ARTÍCULOS DE INVESTIGACIÓN

The interaction systems generated by the teacher's didactic imprinting

Los sistemas de interacción generados por la impronta didáctica del docente

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Summary

The current study aimed to identify and analyze the systems of interaction implemented by teachers in university classes, based on their teaching imprints. It focused on the interactions occurred in scholar natural contexts and the construction of knowledge based on said interaction. A form to observe the different behaviors was designed in order to register the interaction during practical sessions. Six classes and their teachers, from two different epistemic areas (Psychology and Physics), were observed, and the results were analyzed in order to describe the characteristics of the classes and the type of interactions that take place in them. Based on a global qualitative analysis of the classes, three basic types of interaction were detected: collaborative, guided participative and expositive. Beyond the characteristics detected, it is stated that no matter the interaction system, teachers aim to increase the students' knowledge in all cases.

Keywords: Learning, education, interaction, students.

Resumen

El objetivo de este estudio exploratorio y descriptivo fue identificar y analizar los sistemas de interacción que los docentes generan en las clases universitarias a partir de sus improntas didácticas. El énfasis está puesto en las interacciones que se producen en un contexto natural de clases y en la construcción del conocimiento en función de dicha interacción. Con este objetivo se diseñó una planilla de observación de los comportamientos que fue aplicada en clases prácticas para detectar las características de la interacción. Se observaron seis clases, con sus respectivos docentes, de dos epistemes diferentes (Psicología y Física). Las observaciones fueron analizadas con el objetivo de describir las características de las clases y los tipos de interacciones. En base a un análisis global cualitativo de las clases, se detectaron tres tipos básicos de interacción: colaborativa, participativa guiada y expositiva. Los resultados indican que el tipo didáctico impuesto por el docente es variable, lo que habla de estilos que dependen altamente del mismo. Igualmente, más allá de las características detectadas, se sostiene que cualquiera sea el sistema de interacción desarrollado, en todos los casos, los docentes apuntan a lograr un mejor conocimiento por parte de los estudiantes.

Palabras clave: Aprendizaje, enseñanza, interacción, estudiantes.

Introduction

In literature, it is common to find studies regarding teaching styles which classifications vary according to the aim of the research. Terms such as roles, styles, educational configurations or modalities are used. However, most of these works focus on a skill of the teacher, a skill which they use during class (Borgobello, Peralta & Roselli, 2010). In this article, we do not consider the teachers' skills or particular styles, but we aim to descriptively analyze what happens empirically in the systems of interactions found in all the classes observed.

These interactions systems are understood from the perspective which states that the classroom is a social space of participation. According to Rizo García (2007), the teaching-learning process requires the collaboration of the two fundamental actors involved: the teacher and the students. This interaction was studied from different approaches with different units of observation. However, most of the authors understand this interaction as an interpersonal reasoning process mainly characterized by dialogicity aiming for students to learn something (Velasco Castro, 2007).

According to Herrero Márquez (2012), this communicational process established between teacher and students is the key to the effective development of the teaching-learning process. It is an intentional communication specialized on academic knowledge acquisition (Villalta Páucar, Martinic Valencia & Guzmán Droguett, 2011).

However, the teacher-students interaction goes beyond mere communication: it involves a symbolic exchange which is capable of generating a way of socializing that is sustained by two aspects of the students. These aspects are cognition and behavior (González & León, 2009).

Therefore, when a teacher performs expositive or participative activities during class, or alternates between the two types, they initiate different interactive processes in the class-group, and the teaching-learning processes depend on said interactions (Bazán Ramírez, Martínez Monroy &Trejo Urieta, 2009).

In this regard, the analysis proposed in this article represents the confluence of two psychological and educational theories, which provide de referential theoretical framework. These two theories are the collaborative learning and the instruction psychology. The collaborative learning theory recues the value of the intersubjective construction that takes place when two or more subjects embark on an intellectual task which transforms into a common goal, all the people involved being benefitted by the conceptual elaboration built through mutual scaffolding (Beers, Boshuizen, Kirschner & Gijselaers, 2007; Dillenbourg & Traum, 2006; Roselli, 2007).

Psychology of instruction (Genovard & Gotzens, 1990; González Cabanach, Barca Lozano, Escoriza Nieto & González Pineda, 1996; González Calleja, 1996) focuses on the study of the teaching-learning processes of contents on the part of particular subjects (teachers and students) in a given context (classroom), aiming to improve the teaching-learning practices.

According to Coll and Sánchez (2008), what happens in the classroom is a consequence of multiple factors, not only of the processes between teachers and students which originate and take place there, but also of factors and processes beyond the classroom walls, such as institutional problems, study plans, work conditions, among others. Also, the complexity of the classroom's dynamic is added, where different psychosocial phenomena take place at the same time.

This doesn't mean that, when this type of study is carried out, it is necessary to take into account all the factors aforementioned, but quite the contrary: a theoretical-methodological decision must be made, selecting the elements which will be studied and considered. This decision is not separated from the election of the technique that will be used in order to detect said elements.

In this case, as this is an exploratory investigation, it was deemed convenient to analyze the development of natural classes with no a priori criterion of selection and using observation as the best technique.

This instrument is considered ideal to capture the complexity of the classroom's interactive processes and to detect the elements that were defined as fundamental for the research.

This work is focused on the interactive construction of knowledge. This is why classes were analyzed trying to detect *the interaction systems* promoted by teachers. Furthermore, the participants' messages were analyzed according to them being: (1) teacher's questions according to the answers sought, (2) spontaneous participations of the students (not as the result of a question).

According to Camacaro (2008), the teacher's interventions are directly or indirectly oriented towards generating some kind of influence on the students. In this regard, a pattern of interaction in which the teacher exerts an indirect influence in order to increase the students' participation is recognized, thus generating a favorable climate of trust in which they can express their opinions. In order to achieve this, the teacher supports their own speech in what the students say. On the other hand, a direct interaction pattern can be identified, where the teacher's speech predominates, as well as a directive attitude coming from them.

The objective of this study was to identify and to analyze the interaction systems generated by teachers in university classes based on their educational imprinting.

Method

This study is descriptive and exploratory through observation, and its objective is to explore the interactions generated in class based on the teachers' educational styles (Montero & León, 2002).

Participants.

In this study, the participants were six teachers, three psychologists and three physicists, with their respective groups of students, three of psychology and three of physics, who were willing to collaborate in the research according to their interest in the problems of teaching/learning.

Materials.

An ad-hoc observation form was designed, which allowed to describe the characteristics of the class and the teacher-students interaction. The descriptors of the information collected referred to:

- The type of class (expositive, guided participative, collaborative).
- The general characteristics of the class.
- The materials used.
- The work climate.
- The activities performed.
- The pending activities (out of class).
- The classroom's characteristics.
- The specific traits of the interaction (teachers' questions, students' questions or interventions).

Some of the aspects considered in the form were obtained from Flanders (1970).

Procedure.

After asking the teachers for permission to observe some of their classes, the schedule of practical classes in which the observation would take place was agreed with them. Before entering the classroom, each teacher was asked to develop their class as usual in order to guarantee that the class would be as natural as possible, minimizing any kind of intrusion caused by the presence of a researcher. The classes were observed and audio recorded in order to register the verbalizations of the teacher and the students.

Data analysis.

The observations were analyzed with the objective of describing the characteristics of the classes and the types of interactions.

Based on a global analysis of the classes, the following typology was elaborated:

1) *Collaborative*, classes characterized mainly by a high participation of the students in basically self-managed tasks. Generally, the teacher proposes some kind of activity, for example, to perform an exercise between the students inside the didactic development. This type of interaction only takes place if the didactics involves a horizontal task that the students can do on their own, generally in groups. There are confrontation possibilities and, in fact, there is an activity generated by said confrontation.

2) *Guided participative,* characterized for being a class where the fundamental role is played by the teacher, who exposes the subject but includes in this exposition the students' opinions and interventions, asking questions which encourage participation. The teacher permanently takes whatever comes up in the class and structures it by asking inductive questions in order to encourage the cognitive contribution, thus preserving the systematization of knowledge and avoiding the disorder of the contributions. It is mainly characterized by dialogicity, that is to say, the logical connection between the teacher's and the students' interventions, according to the following sequence: the teachers asks a question, the students answer it, a student says something, the teacher evaluates or adds a complement.

3) *Expositive,* characterized by the leading exposition of the teacher, with scarce or no participation from the students at all.

Also, the analysis distinguished between the spontaneous dialogic intervention of the teacher (mainly questions, whether they are answered or not by the students) and the spontaneous dialogic interventions of the students (questions or remarks).

It is important to note that the teacher's questions were registered, divided into those that were answered and not answered by the students, as well as the questions or interventions of the students.

Results

For a better understanding, the results are shown divided by subject and, within each of them, by classes. At the end of each subject, a global analysis of the results is made.

Psychology classes.

Class 1. Subject: Dreams according to psycho-analysis.

Characteristics of the class.

A young female teacher, with little experience in university teaching, was in charge of this class. There were 40 students and the class lasted for an hour and a half. The classroom was big and all the students were comfortably seated in individual chairs, the teacher being on a platform.

At the beginning, the class focused on organizational matters due to the proximity of the mid-term exam. For that reason, the teacher stated all the issues which would be considered in the exam. Then, she started to develop the subject. The materials used were the blackboard, the books and two practical homeworks. One of them consisted in a list of questions the students could use to work on the concepts studied in class, with this activity remaining as a pending homework.

The class ended with the application of the concepts learned in a practical activity that was solved on the blackboard by the teacher herself while the students took notes.

The predominant type of interaction.

This class characterized for being expositive, with high use of the blackboard by the teacher and with only a few questions addressed to the students so they could participate. The activity of the students was reduced to them taking notes of the concepts provided by the teacher.

Along the class, there were only two situations of exchange encouraged by the teacher.

The students, on their own initiative, intervened 14 times in class. Only half of these interventions were requests for the repetition of a certain word or to confirm if what they had heard was right. The other half were conceptual intervention directly related to the subject of the class, such as: "*what are children's dreams about?*", "*what is the dream-work?*", "*Freud states that the psychic accent runs in shifting*".

As it can be observed, the expositive style of the teacher probably led to a scarce participation of the students and, as a consequence, to a null possibility of interaction.

Class 2. Subject: Gregory Bateson and the systemic theory.

Characteristics of the class.

A female teacher with only a few years of university teaching experience was in charge of this class. 23 students were present and it lasted for an hour and a half. The classroom was not very big, it had three long tables that the students had to share and the teacher was standing in front of the class next to the blackboard and also shared the desk with the students. It was their first time in this classroom. Previous classes took place in a classroom with individual seats.

At the beginning of the class, the teacher explained to the students why they had changed classroom and then started working on the main subject. She identified it in the syllabus and developed the concepts following a list of questions she had given them in the previous class. Towards the end, after making a summary of the subject, they talked about the characteristics of the mid-term exam and formed work groups which would approach the following subject of the syllabus during the next class.

During the class, their working materials were the blackboards, the sheets where the main texts were and a list of questions.

The predominant type of interaction.

From the beginning to the end of the class, the teacher intervened 137

times asking questions to the students with the objective of encouraging their participation. That is a much higher amount of times than the previous class. These interventions from the teacher were characterized for aiming to encourage the permanent participation of the students, turning the class into a guided participative one.

Some examples of the dialogues that took place are:

Teacher	: What is a system? Can we build one?
Student A	: It is a unit of interaction with another one.
Student B	: It has a goal.
Teacher	: Does Bateson write a book?
Student A	: Naven.
Teacher	: What does he write? What concept is implied?
Student B	: Shismogenesis.
Student C	: Schismogenesis is the genesis of a schism within a social system.

Also, 46 out of those 137 questions were not answered by the students. Most of this type of questions (16) was registered at the beginning of the class, when the teacher asked the students if they had read the given book, if they had been able to answer the questions given on the list, among others. That is to say, it was about a series of questions which aimed to generate a climate of participation in the classroom.

The other 30 questions were conceptual, but all of them were followed by another questions which sought to reformulate the previous one and to obtain the effective participation of the students.

The interventions made by the students were 18, and only one of them sought to ask the teacher for the clarification of a term that a student had not heard well. The rest of them were purely conceptual interventions. It is important to note that all the answers of the students were individual, that is to say, that the direction of the dialogues was teacher-student.

According to this, it could be stated that the whole class turned into a co-construction situation where the students, together, built the fundamental

concepts of the subject supported by the study guide the teacher had elaborated for them.

Class 3. Subject. Definitions of system.

Characteristics of the class.

As in previous classes, a Young female teacher with few years of teaching experience was in charge of this one. 35 students attended to this practical class, which lasted for an hour and a half. The classroom was big, with individual seats for the students and one desk and a blackboard used by the teacher.

At the beginning, the teacher started on a new subject and begun to develop it. After the first ten minutes, the students started to work in groups in an activity previously given by the teacher. The activity lasted for about 30 minutes, and then the students shared the information. Towards the end of the class, the teacher told the students which texts they would have to read for the following class.

The group activity took place as follows: nine groups of three to five people were formed. The teacher walked by each group explaining the instructions. Two assistant teachers who were present also approached each group asking if they had any doubts. The students had to come up with an example of an integrated system and explain each one of the characteristics and their relationship with the system. When the time for group work was over, the students shared their findings, led by their teacher. Since the groups did not finish the activity, the teacher exposed the last concepts.

The work materials were: the booklet made for the class where all the main texts are found, a book brought by the teacher to read a fragment to the students and a practical activity elaborated by the teacher.

The predominant type of interaction.

This class was characterized for being collaborative, because the teacher not only encouraged participation through questions, but she also made an activity (group work) which motivated the students to participate.

In total, there were 108 questions registered from the teacher, two of which were not followed by an answer. The students intervened (the entire class) on their own initiative in 19 opportunities, all of them being purely conceptual interventions.

An example of the dialogues that took place is shown below:

Teacher   : How is this man going to be considered here?
Students   : As a system.
Teacher   : What does the text basically say? What is a system?
Students   : A set of elements.
Teacher   : But, what are the characteristics of this set of elements?
Students   : They have to be related.

The dynamics of the class was characterized for presenting a teacher-students direction, because most of the answers to the teacher's questions were in group, unlike the aforementioned class, where the direction was teacher-student. Furthermore, during the group work, the prevalent direction was student-student.

Global analysis of the psychology classes.

To sum up, a table showing the main characteristics of the observed classes is presented below (see Table 1).

Table 1.

Summary of the classes observed in psychology.

		Observed Classes		
		Class 1 (40 students)	Class 2 (23 students)	Class 3 (35 students)
	Type of class	Expositive	Guided participative	Collaborative
Type of spontaneous dialogic interventions	Spontaneous interventions (questions or remarks) from the students	14	18	19
	Spotaneous interventiosn (questions) from the teachers	7 (questions), all of them answered	137 questions, 46 (33.60%) unanswered; 16 (34%) of formal aspects at the beginning of the class and 30 (66%) which were followed by answered questions)	108 questions, 2 (1.8%) unanswered (both were followed by answered questions)

It is worth noting that all classes were practical works. According to the logic of the Argentinian University, or of what is usually expected or is naturalized, theoretical classes, which are mainly given by a Professor, are expositive, while practical classes are expected to have a predominant students' activity, that is to say, they are collaborative. In the case of the observed classes, they were all practical classes, nevertheless, they also worked as theoretical classes, especially Class 1.

All subjects approached by the teachers could involve a debate, because they were subjects suitable for discussion, for coming up with examples and for posing different points of view.

One important element that should be noted is that every classroom had a particular structure, and it could be said that this had an influence on the class' dynamics, especially on the case of Class 2, where the classroom had three shared tables with about eight students each, the teacher sharing seats with them, unlike the classroom where Class 1 took place, in which the

students had individual seats and the teacher stood on a platform which gave her a leading position.

The classroom of Class 3 also had individual seats and the teacher had a desk in front, but the possibility of moving the seats allowed the students to place themselves in circles. This would not imply that the structure of the classroom determines the type of interaction that should take place, but one could say that, in these cases, it is a relevant element.

Another significant fact to highlight from the observations is the different types of unanswered questions found. Two types could be detected: those which were unanswered but were followed by other questions which sought answers and those unanswered because the teacher did not wait for the answers nor did she reformulate the question in order to obtain an answer. This type of analysis allowed to enrich the study of observations, making it possible to identify the dialogues between teacher-students which aimed to establish a real socio-cognitive interaction.

Finally, it is important to state that, beyond the specific situations of every class, it could be said that classes themselves consist of interventions leading to broaden the field of action or representation and have as a consequence that each of the participants leads the other to precise or modify their representation of the problem. It could be said that the teacher is permanently in the position of intervening, broadening the representation of the situation for the students, looking for them to modify or precise their previous knowledge on the corresponding matter. This could also happen when the students make groups to solve the problems and mutually explain the solutions.

Physics classes.
Class 1. Subject: Force.
Characteristics of the class.

There were 14 students present in this class, which is half the total. The other half of the students were working in the lab. The teacher in charge of the class was a young female with experience in teaching in a university.

The classroom was big, which allowed the students to be comfortable. It had shared tables looking to the front of the classroom, where there was a platform on which the teacher's desk was and, behind it, the blackboard. Once again, as it was the case for Class 1 of psychology, the disposition of the classroom led to think than it was the teacher who would have the leading role in the class. However, shared tables allowed the students to work in groups, thus giving them an active role in the situation.

The class started with a suggestion of the teacher, who told the students thy had to attend the consultations, and then continued presenting the subject, identifying it in the syllabus. The rest of the class focused on the students doing exercises. During the class, the teacher used several tools to exemplify her explanations, such as the blackboard, strings, boxes and fibers, as well as the booklet made for the lecture. By the end of the class, the exercises left pending were sent as homework.

The predominant type of interaction.

This class was characterized for being predominantly collaborative and for presenting the following structure: the teacher performed a dialogued exposition with the students on the subject, then the students did the exercises (which took most of the class), individually or in groups and, by the end of the activity, students solved the exercises on the blackboard, which allowed the whole class to participate.

During the class (during the teacher's exposition and while the students did the exercises), 186 questions from the teacher were registered. 72 of these questions were not answered by the students, mostly because the teacher did not wait for the answers, but kept developing her speech. The interventions initiated by the students were scarce: only 18, six of which were questions and 12 conceptual contributions.

The dialogue presented below is an example of the interactions that took place:

Teacher	: So, which forces are present?
Student A	: Weight.
Teacher	: What else?
Student B	: Friction and the normal one.
Teacher	: The normal one?
Student C	: And it is perpendicular.
Teacher	: And what is its direction?
Students	: It goes upwards.
Teacher	: And what other force?
Student D	: Friction.

As it can be seen, the dynamics of the class was fundamentally characterized for having a teacher-student direction.

Class 2. Subject: Force.

Characteristics of the class.

In this class, which lasted for an hour and forty minutes, 28 students were present. In this case, the teacher in charge of the practice also had experience teaching in a university. She was also part of several research projects related to university educational practice, especially regarding teaching physics.

The classroom was big and had shared tables where the students sat, so there were groups of five or six people. The teacher's desk was at the front of the classroom but, unlike what happened during the previous class, it was not on a platform.

When students arrived in the classroom, they started solving problems on their booklets individually or in groups, because they knew beforehand what was the subject of the class. As they solved the problems, for about ten minutes, the teacher answered questions while they waited for the rest of the students to arrive. When they were all there, the teacher started the class, which general structure was: guided participation on the problem that was to be solved, attentive following from the students, and then individually doing the exercise.

The main tools used by the teacher were the blackboard and the booklet with exercises elaborated for the lecture. Towards the end, they organized the subjects of the classes to come and the date of the mid-term.

The predominant type of interaction.

This class was characterized for being predominantly guided participative, that is to say, with interventions from the teacher which aimed to establish a dialogue with the students seeking for their participation, but following the teacher's speech as the axis of the class. The teacher asked 143 questions, 87 of which were not answered by the students. The unanswered questions were followed by other questions which did obtain an answer, because they were reformulations of the previous question and sought for the students' participation.

Students intervened on their own initiative 30 times, 8 of which were questions, and the other 22 were conceptual interventions.

Class 3.

Characteristics of the class.

There were 21 students attending this class, distributed in a classroom with shared tables, just like in the previous classes. The teacher, who was a young female with little experience in teaching, was sitting in a desk facing the students, representing a traditional university class.

At the beginning, the subjects of the dialogues aimed to organize elements such as the days they had lab practice or theoretical classes, the importance of attending consultation classes and, besides, the teacher said which were the exercises they would do during the following classes. Then, the development of the whole class was a guided participation. The teacher read a problem, explained it and solved it on the blackboard as she asked the students how to solve it.

During the very few opportunities where she asked the students to solve the problems on their own, she only gave them a few minutes and

quickly, when asked a question, she would stand up and started explaining things on the blackboard again.

For her class, she used the same tools as the teacher from Class 2, that is to say, the blackboard and the exercise booklet. By the end of the class there were several exercises left as homework.

The predominant type of interaction.

This class, as the previous one, could also be considered as a guided participative class. The teacher asked the students 194 questions, 89 of which were not answered but, in this case, unlike in Class 2, they were not followed by questions reformulating previous ones and sought for an answer, but they were questions aiming to organize her own speech.

Another thing worth mentioning is that, of the questions that did get an answer from the students, 26 were of evaluation and comprehension, such as "*do we agree?*" or "*are we clear*?" . The students intervened on their own initiative 25 times, with 17 conceptual interventions and 8 questions referring to the exercises they were doing.

Global analysis of the physics class.

The fundamental characteristics of the observed classes are shown in the table below (see Table 2).

Table 2.

Summary of the observed Physics clases.

		Observed Classes		
		Class 1 (14 students)	Class 2 (28 students)	Class 3 (21 students)
	Type of class	Colaborativa	Participación guiada	Participación guiada
Type of spontaneous dialogic interventions	Spontaneous interventions (questions or remarks) of the students	18	30	25
	Spontaneous interventions (questions) of the teachers	169 questions, 72 (42.60%) unanswered and 97 (57.40%) answered	143 questions; 87 (60.80%) unanswered; 41 (47.10%) of which were followed by answered questions)	194 questions; 26 of which (13.40%) were of the "do we agree?", "¿are we clear?" type. 89 (45.80) of the questions were unanswered

As in psychology, the classes observed were also practical Works, mainly based on solving exercises. The general structure of the lecture implies a theoretical class, where the Teacher develops the theory which will later be put into practice in practical exercises and in the lab.

Regarding the classroom structure, all three of them were similar. Putting the students in a situation where they have to share tables could perhaps lead to the formation of spontaneous groups every time the teachers asked them to solve a problem.

It is worth to mention that, during the development of physics classes, the teachers have time limitations to do their classes. Each class' subjects and the dates that must be met are established beforehand and every teacher, by the end of the school year, must follow the established chronogram. When a class is missed for any motive, such as strikes, holidays or others, the teachers have to add, for instance, two other subjects to their classes, which causes a decrease in the time destined to a specific subject and, as a consequence, in the possibility of using techniques which encourage participation, discussion or evaluation from the students, which are left on a secondary level.

In this case, just as in psychology, when the used educational strategy aimed to encourage a collaborative type of teaching, the appearance of interaction situations among the students was sought for. That is to say, when the planning of the teaching/learning process encourages the plurality of perspectives and their exposition, a proper collaborative interaction is possible, as it was the case for Class 1.

Discussion

We have made a description of the manifest (formal) aspect of the teacher-students interaction during natural classes. For future research, it is pending to do a discursive analysis of the cognitive construction itself, specifically of the socio-cognitive interactions produced based on the academic content that is taught.

The classes observed were practical classes, where the elements usually expected are the predominance of the participation and the conjoint construction of knowledge. In spite of this, it was determined that the didactic type imposed by the teacher may vary, which regards imprinting styles that highly depend on the teacher.

In psychology classes, two types of interaction could be observed: collaborative, with high self-managed participation of the students; guided participative, with an interactive dialogue as the central axis between teacher and student; and expositive, with a leading, almost exclusive role of the teacher.

On the other hand, in the case of physics, "guided participation" was predominant, that is to say, the classes where the leading role was played by the teacher, who exposes the subject, but who includes in their speech the students interventions and encourages them to permanently participate. The element which stands out in this type of class is the dialogue between the teacher and the students.

This way, in can be observed how the classic distinctions between master classes a non-master classes are diluted, thus forming a relative characterization.

What was previously stated coincides with Aiello (2007), who claims that, even though the teacher's explanations are fundamental for education, the expositive classes where explanations take place usually live little room for the students to participate and express themselves, which does not allow the teachers to know the level of comprehension of the students.

Another thing worth mentioning is the teachers' experience. We could think that the experience is directly related to the possibility of implementing a teaching modality which tends to collaboration and, as a consequence, to the students' participation. However, as this study shows, the higher or lower level of experience (we speak of relatively young teachers) does not encourage a specific relational type. For instance in the case of psychology, all three teachers had little experience in university teaching, yet all classes were different, each of them being either collaborative, expositive or guided participative. It is also important to highlight that, beyond the specificities of each situation, we could think that every interaction system promoted by teachers aims to achieving the best possible learning, which would not depend all that much on the didactic interactional type, but on the quality of the teaching.

Finally, just like Sánchez, García, Rosales, de Sixte and Castellano (2008), it is considered that the analysis of what happens in the classroom is made with the ultimate goal of helping improve educational practices, because it can help see the distance between what is being done and what is intended to be done, allowing to detect the changes that are more feasible for improving teaching.

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