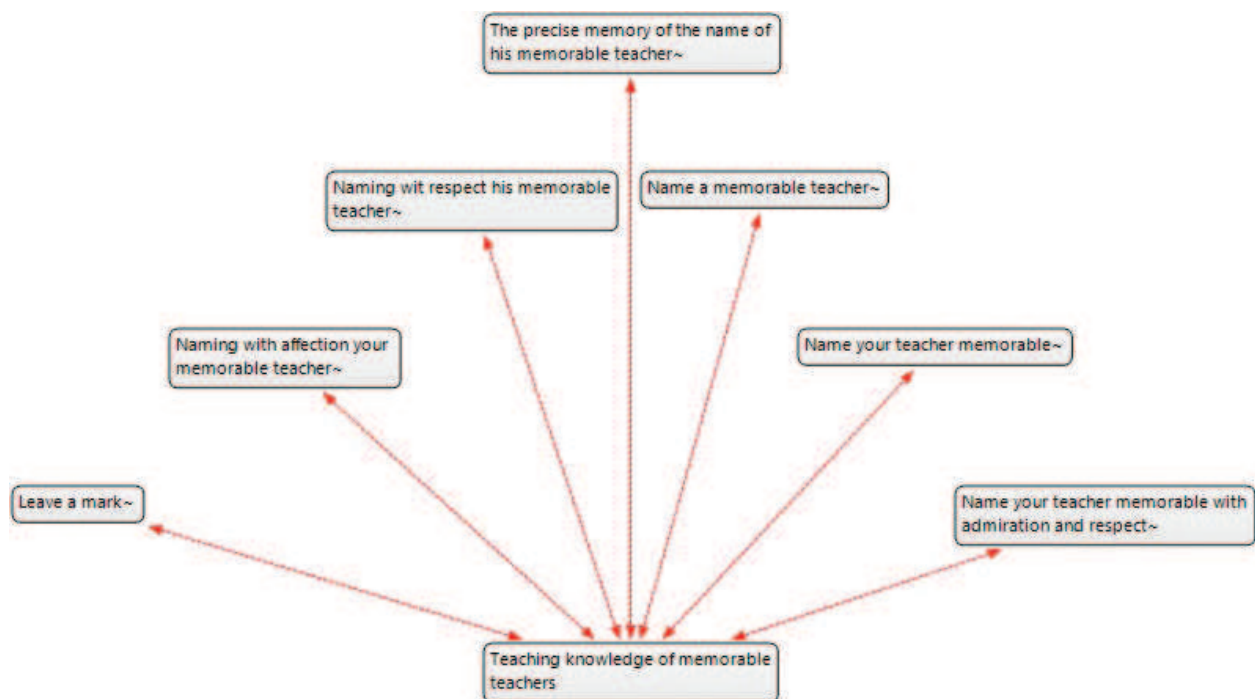
On the other hand, when calling a teacher “memorable,” it is implied that there is a recognition, admiration, and respect for his or her knowledge, in addition to gratefulness for the efforts of the teacher employed in the formation of the student, the kindness, and the good heart shown by the memorable teacher, who combines expert knowledge and didactic abilities with an interpersonal touch that has left a mark in the formation of the student: “The only teacher that has left a mark in me was a teacher named Xóchitl, this was during my high school years. Besides from being my teacher, she was my tutor for two years and a half. She was a strict teacher but a very good one, with a great heart” (Na11 UV, in Table 1); this memorable remembrance describes the practices of a teacher that was able to modify the formation path of the student and therefore attains the level of a memorable teacher (Figure 1).

The act of naming, using first names and surnames, a memorable teacher denotes a fine admiration on behalf of the student; the memory is a strong one and has left a mark in the career path, and hence the memorable teacher has become a role model [37].

This happens even as it was identified that the teacher used traditional but effective teaching strategies. This is to say, the memorable teacher has left a formative impression in the memory of the pupil; notwithstanding, if he or she was a constructivist or traditional teacher, he taught

Code	Decoding	Date
(Na1 UV)	Narrative 1: student of the Faculty of Pedagogy	14/10/2016 (first workshop session)
(Na11 UV)	Narrative 11: student of the Faculty of Pedagogy	14/10/2016 (first workshop session)
(Na14 UV)	Narrative 14: student of the Faculty of Pedagogy	14/10/2016 (first workshop session)
(Na17 UV)	Narrative 17: student of the Faculty of Pedagogy	15/10/2016 (second workshop session)
(Na20 UV)	Narrative 20: student of the Faculty of Pedagogy	15/10/2016 (second workshop session)

Table 1. Decoding in empirical citations.



**Figure 1.** Category: teaching knowledge of memorable teachers.

his or her student very well to the point where the teacher was memorable to them, as it was expressed in one of the narratives: “I had several teachers whom I love and respect, but there was one teacher that gained my admiration, and he has my respect and affection, his name: Jorge Cabrera Cruz, he was always supporting me and not just me, also all of my school mates” (Na 14 UV, in **Table 1**).

Finally, when remembering the name of a memorable teacher, it is done in a warm and evocative manner: “Teacher Betty...She is very kind, she understands the life of the students, she tries for you to understand as a group or personally. She is always available for any doubts that you might have” (Na 20 UV, in **Table 1**). In this last passage, the recognition of the commitment and dedication to the personalized learning process of the students on behalf the memorable teacher is shown.

## 9.2. Teaching knowledge: category of the ability to explain—gift of teaching

This category integrates codes whose meaning recognizes the outstanding ability of teachers in the knowledge of how to teach, i.e., the gift of teaching. This set of codes refers to a very significant characteristic of good teachers, who maintain as their knowledge the capacity to simplify a complex topic for the easy understanding on behalf of their students. This knowledge or gift of knowing how to teach is associated in a direct manner to the mastery of their subject. In addition, this categorization is concerned with the presence of a teaching ability in the management of information and the ordering of the content presented to the students; this ability is shown by very good teachers, and they manage to be admired and taken as an example for appropriating this content (**Figure 2**).



**Figure 2.** Category: ability to explain—gift of teaching.

This category focuses on the set of skills acquired by the teacher in regard to knowing how to simplify and convey in a straightforward way the topics of their subject and this way facilitating the complete understanding by the students; this superior ability of “knowing how to explain well” [38] concentrates on the characteristic of having explanatory resources to address complex contents and deconstruct them for their students in a clear and easily understandable approach, to which the student reacts in a very positive manner, expressing a joy for the way the good teacher is able to convey ideas, which even when the methods are traditional, they are adapted to what the student needs to learn by the very good teacher. “This teacher had the talent to explain the processes needed to solve this kind of problems, she was able to make me understand so well, that I even began to like mathematics” (Na1 UV, in **Table 1**). As can be seen from this narrative, being able to explain topics so well not only facilitates the full comprehension of the subject, but also it stimulates the enthusiasm on behalf of the students, and this has an influence on the future career paths chosen by students.

### 9.3. Teaching knowledge: strategies

In this category, teaching knowledge is concerned with the mastery of teaching strategies; whereby, the codes that are part of this categorization refer to the ability of good teachers to make their classes very dynamic. The category focuses on the teaching knowledge that is expert in the management of students, groups, and the content being taught, integrating strategies that are able to spark the participation of the group and arrive to the construction of learning [25].

The effect of this teaching knowledge being put into practice is the dynamism given to the classes on behalf of the good teachers, keeping in mind that a dynamic class is not the same to an interesting class; the dynamic class is more related to the active usage of didactic

sequences and strategies, which results in actions, to the movement inside the classroom, to applying dynamics to the session, and then following the class becomes an agile activity, not tedious. The interesting class involves being trapped by the plot and interest of the topic; we could then not move in an interesting class, but it does not become dynamic (Figure 3).

On the other hand, this category refers to the procedural characteristics of good teachers; whereby, in their class, they encourage the whole group of students to participate, and they stimulate cooperation, the integration, and exercises using teamwork. They acknowledge the points of view of the students, and they integrate different perspectives. Therefore, they are able to achieve learning in their students after rigorous interactive exercises.

Finally, this category includes the code-named organization for work, which recognizes the teaching knowledge related to organization and systematization [26] and in addition the methodological rigor in addressing the contents and activities of learning. When recognizing that a teacher was organized and strict conveys the idea that the teacher was meticulous in her mastery of her subject and carefulness when delivering topics, in an attempt to be faithful to the contents of the discipline and the level of learning that is demanded.

#### 9.4. Teaching knowledge: good attitudes of the teacher

This category encompasses the codes that are related to the personality traits belonging to the teacher, which are integrated to their knowledge; here, there is an example which is very commonly expressed to be a characteristic of good teachers: their kindness, which enables them to connect with the students; their smile, the joy to be teaching in the classroom; and their

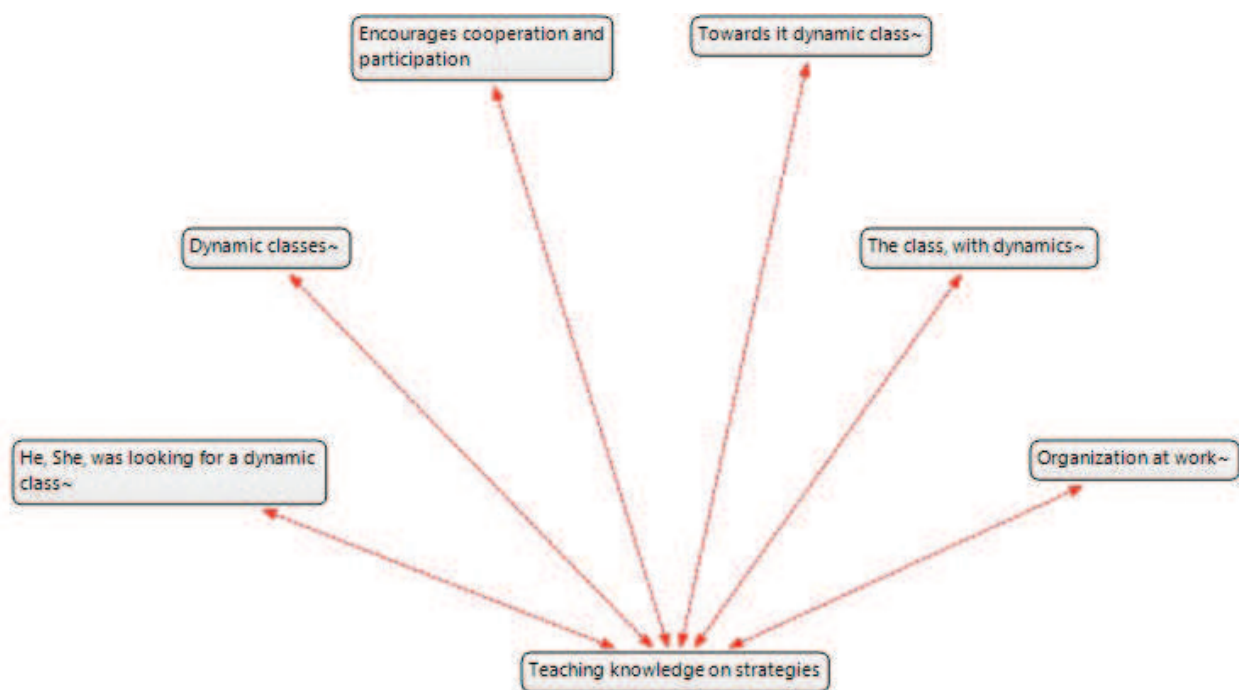


Figure 3. Category: teaching knowledge—strategies.

expression of good attitude and spirit of service toward the subjects of learning. Kindness and a friendly treatment create favorable conditions for the learning environment and the relationship among peers in class [11]. When the teacher treats his or her students with kindness, they will be in a condition to learn better. Likewise, this category reflects an affectionate condition present in very good teachers, who offer trust and warmth in the relationship between them and their students [39], which leads to friendship relationships between the students and the teacher, without them affecting or demeriting the professional function of support and educational facilitation from the teacher (Figure 4).

Good attitude of the teacher as a category also alludes to a personality feature on behalf of the teacher toward his or her professional functions, the good attitude, a willingness for service, a capacity for patience, and to be polite, demonstrating and encouraging all the time a positive personality that facilitates the participation of students and motivates them to express their own ideas and proposals in class. The good attitudes of memorable teachers will be an encouraging factor for the disposition of students toward learning of their subject.

Finally, the category establishes a feature of good teachers, the level of trust that they have gained from their students, which manifests itself mutually and denotes a personal passion on behalf of the teacher for the good academic performance of their students [37]; this trait in a good teacher is perceived naturally by the student and gains their trust.

9.5. Didactic knowledge

This crucial category defines outstanding teachers and memorable teachers by their distinctive nature. They all have as a strength a great didactic knowledge [38]. Didactic knowledge is



Figure 4. Category: good attitude of the teacher.

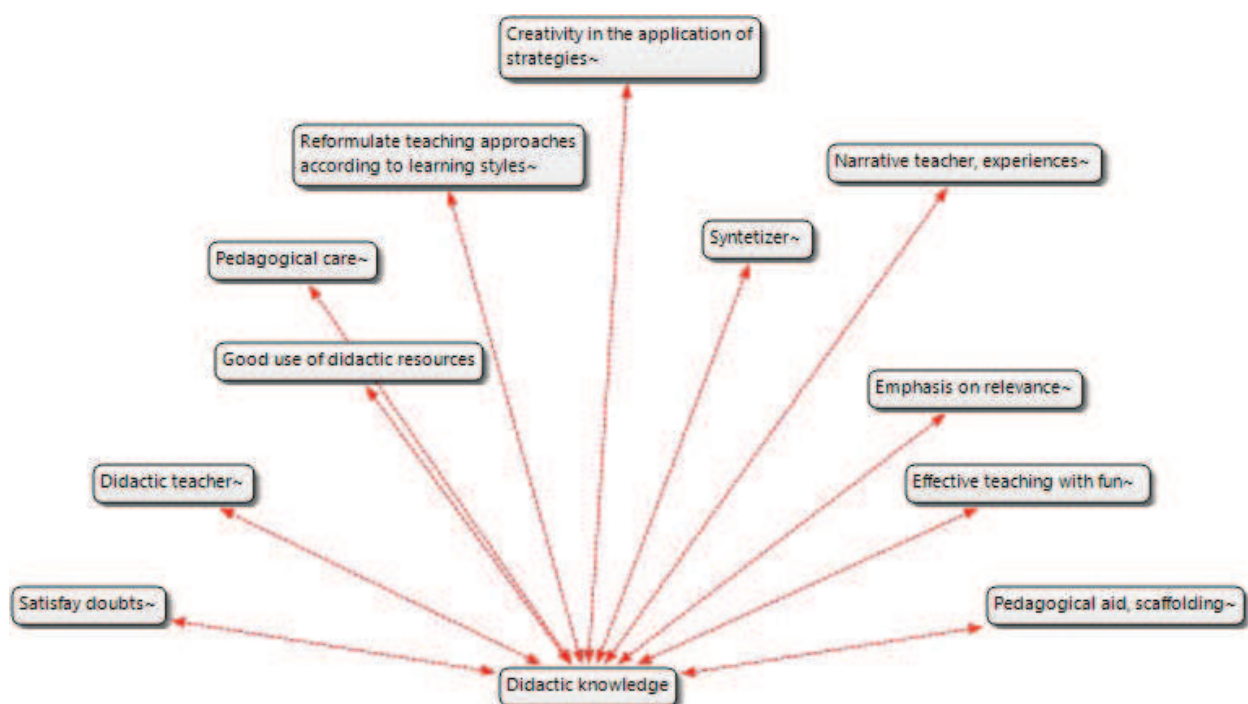


understood as the mastery of a teaching method or techniques for addressing learning objectives. They know how to put arguments forward, to show, to demonstrate, to experiment, to expose, to make conclusions, and to synthesize knowledge with the appropriate usage of auxiliary, material, or technological resources (**Figure 5**).

This category distinguishes itself from the knowledge on strategies that has already been mentioned; the former is concerned with ways to articulate or coordinate learning activities. Didactic knowledge, on the other hand, is not a particular knowledge to coordinate different strategies, but is a knowledge on how to conduct in an all-inclusive manner the process of teaching; the category includes a constant practice on behalf of memorable teachers, offering pedagogical or staging help in the disposition of resources or gradual exercises for each type of student as he or she requires them [17], and although, as it has already been established, didactic knowledge is concerned primarily with knowing the application of methods and procedures, it is also related to the application of teaching strategies in a creative manner, giving freedom to the students to display, with learning autonomy and their proposals, and developing the learning activity creatively.

Creativity in the classroom represents innovation and development of thought in order to find optimum results through different pathways. This category also refers as to how good or memorable teachers make use of fun or entertaining resources that make a class session pleasant and enjoyable so that learning becomes an engaging activity for the student [23].

There is another concept or code which has been included in this category which has been named *pedagogical care*. This code refers to the attention and care given to reach a goal and achieve learning in the performance of the student; it involves a professional trait of focusing



**Figure 5.** Category: didactic knowledge.

attention on the student and on his or her learning needs; it requires listening attentively, to provide help and resources, to explain again topics more than one time if needed, to go over the exercise again with the student, etc. It is also included in this category the *emphasis given to relevancy* as a separate code, which constitutes a practical teaching knowledge that refers to the ability of the teacher to connect the learnings and knowledge proposed to the students in the classroom, with real-life applications and current events. Relevancy in learning is always present in the teaching knowledge of good teachers, and they will use this tool often.

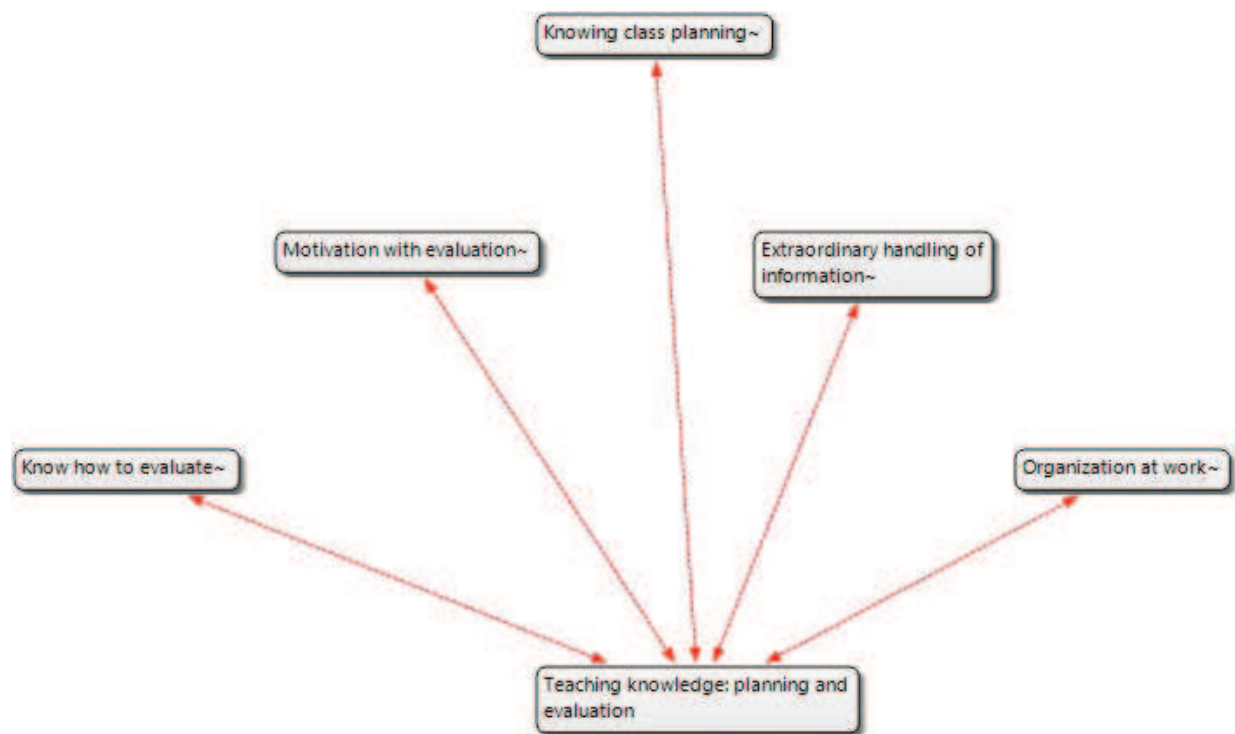
On the other hand, the didactic knowledge category includes a code that has been named *narrative teacher* [33], which describes a type of teacher that shares, through the use of pedagogical narratives, his or her life experiences, which then become learning scenarios for their students; in this sense, each narrated scenario is linked and supported by the employment of the imagination in each of the minds of the students, and, hence, imagination and learning take place in a didactic situation [24]. In addition, other codes belonging to this category involve the synthesizer teacher, where it is recognized as a valuable teaching knowledge the ability to offer a synthesis of the activities that took place and the topics that were addressed in integrated and summarized manner, establishing a complete vision of what was covered and learned. This way, the students presented with a panoramic vision of the session and are able to capture elements of learning that could not have been presented in a segmented fashion or were not fully comprehended when covered individually.

In addition to knowing how to make use of didactic resources appropriately, an important code to highlight this category is *teaching knowledge: reformulate teaching approaches according to different learning styles*. This code comprises teaching knowledge on behalf of teachers who are dedicated to and expert in what corresponds to an ability to personalize teaching strategies in accordance with the different styles of learning that students display. The reformulation of teaching approaches, made on the fly, reveals an expert teaching knowledge which can be developed changing teaching styles and adapting them to the circumstances of the level and style of learning that corresponds to the student.

### 9.6. Teaching knowledge: planning and evaluation

This categorization is constituted of five codes or concepts that refer to a kind of technical and pedagogical knowledge closely related to the management of the process of teaching-learning, that is, the planning and evaluation of class sessions by the teacher, [40] where the teaching knowledge of organization and systematization are highlighted, together with the methodological meticulousness when addressing the contents and activities of learning (**Figure 6**).

The category, teaching knowledge: planning and evaluation, was created after narratives affirmed that teachers were good, organized, and strict which reveals a certain mastery of the discipline and carefulness when teaching it on behalf of the teacher, always attempting to be faithful to the contents of the topics and to the level of learning that is demanded. Hence, this corresponds to the systematization and design of each session of classes; the richness of the design and planning of each class is revealed in sessions rich with information, resources, materials, graphics, ordered sequences, systematizing and closely following the objectives and goals, etc.



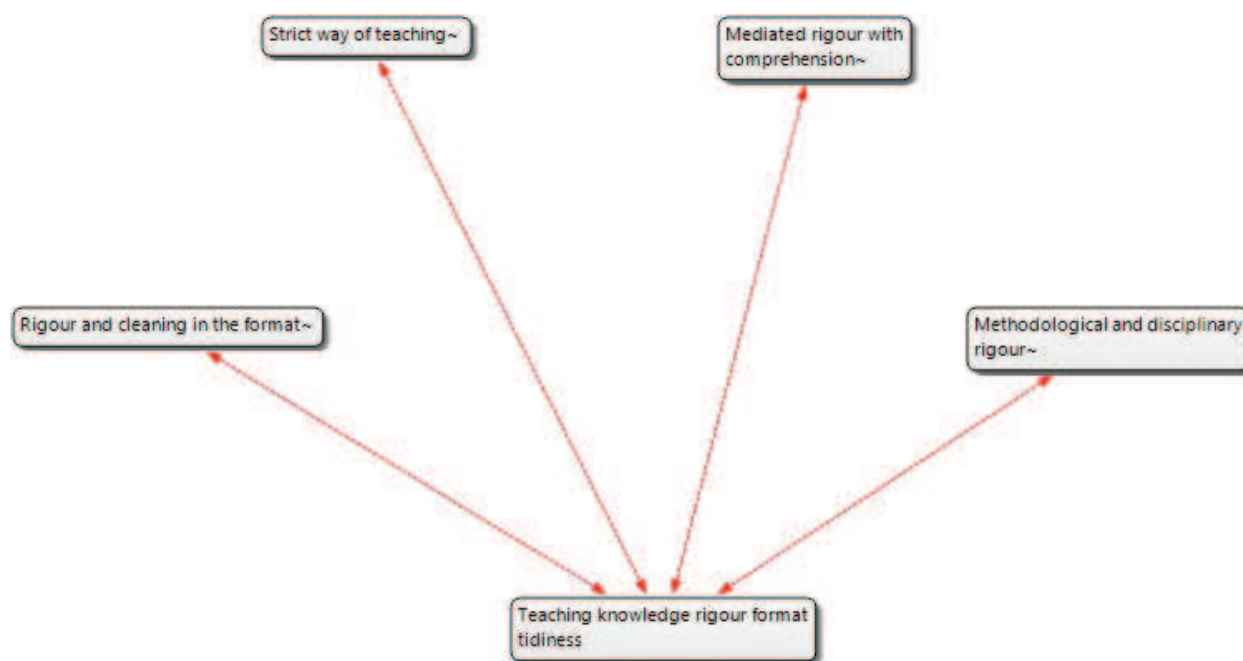
**Figure 6.** Teaching knowledge: planning and evaluation.

The students value this kind of professional knowledge, which represents all the teaching technical and professional works previous to the class session, namely, to the pedagogic planning. Additionally, this category expresses a valuable ability that is perceived by the students on behalf of their good teachers, that of a teaching knowledge that is exceptional, and the ability to know how to properly evaluate and leave their students satisfied, to the point where the students recognize the objectivity and fairness of the mechanics and procedures of evaluation employed by good teachers. This expert teaching knowledge, knowing how to evaluate, illustrates how the said evaluation process always becomes an active learning process [40].

Finally, as part of this category, the code refers to the ability of the teacher to manage and organize the information and contents presented to the students. This skill is displayed by very good teachers, helping them gain the admiration of the students and being taken as an example when appropriating the said content.

### 9.7. Teaching knowledge: rigor-format-tidiness

This category is comprised of four codes that involve the knowledge of demanding strict adherence to the method, to the discipline, and to the format with accuracy and style. According to this category of teaching knowledge: rigor-format-tidiness, teaching is a strict process in terms of raising the quality standards of the work being presented in the classroom. Consequently, very good teachers or memorable teachers are not involved in pedagogic practices where laxity and slackness are part of the development of learning activities (**Figure 7**).



**Figure 7.** Category: teaching knowledge—rigor-format-tidiness.

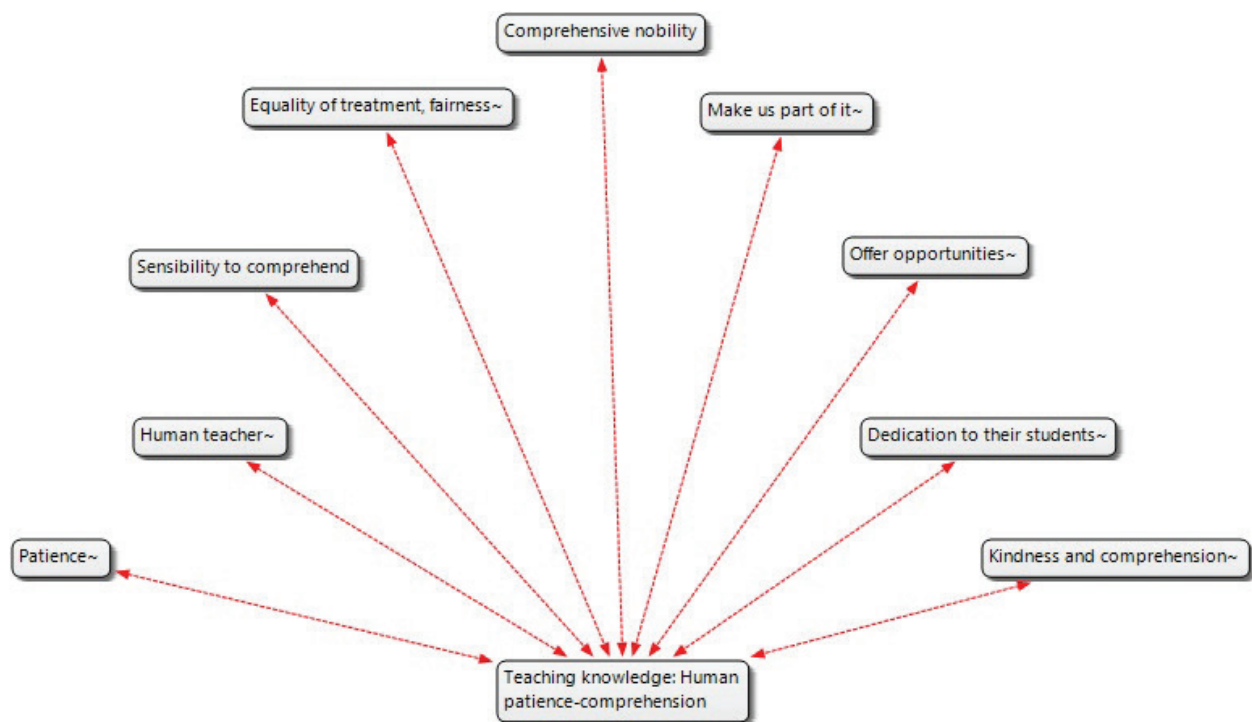
In this sense, according to the category being analyzed, lax teachers, lacking in rigor and discipline in the teaching process, are shown with little regard by the students, and hence there is a positive recognition to strict but effective approaches to teaching, mutually agreed on by the teachers and their students, where discipline and rigor in teaching are expressed in good teachers as being “a strict teacher” and this without having any sign of disapproval. However, another code that belongs to this category points to a teaching knowledge that revolves around being rigorous and strict toward the execution and performance of a learning activity but at the same time provides understanding and resources that will help the students; this articulated knowledge is proper to very good teachers and is thus recognized by students in this category.

In addition, as part of this category, there is a summary of systematic practices that are adjusted to a precise method, followed by a procedure and rigorous system [30]. Furthermore, it is considered as a mastery and execution of solid disciplinary knowledge, an ample scientific preparation, beyond any doubts and following common sense. The teacher is recognized for his expert knowledge [41], with two kinds of well-defined rigor: the methodological and that concerned with the subject. Finally, a code in this category refers to the competency of tidiness and carefulness in the elaboration of learning exercises and activities keeping a clean and precise format; good teachers strictly demand cleanliness and adherence to the format in learning activities, and excellent knowledge should not only manifest itself in terms of content, but also present itself in the tidiness of format.

### 9.8. Teaching knowledge: human-patience-comprehension

This category addresses a knowledge to assign value that is profoundly pedagogic [20]. It is a knowledge of comprehending the human condition; it touches knowledge on the emotional realm from the teacher, and the students recognize the kindness and comprehension of memorable teachers, in accordance with the following codes (**Figure 8**).





**Figure 8.** Category: teaching knowledge—human-patience-comprehension.

*Offer opportunities:* This code represents the openness, patience, and kindness of good teachers for whom there is no lost student or that is incapable of learning. These attitudes to help and offer solidarity to the subjects of learning [29] are features of an optimist teacher who is convinced and believes in the possibilities of improvement, in the results of the learning process of any student.

*Dedication to their students:* The dedication of a teacher to their work is a background trait that refers to the learning practices that are performed using extra time, and because of that, they define the dedication of memorable teachers. The students value this devotion to their duty on behalf of good teachers as they understand that this extra time could be spent by the teachers with their families or to themselves and hence this extra effort by teachers is highly by students as part of good teacher's dedication to work.

*Equality of treatment and fairness:* This code alludes to a good teacher being a figure of justice and authority in the classroom. The teacher must treat all the students with justice and equality; indeed, it is all lost if there is a great pedagogue in any disciplines, but which is no longer recognized by the student because he or she received an unjust treatment in the classroom. Academic justice and equality of good teachers, in terms of values, are the crown jewels of the professional competencies.

*Making us part of it:* This code involves the pedagogic principle which is put into practice and takes into account the students and their learning needs. Teachers owe their work to students, and they are the reason for being a teacher; therefore, making them part of their designs considering their opinions, preferences, and points of view in the learning process to achieve good results is a feature of memorable teachers.



*Kindness and comprehension:* This code refers to the attributes given by the students to teachers that have good feelings, good and kind teachers who offer the best of their knowledge and teaching work to their students [39].

*Patience:* Patience is a teaching virtue and in this code is defined as an attitude favorable to the learning process, to be willing to wait and to take the time for a paused and detailed explanation, waiting and accompanying the learning rhythm of the student and using words that calm and appeal to temperance—*try one more time, don't worry, take a calmed look*—patience is a true gift of teaching.

*Humane teacher:* This code involves the ability of memorable teachers to be in an active disposition to listen and to show empathy to their students; to first understand and then comprehend their students, comprehension and empathy are essential for meaningful coexistence and warmth toward their students, to feel together with them part of them in a learning community [20].

Finally, there is the code named *sensibility to comprehend*, which is closely related to the other codes of the category to conform in this humane pedagogical knowledge and value them in the order of comprehension.

## 10. Conclusions

This last section deals with the summary of results yielded by this study and answers each of the questions put forward and the objectives set before:

- a. The categorizations that were found in the 28 narratives provided by the students enrolled in the Faculty of Pedagogy at the Universidad Veracruzana in Mexico and which give meaning to the teaching knowledge of memorable teachers, presented in a decreasing frequency, are the following:
  - *Didactic knowledge* (12)
  - *Teaching knowledge: humane-patience-comprehension* (9)
  - *Teaching knowledge: ability to explain—gift of teaching* (7)
  - *Teaching knowledge: strategies* (6)
  - *Teaching knowledge of memorable teachers (specific)* (6)
  - *Teaching knowledge—planning and evaluation* (5)
  - *Teaching knowledge: rigor-format-tidiness* (4)
  - *Teaching knowledge: good attitudes of teachers* (4)
- b. The teaching knowledge of memorable teachers, which left a mark in the lives of their students in terms of this research, were expert disciplinary knowledge, didactic abilities, dedication, kindness and great heart, and additionally the intermediation between rigor and comprehension for the students.

- c. The teaching knowledge implicated in the learning process of different subjects, proper to the technical-professional realm, are present in the categorizations: didactic knowledge, the ability to explain: gift of teaching, teaching knowledge: strategies, teaching knowledge: planning and evaluation, and teaching knowledge: rigor-format-tidiness.
- d. Generally, in the narratives and the categorizations that were constructed, bad teachers are conspicuously absent; no one remembers them by their names and last names—*and, hence, they are not memorable*—and only appears in one categorization; that of teaching knowledge: rigor-format-tidiness, in some narratives, lax and lacking on rigor teachers are reported as being bad teachers because they did not achieve significant learning in their students.

In the future, it will be necessary to conduct deeper research in terms of what constitutes expert teaching knowledge and in relation to specific didactic abilities; in addition, more extensive research is needed on the topic of how to mediate between rigorous teaching knowledge and that oriented toward comprehension and emphatic abilities on behalf of teachers.

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