

Article

The Reflective Practicum in the Process of Becoming a Teacher: The Tutor's Discursive Support

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Abstract: Interest in reflective practices, within the broader framework of teachers' professional knowledge, has been ongoing in educational research for the past few decades. The idea from which reflection itself stems is that of teachers' agency in their own professional development. The initial positivist approach viewed the relationships between teachers' theoretical knowledge and educational practice in terms of hierarchical reductionism. We analyze the relationships between different types of knowledge from a historical-cultural perspective, which requires locating them in the context of the cultural activities. Our aim is to analyze the discursive interactions, which take place during collaborative seminars, within a reflective practicum, and to identify how the university tutors support and foster reflection on practice. We use a multiple case design in which each case is a classroom unit made up of a tutor and his or her students. An analysis of the tutors' discourse revealed an ongoing promotion of students' active engagement through highly structured classroom participation, a strong focus on interpreting students' personal experiences during teaching practice and significant interventions aimed at establishing links with academic knowledge. Results invite us to rethink the ways in which we can contribute to processes of reflection among trainee teachers.

Keywords: teacher training; reflective practicum; tutor's support; teachers' agency; discursive interactions; cultural-historical perspective; case study

1. Reflection as a Teacher-Training Tool

Interest in reflective practices, within the broader framework of teachers' professional knowledge, has been ongoing in educational research for the past few decades [1–3]. Indeed, reflection has always been a key element in educational ideas and principles, and was discussed in detail during the previous century by such influential thinkers as Dewey [4], Freire [5], and Habermas [6]. As some authors have already stated [7], the book entitled "The reflective practitioner", published by Schön in 1983 [8], marked a milestone in the reemergence of this focus of interest within the field of teacher training. It is important to highlight that no commonly-accepted definition of what those in the educational field understand by the term "reflective practitioner" or "reflective teacher" exists; nor is there any consensus regarding the different types of reflection which may be engaged in, in accordance with context and the individuals involved. Schön [8–10] referred to the appearance of surprise. Reflection in action occurs as an immediate situation, linked to the experiences of the moment in a teaching situation. It arises from surprise in the face of the unexpected and the need to resolve uncertainty. Another type of reflection is also possible, namely that which occurs after the event, in the context of a different activity, in which the teacher analyzes their own practice and processes of reflection in that practice. Jaworsky [11] points out the strong link between reflection and action, in which reflection is not only a process that happens after action, but as a distancing process that can cause change

and future action. Understood in this way, the act of reflecting is the activity that allows gathering experience and learning from that experience. Nolder and Johnson [12], in fact, identify reflection as a tool in monitoring professional change. In such activity, both practical and academic knowledge would be called upon to analyze, identify, interpret, criticize, and reconstruct the past intervention.

Not all voices converge in the same descriptions. Several authors have extensively discussed and criticized the conceptual framework by Schön and others under the umbrella of reflective practitioner because of its lack of definition or for not taking into account the context of reflection [13]. The discussion on the components of reflection has led authors as Mezirow, Brookfield, and Fook to propose a revision of its nature beyond the mere thinking about experiences. From the perspective of critical reflection, it is argued that reflection may tend to remain at the level of relatively undisruptive changes in superficial thinking [14]. Instead, a deconstruction of our own beliefs and values is necessary in order to be conscious of the ideological assumptions behind professional actions, and to develop new interpretations of past and future practices for social change [15–17]. From a critical perspective, the importance of understanding reflection as action-oriented and placing it in a context of social, collaborative and ideological construction is also highlighted [18].

Proposals that advocate the advantages of reflection as a teacher-training tool often refer to a series of common elements, such as the fact that knowledge derived from academic theories or others' practice is insufficient to ensure effective and autonomous professional practice. Other recurring issues include the need to link theoretical principles to practical resources, the improvement of teaching practice thanks to a critical analysis of one's own practice and the development of reflection strategies that help students learn from their own teaching experience [19,20]. The idea from which reflection itself stems is that of teachers' agency in their own professional development. Schön's work and the plethora of papers published on the theme of the reflective practitioner [20–22] imply not only a change in the nature of the relationship between theoretical and practical knowledge, but also, in our opinion, a fundamental change in our ideas about who actually generates knowledge that is valid and useful in a classroom setting. This in turn implies a change in the way we see the relationship between the academic and practical scenarios through which we build professional knowledge.

Another point to remember, which is closely linked to that outlined above, is that the study of processes of reflection has developed in parallel with the characterization of the nature of the knowledge that practitioners use in their teaching practice. The initial positivist approach viewed the relationships that exist between teachers' theoretical knowledge and educational practice in terms of hierarchical reductionism. In this explanatory context, theories are compendiums of generally applicable knowledge that serve to characterize educational practice which, having a lower hierarchical status, is reduced to a mere application of theoretical principles. However, as argued by Clará and Mauri [1], the facts challenge not only these principles but also the very nature of this hierarchical conception, since there is an evident discontinuity between the theoretical knowledge shared by the academic community and real educational practice. The rejection of this positivist rationality has therefore prompted authors to rethink how they view the relationships which exist between theory and practice in the educational field.

It is in this discourse that teachers' processes of reflection come to the fore as a useful and beneficial tool for teacher training, and it is on this idea that our study is based. In this paper, we understand the relationships that exist between different types of knowledge from a cultural-historical perspective [23]. This requires locating the relationship between theoretical and practical knowledge in the context of the cultural activities of which they form part. Both types of knowledge can be thought of as specific constructions of cultural contexts characterized by their participants, activity structures, means of communication, motives and goals, etc., all of which are different.

We therefore propose a framework for conceiving the relationship between different types of knowledge in which it makes no sense to talk about superior and inferior hierarchical levels. Rather, in our model, each semiotic option is constructed in accordance with the "here and now", the motives underlying the activities in which the participants are involved and their demands and

requirements [24–26]. Scientific or academic knowledge used in academic contexts are originated from the structured and organized activity that takes place in formal education. It involves a process of generalization and inclusion of particular elements within a system. This kind of knowledge is different from that which is constructed in other activities, as is the case of what takes place in professional practice. These different ways of knowing and constructing reality have their own functions and criteria of correction, but are complementary and, in any case, one is reducible to each other [24,27–29]. In relation to the topic that we are discussing here, both the academic knowledge in teacher training, as well as the students' personal experience acquired in the practicum, are sources of knowledge equally valid and necessary for the professional development of teachers.

According to our approach, there is a functional relationship between the activity scenarios in which individual development takes place, and the way in which the demands present in said scenarios are met; different activities imply different knowledge and resources. The activities that take place in a teacher training classroom at university, or those that occur during the study of the theoretical principles of different key scientific disciplines within the field of education, are not the same as those that take place in an actual classroom, in which the teacher him or herself must actually teach a group of students. These are different practical and knowledge-building scenarios, with different agents, motives, and interests, etc., and, as such, each has a unique set of interactions and a unique discourse.

Thus, according to our perspective, teacher training should include educational interventions aimed at generating contexts that combine both theoretical models and an analysis of real practice. The nature of the situation and the circumstances under which knowledge is built influence its acquisition and the probability of it being used by the student in other novel situations [30,31]. As argued above, from a sociocultural perspective, context forms part of the learning or knowledge acquisition situation. Thus, the transfer of some situations to others (from a university classroom to a primary school classroom, for instance) is co-constructed by the situation and circumstances, the way in which subjects interpret these circumstances, their ability to extract abstract meaning from situation-specific knowledge (within a community of practice), their perception of when it is appropriate to use that knowledge in other circumstances, and the construction and negotiation of meaning that occurs during dialog-based interactions. The training of new teachers and their professional practice could, therefore, be thought of as their participation in communities of practice [32] which are either proximal or in which the activities carried out have shared characteristics. The learning that takes place through these activities and classroom practice sessions involves the development of an identity within this community, as well as the development of a discourse and a series of methods for defining problems, all of which helps trainee teachers become active members of their community of practice [33]. The educational discourse is the element that not only enables the construction of knowledge in the classroom, but also the construction of the classroom reality itself. Rather than show a mere static representation of reality, it works by constituting facts and carrying out actions, all aimed at generating relationships and exchanges which occur in a specific situation of social interaction [34–36]. It is in this complex framework of discussion that our paper is located, since it is based on recent research into the need to support processes of reflection among trainee teachers.

These scenarios for reflecting on and analyzing ones' practice can be materialized in the Practicum. We see the Practicum as an ideal context for processes of reflection and the perfect opportunity for students to come face to face with, reflect on, and attempt to interpret their own initial classroom experiences as trainee teachers. The practicum is an opportunity to test joint processes of reflection on action, since it enables students to experience real teaching practice situations in schools, and then to reflect on them with their fellow trainees and tutor [37]. It is not, however, the same classroom action context as that in which a teacher teaches a class, with his or her specific motives, interests, and demands. It is not our aim here to simplify the description, or to substitute the hierarchy of scientific knowledge over practical knowledge for any other kind of equally academic hierarchy. We are not referring to practical knowledge itself or to knowledge in action [8]. Nevertheless, a practicum in which students are given the chance to reflect on and try to interpret their classroom experiences may be a means of

helping trainee teachers to analyze problems and understand the reasons underlying their actions in the classroom, encouraging them to talk to the teachers at the placement school about their decisions and measures and to discuss the validity of certain theoretical concepts for understanding or managing specific situations. In short, it is an opportunity to work on values and aims, to develop new strategies for action, test out these actions in practice and experience, and reflect upon the consequences [38]. A practicum of this kind would necessarily require students to view collaborative reflection activities as a positive means of questioning their teaching practice and enabling them to attain a certain level of reflection and knowledge, which will help them identify different possibilities for action [7,39,40]. In short, we are talking about a type of learning situated in cultural practices that are similar to and significant for subsequent professional practice. Our specific aim, therefore, is to analyze the discursive interactions that take place during these classroom sessions (collaborative seminars) within a reflective practicum, and to identify how the university tutors support and foster reflection on practice among their students. The conclusions shed light on how discursive interactions evolve towards interpretative elements and allow us to rethink the status afforded to reflection in practical professional experience.

2. Methodological Strategy and Educational Intervention

2.1. Participants

The research project entitled Knowledge construction aids in teaching practicums: joint reflection for improving the relationship between theory and practice is an exploratory study with a multiple case design [41], in which each case is a classroom unit made up of a tutor and his or her students. Eight cases from three different universities were selected according to theoretical criteria, with the aim of ensuring adequate analytical generalization. All cases participated in activities carried out within the practicum of the undergraduate Teacher Training Course.

Specifically, this paper analyses Case F and Case H. The sample group comprised two classroom units from the Primary Education Teacher Training degree, made up of one tutor and 15 students, and one tutor and nine students, respectively. Each case encompassed five sessions, each lasting approximately ninety minutes, in which a learning activity was carried out with the aim of encouraging students to reflect on their practice with the aid of their tutor. In each session, the analysis focused on one or more situations linked to students' teaching practice in the classroom (this is explained in more detail below, in the procedures section), and tutor-student interactions were recorded *in vivo*.

To select the tutors, and therefore the case studies, an initial in-depth interview was held with potential candidates in order to explore their teaching and didactic strategies, as well as to determine the importance they attach to reflection within said strategies. Candidates were also asked about their interest and willingness to participate in a project of these characteristics. We believe that the general nature of the project justifies the selection of tutors considered promoters of good educational practices, and with extensive teaching experience within the practicum activity. In this sense, the sample selection process corresponds to what Goetz and LeCompte [42] call criterion-based selection and Patton [43] calls purposeful sampling. In other words, we selected those cases that we believed would provide the most abundant information on the subject under study.

After selecting the cases, the study protocol was initiated, with the corresponding institutional permits being obtained, along with tutors and students' informed and voluntary consent to participate in the research project and data gathering procedure.

2.2. Study and Intervention Tools

A number of different situations were used during the joint reflection process. Students were asked to provide an individual written description of a situation they had experienced in their Practicums, which had particularly caught their attention. They were asked to describe the situation in as much literal detail as possible, and to try to avoid interpretations. To help them in this task, students were given a description of a first class designed by the research team to serve as an example. Students

analyzed this example together in the classroom, with their tutor. Table 1 is an overview of the issue dealt with in each situation. It should be noted that Case F analyzes twice as many situations as Case H.

Table 1. Situations discussed by the group.

CASE F	CASE H
C1. Controversy over a decision made by the management team to make three students retake a year.	C1. Controversy over a decision made by the management team to make three students retake a year.
C2. Refusal by the parents of a Down Syndrome student to let him/her receive extra support from the school services.	C2. Difference of opinion between the classroom tutor and trainee teacher about working with an ADHD student.
C3. Measures taken by a classroom tutor in relation to a student who lies about being threatened by two other classmates.	C3. Difference of opinion between the classroom tutor and a mother about a student's inappropriate behavior in class.
C4. Xenophobic behavior of a 5th grade primary student and the measures taken by the school in response.	C4. Conflict resolution by a classroom tutor in response to a fight between three students, one of whom has ADHD.
C5. Learning difficulties experienced by a girl in 1st grade of primary, with a de-structured family (parents separated).	C5. A classroom tutor decides to stop using the number-based algorithm method to teach mathematics, because of cognitive dissonance.
C6. A 2nd grade primary student needs remedial support outside the classroom, which is not provided owing to family breakdown.	
C7. Controversial situation arising between a classroom tutor and a father over a 4th grade primary student with behavioral and academic problems.	
C8. Collaborative work agreement between the classroom tutor and parents in relation to a violent and aggressive 2nd grade primary student.	
C9. 1st grade primary student with special educational needs who is not provided with adequate attention due to a lack of resources.	
C10. 5th grade primary student with low academic performance, who is in a remedial support and classroom integration program.	

2.3. Category System

The data gathered in relation to the two cases studied were processed and organized using a category system designed specifically for this research project by the working team from the three participating universities. The unit of analysis used to code and demarcate the discursive extracts was individual interventions or turns, i.e., what was said by any participant when they had the floor.

A category system was used to identify the different Interactivity Segments (SI), i.e., the different ways in which the activity was organized in the joint reflection sessions. This method enabled the research team to describe the classroom sessions in terms of shared activity segments, each with a specific function and profile. The differentiation criterion in this case was the structure of the participation, with changes in segments corresponding to changes in the subject matter being discussed and the way in which participants spoke, along with the intention, aim and meaning of the conversation. To do this, the system developed by Coll et al. [44], and Coll, Onrubia, and Mauri [45] was followed, although said system was discussed and reformulated by the research team in order to adapt it to the aims of the present study. Thus, the initial category system comprised 27 different interactivity segments [3,46], of which 22 were coded in our study (Table 2). The interactive segments were then grouped into four dimensions in accordance with the orientation of each intervention: *Introduction of the activity*, *Exploration of the elements of the situation*, *Interpretation of the situation*, and *Closure*.

Table 2. Interactivity segments.

Introduction of the Activity
SIA. Introduction of the activity
SRC. Presentation/reminder of the activity instructions
SIC. Introduction of the activity and presentation of the activity instructions
SCS. Contextualization of the situation
SCS_T. Contextualization of the situation by the tutor
SLS. Interpretation of the situation
SLS_T. Interpretation of the situation by the tutor
SCE. Clarification of elements of the situation
SCE_T. Clarification of the situation by the tutor
EXPLORATION
SEC. Joint exploration of the situation
SEG Exploration of the situation guided by the tutor
SDP. Pedagogical discussion
SEE. Exploration of an element of the situation
SPP. Responses to the tutor's questions
SFE. Focusing
INTERPRETATION
SIS. Tutor's interpretation of the situation
SID. Tutor's interpretation with debate
SIP. Tutor's interpretation supported by questions
SUC. Use of academic knowledge
CLOSURE
SS. Summing up
SC. Closure of the session

A coding manual for the category system was developed, which included the different codes, their definitions, the general operational criteria common to all and individual specifications for application.

The reliability of the category system was determined by calculating the Cohen's kappa coefficient for inter-observer agreement, with optimum values of between 0.85 and 0.87 being obtained. For this purpose, 30% of the data were coded in parallel sessions by two observers, and any discrepancies were resolved through the intervention of a third observer. After obtaining satisfactory reliability values for each category, the entire system was applied to 100% of the data.

As regards the development of the category system, members of the research team, who read and re-read the transcription several times, verified each category. This mechanism gave rise to an iterative process between the generated categories and their re-analysis, resulting in a network of categories being established through saturation [47]. In this sense, the group analysis sessions held to ensure agreement can be understood as a means of ensuring the reliability of the qualitative procedures.

2.4. Study Phases

The study was divided into several different phases:

Phase I: Development by the research team of tutor guidelines regarding the instructions to be given to students, and the organization and sequencing of the sessions (S) [2,3,46].

Phase II: The aim of the research project and the procedure to be followed were discussed with tutors. Tutors undertook to abide by a series of action principles designed to foster reflection among their students. The result was an innovative activity that was included in the practicum itself.

Phase III: In general, terms, the innovative activity aimed to help students link their descriptions and interpretations of their classroom experience with their academic knowledge, through a process of joint reflection involving both fellow trainee teachers and the tutor [2]. More specifically, in each session, discussions were held between students and the tutor, beginning with an interpretation of the written situation (s) presented by a student. In each session, one or more students were called upon to present their interpretations, meaning that one or more analysis situations could be explored in each session. Next, the debate was opened up to the entire group, so that students could interact, debate

and reflect jointly upon the situation presented. The tutor's role was to guide the conversation, based on a set of action principles previously agreed upon with the research team [2]. All 10 sessions (five for Case F and five for Case H) in which the activity was carried out were recorded (video and audio). The content of this phase is what is analyzed in this paper.

Phase IV: Once the sessions had been completed, students were asked to answer a questionnaire, and individual interviews were scheduled with each tutor in order to explore their views regarding the innovative experience. The data from this last phase are not presented in this paper.

2.5. Analyzing Teaching Practice Through Interactivity Segments

The ATLAS.ti V.7 software program for qualitative data analysis (Scientific Software Development, Technische Universität Berlin, Berlin, Germany) was used to systematize the data gathered from the classroom discussions. This software package facilitates the analysis of complex phenomena in unstructured data sets. Its use enabled us to locate and code both *in vivo* elements and those created *a priori*, assess their importance and weight, establish relationships and generate families [48]. The category system was created and applied in order to identify and systematize the interactivity segments.

3. Results and Discussion

This section presents the analysis of the way in which the two tutors constructed and organized the joint activity with their students when asked to foster reflection on their classroom experiences within the practicum. We focus here on Cases F and H. With the aim of identifying possible evolutions in the distribution and relevance of the different interactivity segments, as well as any regularities or patterns in their relationship with each other, the information obtained has been organized according to the following analysis factors:

- The presence or absence of interactivity segments in each individual session and in the series of sessions and situations.
- The position of the session and situation within the intervention, and the sequence in which the different interactivity segments appear.
- The time spent by participants on each interactivity segment.

3.1. Analysis of Case F

The data corresponding to the presence of interactivity segments in each session (S) and situation (s) are provided on the interactivity map, which is a graphic representation of the duration and distribution of the different segments within the different sessions and situations, providing a global overview of the joint activity, its organization and evolution, thus enabling an initial interpretation [44,45]. Tables A1 and A2 in Appendix A present the data corresponding to each segment's duration, frequency of appearance and percentage of each situation and session analyzed. In Case F, over the course of the five sessions the tutor and students analyzed 10 specific educational situations.

3.1.1. Patterns Regarding the Introduction of the Situation

A study of the different analysis factors reveals a clear evolution of the presence of the interactivity segment *Introduction of the activity and presentation of the activity instructions* (SIC) throughout the course of the sessions. This segment is only present in the three first sessions. During the fourth and fifth sessions, the activity is introduced through the interactivity segment *Introduction of the activity* (SIA), without students being reminded of the instructions. Students are explicitly reminded of the instructions on three occasions during the first session, twice at the beginning (an SIC followed by an SRC—*Presentation and reminder of the activity instructions*) and again almost at the end (a new SRC). The SIC segment appears on two occasions during the second session, the second time when there is a change of situation (i.e., the specific case being analyzed). Finally, it appears again twice during the

third session, although here both appearances are located at the start of the first situation, and the tutor does not remind students of the instructions once again during the change of situation, nor indeed in any of the subsequent sessions (Table A1).

The presence of other segments related to the introduction of the specific situations being analyzed, such as the segment *Clarification of elements of the situation* by either the tutor (SCE_T) or the students (SCE), is scarce, particularly if we consider the percentage of time spent on such segments throughout all five sessions (1.16% and 0.87%, respectively). The same can be said of the segment *Contextualization of the situation* (SCS), which only corresponds to 0.64% of the total time of all five sessions together.

3.1.2. Patterns Regarding the Exploration and Interpretation of the Situation

In relation to the parts of the conversation which fall into the SI *Interpretation of the situation by the tutor* (SLS) (i.e., that which occurs during the interpretation of the situation being analyzed), two SI patterns or structures can be identified. The first consists of a time sequence comprising *Introduction of the activity and presentation of the activity instructions* (SIC)/*Introduction of the activity* with no activity instructions (SIA) plus *Interpretation of the situation* (SLS) plus *Exploration of the situation guided by the tutor* (SEG). This SIC/SIA+SLS+SEG pattern mainly occurs during the first and second sessions. The characteristic segment that follows the interpretation of the situation is *Exploration of the situation guided by the tutor* (SEG). This is a very important structure for the development of the sessions, since the SEG is the second-most common SI as regards total time duration, accounting for 17.96% of the overall discussion time for all sessions in Case F (S1s1: 20.34%; S2s2: 69.39%; S2s3: 51.42%; S2s4: 50.72%; S3s6: 11.01%; S4s7: 24.80%) (Table A2).

In the first session, this segment meant that the exploration of the different elements of the situation was carried out gradually and was controlled by the tutor through questions targeted at one or various students. During this process, the tutor asked about partial aspects linked to the situation and organized the debate by focusing on specific, successive elements. In these cases, students participated by responding to the questions asked, offering interpretations or solutions, asking questions in turn, stating their agreement or disagreement with the comments and observations made by their fellow students and assessing the different elements of the situation described.

During the second session, the *Introduction of the activity and presentation of the activity instructions* (SIC) segment and the *Interpretation of the (first) situation* (on this occasion by a single student) (SLS) were followed by two brief and consecutive interventions within the *Contextualization of the situation* (SCS) and *Clarification of elements of the situation* (SCE) segments, before moving on to a long SEG. This SIC/SIA+SLS+SEG pattern emerged again in the second and third situations analyzed during this second session. In addition, in S2s4, the pattern SIC + SLS + SEG clearly emerged once again. In S2s3, the pattern is somewhat more complex, although it is still possible to identify the basic relationship which exists between the *Introduction of the activity* (SIC/SIA), the *Interpretation of the situation* (SLS) and an *Exploration of its elements*, guided by questions asked by the tutor (SEG). In this case, however, we find up to three SEGs, which together account for 51.42% of the time spent on this situation. S2s3 is more complex because the three SEGs are separated by another 3 SIs: *Exploration of an element of the situation* (SEE), *Use of academic knowledge* (SUC) and *Responses to the tutor's questions* (SPP). We refer to these SIs later on, when we analyze their specific profile.

The SIC/SIA+SLS+SEG pattern also occurs in the third session, but takes up a much smaller percentage of the time dedicated to the specific situation. Moreover, it is found in only the second of the two situations analyzed (S3s6).

The second basic pattern regarding what occurs in the classroom debate once the situation has been interpreted is defined by the presence of the SI *Tutor's interpretation of the situation supported by questions* (SIP). This is the moment in the interaction when the tutor asks the student who has written the descriptive text of the situation a series of questions. Based on the answers to questions focused on elements that are not known to either the tutor or the other students in the group, but which require clarification, the tutor engages in partial interpretations or assessments of the situation, and offers partial

solutions to the problem posed. It is mainly the student who is the one who describes the situation and responds and participates in this exchange, although other students may also contribute to it. It is an SI in which further information is obtained regarding the case being analyzed, information that the tutor considers relevant and which she incorporates into the conversation with specific, targeted questions. In this way, new information is incorporated into the discourse, along with very partial interpretations by the tutor and partial solutions linked to the various aspects discussed. Sometimes a series of related solutions may be offered which, while not constituting a global framework, nevertheless respond to various specific elements.

The SIP segment is very important as regards the percentage of time dedicated to it. Indeed, it is the largest segment as regards time percentage, since it accounts for 29.81% of the total time of all five sessions in Case F. Although it appears three times in S1 (Table A1), the duration in all cases is very brief (9.21% of the whole session period). The segment only becomes more relevant from S3 onwards, when it becomes the most important segment (from a time perspective) for the remainder of the activity, accounting for 36.64% in S3s5, 63.16% in S4s7, 52.69% in S4s8, 66.76% in S5s9 and 42.71% in S5s10 (Table A2). From the third session onwards, the SIC/SIA+SLS+SEG pattern is replaced by the SIA+SLS+SIP pattern, which is repeated on 5 occasions (Table A1). On one of these occasions, this pattern is extended to include the SEG segment, adopting the SIA+SLS+SIP+SEG format (S4s7). In S3s5, the SIA+SLS+SIP pattern accounts for 46.77% of the time dedicated to the situation; in S4s8, this figure is 62.85%; in S5s9, it is 83.80%, and in S5s10, it is 54.86%. The extended SIA+SLS+SIP+SEG pattern accounts for 100% of the time dedicated to S4s7.

The results reveal that, in all cases, after introducing the activity (and, at the beginning of S3 only, reminding students of the instructions) and interpreting the situation, the tutor controls large periods of the discussion by asking questions aimed at either the student who provided the written description of the situation (an interaction which enables the tutor, as described above, to offer some partial interpretations and solutions) or at the group in general. These questions focus on specific, consecutive aspects of the situation, and are produced to build an accumulative interpretation.

Due to the predominance of the SEG segment, in which the different elements of the situation are explored in a guided manner by the tutor's questions, with a strong input from that figure, other segments that also explore the elements of the situation but more through dialog between the students themselves, appear less frequently in the discourse. Much the same occurs with the segment *Joint exploration of the situation* by students (SEC), and the segment *Exploration of an element of the situation* (SEE) identified by the tutor, but again focused on student participation.

Indeed, the interactivity segment *Joint exploration of the situation* (SEC), in which the tutor intervenes by encouraging students to contribute to the conversation, prompting them to participate in the reflection by pointing out different elements of the situation and stating their agreement or disagreement with the comments made by their classmates, only appears in two sessions. As stated earlier, this type of intervention is qualitatively different from that which takes place in SEG segments. The SEC segment only accounts for 2.36% of the total time of all five sessions, and only appears in Session 3, accounting for 12.68% of S3s5 and 4.36% of S3s6.

For its part, although the interactivity segment SEE (*Exploration of an element of the situation*) appears in four out of the 10 situations which make up the intervention, in three of them its weight relative to the other, more relevant, categories of the sessions is lower: 7.09% in S1s1, 10.25% in S2s3, and 9.56% in S3s5. In session S4s8, however, the presence of the SEE segment is much greater (34.78%), which is why we believe this session is worth analyzing in more detail. If we analyze session 4 in its entirety, we see that it consists of the discussion of two situations (s7 and s8). Both are characterized by the emergence of the basic SIA+SLS+SIP pattern, which was described earlier in this section. In the first of the two situations analyzed in Session 4, we find the extended SIA+SLS+SIP+SEG pattern, which takes up 100% of the time dedicated to S4s7. In other words, following the introduction of the activity and the interpretation of the situation, the tutor asks the student who provided the written description a series of questions and, based on the answers provided, offers partial interpretations of

and solutions to the problem posed. At a certain point in the conversation, the tutor changes strategy and begins guiding an exploration of the different elements of the situation by asking questions aimed at the entire group. This continues until the end of this part of the session. Much the same occurs in the case of S4s8, but on this occasion, the extended pattern includes the SEE segment rather than the SEG one, giving rise to a new pattern: SIA+SLS+SIP+SEE. Consequently, following the introduction of the activity, the interpretation of the situation and the SIP interpretation segment, the tutor proposes that the conversation focus on a specific element or factor of the situation and students intervene by stating their opinions and trying to explore the factor proposed by the tutor. As with S4s7, the SIA+SLS+SIP+SEE pattern of S4s8 occupied almost all the time dedicated to this part of the session (97.65%), in this case with the exception of the closure.

The segment *Tutor's interpretation of the situation* (SIS) only appears as such, i.e., as an overall interpretation of the situation, on two occasions: S3s6 (23.78% of the time dedicated to this part of the discussion) and S5s10 (14.36%). The act of interpreting the situation is also covered, albeit partially and linked to specific contributions, by the SIP segment. While this segment is qualitatively different from the SIS, it is the one on which most time is spent in the intervention (29.81%, almost one third of all the activities carried out in the sessions). In both cases in which the SIS appears, it does so at the end of the sessions and is linked to the *Pedagogical discussion* segment (SDP).

3.1.3. Session Closure Patterns

In Case F, the session closure pattern consists of the *Closure of the session* segment (SC), in which the tutor explicitly closes the session and sometimes gives instructions regarding future tasks. In all cases, the *Closure* segment is brief (0.27%, 6.49%, 5.18%, 2.35%, 4.88%, respectively, for each session).

The *Summing up* segment (SS) only appears on one occasion, just before the close of situation s4, and therefore the closure of session S2. Its brevity (5.59% of the whole session, 0.24% of all five sessions together) reflects the almost total absence of any *summing up* in the terms in which this segment is defined, i.e., the absence in Case F of a monologue by the tutor reiterating some of the issues discussed throughout the session, presented as a final summing up of the joint reflection process. This does not necessarily mean, however, that no partial summing up is carried out or no interpretations offered since, as described above, this function is fulfilled also by the SIP segment, in which partial interpretations are developed on the basis of the questions asked by the tutor.

3.2. Analysis of Case H

A description of the data corresponding to the presence of the different interactivity segments in each session (S) and situation (s) is provided in Tables A3 and A4 in Appendix A, which represent the data corresponding to the duration of each segment, the frequency with which each appears and the percentage of time dedicated to it in each situation and session. In Case H, over the course of the five sessions the tutor and students analyzed 5 specific educational situations, one per session.

3.2.1. Patterns Regarding the Introduction of the Situation

Two patterns were identified, both of which structured the start of the sessions around the interpretation of the situation being analyzed. The first pattern was SRC+SLS, or its extended version SIC/SIA+SRC+SLS; and the second was SCS+SLS. In the first three sessions, the pattern detected was *Presentation/reminder of the activity instructions* (SRC) plus *Interpretation of the situation* (SLS), complemented on occasions by *Introduction of the activity* (SIA) and *Introduction of the activity and presentation of the activity instructions* (SIC) (Table A3). In the fourth and fifth sessions, however, this structure was replaced by the second of the patterns detected, namely: *Contextualization of the situation*, by either the student presenting the situation or the tutor (SCS and SCS_T) plus *Interpretation of the situation* (SCS+SLS). In other words, an evolution was detected over the course of the five sessions, in which the instructions regarding how to carry out the activity disappear from the introduction of the situations presented by students for discussion.

3.2.2. Patterns Regarding the Exploration and Interpretation of the Situation

After these two initial patterns, an exploration SI was detected, in which the tutor (SEG) guided the process of exploring the situation. This was generally followed by the *Exploration of an element of the situation* (SEE) segment or, in one case, the *Pedagogical discussion* (SDP) segment, and in another the *Use of academic knowledge* (SUC) segment. These four SIs were identified in all sessions, although not always in the same order, with *Exploration of an element of the situation* (SEE) generally appearing at the beginning, and *Use of knowledge* (SUC) and *Pedagogical discussion* (SDP) emerging during the second half. It is important to highlight the fact that, over the course of the five sessions, the SIs *Exploration of the situation guided by the tutor* (SEG) and, particularly, *Pedagogical discussion* (SDP), are repeated in different sequential orders.

If we look at all five sessions together, we see these are the four segments to which most time is dedicated. They are also the ones that appear most frequently, both in each individual session and in all the sessions globally (Tables A3 and A4). Indeed, of the 6 h and 6 min taken up by all five sessions, 47.87% was dedicated to the SI *Pedagogical discussion* (SDP), which was identified as occurring on 15 separate occasions. For its part, 19.52% of the total time was dedicated to *Exploration of the situation guided by the tutor* (SEG), which was identified as occurring on 11 occasions. Less frequently, the SIs *Exploration of an element of the situation* (SEE) and *Use of academic knowledge* (SUC) were also identified, occupying in total 6.64% and 3.27% of the total time (respectively) and occurring on 6 and 7 occasions.

As shown in Table A4, the highest percentage of time was dedicated to the SIs *Pedagogical discussion* (SDP) and *Exploration of the situation guided by the tutor* (SEG), both overall and in each individual session. Not only are these two SIs the ones to which most time is dedicated, they are also the ones that are identified as occurring most frequently (Table A3). Thus, the interactivity segment *Pedagogical discussion* (SDP) occupied 54.98% of the first session and appeared on four occasions, and *Exploration of the situation guided by the tutor* (SEG) meant 10.19% of the same session and was identified as taking place on two occasions.

Although both the frequency and the total time dedicated to the SI *Pedagogical discussion* (SDP) decreased slightly in the subsequent sessions (with the exception of session three, in which this decrease was more pronounced), it is still the most representative means by which the tutor in Case H organized the joint activity. In other words, the intervention was characterized in this case by a conversation about the situation focused on general pedagogical aspects, ideas or principles. Either the students or the tutor may initiate the pedagogical discussion, and ideas or principles arise in the conversation. These linked initially to the interpretation of the specific situation being explored, although they later become focal points in themselves. When this happens, they are analyzed in decontextualized terms that move beyond their potential relationship with the specific situation being studied. The conversation sometimes alternates between comments by the tutor and comments by students, although most of the time it takes the form of a monologue by the tutor. The frequency and percentage of time (see Tables A3 and A4) dedicated to this SI in the four remaining sessions was: 52.62% and two occasions in the second session, 29.36% and four occasions in the third session, 47.91% and two occasions in the fourth session, and 57.76% and three occasions in the fifth session. As you can see, the weight of this SI remained more or less constant throughout the entire intervention.

In the case of the SI *Exploration of the situation guided by the tutor* (SEG), the time dedicated to this segment increased over the course of the intervention, with the exception of the last session in which it decreased slightly. This implies an evolution in the overall structure of the sessions. The same cannot be said of the frequency with which the SI appeared, which remained stable throughout all five sessions. The percentage of time dedicated to this interactivity segment in the latter four sessions was 28.96% in the second session, 25.71% in the third, 20.13% in the fourth and 9.81% in the fifth (Table A4). This indicates that the tutor intervened repeatedly by asking a specific student or the group in general questions designed to guide the discussion. The exploration of the different elements of the situation was, therefore, guided by the tutor's questions, which focused on partial and successive aspects of the situation and its interpretation. Students participated by responding to the questions asked, offering

interpretations or solutions, asking questions in turn, stating their agreement or disagreement with the comments and observations made by their fellow students and assessing the different elements of the situation described. In short, the students intervened in the discussion of the situation in a structured manner, with the tutor's questions serving as the backbone of the conversation and regulating participation.

The pattern for the SI *Exploration of an element of the situation* (SEE), in which the tutor focuses the conversation on a specific factor or element of the situation being analyzed is more diverse. It does not appear at all in Session 2, has lower percentages in Sessions 1 and 4 and much higher ones in Sessions 3 and 5. Thus, while 5% of the session time is dedicated to this SI in Session 1, this figure rises to 14.19% in Session 3, drops again to 5.36% in Session 4 and then rises again to 10.13% in the final session.

Finally, in the fourth type of SI identified as being characteristic of this tutor, namely, *Use of academic knowledge* (SUC), the tutor identified academic knowledge linked to the issue being discussed and either presented it directly or explicitly reminded students of it. The percentage of time dedicated to this SI remained constant over the first three sessions, and increased during the fifth one (it did not appear at all in the fourth session). In specific terms, the percentage of time dedicated to this interactive segment in each session was 2.95% in the first session, 3.03% in the second session, 3.24% in the third, and 9.30% in the fifth.

3.2.3. Closure Patterns

In Case H, the session closure pattern consisted of the *Closure* segment (SC), in which the tutor explicitly closed the session and communicated this to the students. In all cases, the *Closure* segment was brief (0.71%, 1%, 0.85%, 0.51%, 0.98%, respectively, for each session).

4. Conclusions

Based on the results presented above, we would like to highlight a series of conclusions. A separate, characteristic segment profile was identified for each of the two tutors participating in the study. Consequently, the detailed analysis of the segments and their evolution throughout the various sessions of the practicum enabled us to identify different strategies of engaging in collaborative reflection in the classroom and, therefore, different ways of managing reflection about one's own practice.

In Case F, of the 21 interactivity segments identified, three were particularly significant due to their frequency and the presence of intervention patterns by means of which the tutor fostered reflection. These segments were (in order of importance): *Tutor's interpretation supported by questions* (SIP), *Exploration of the situation guided by the tutor* (SEG), and *Exploration of an element of the situation* (SEE).

We conclude there are two characteristic practices of this tutor's intervention for structuring reflection in the classroom. One is the use of *highly structured interactions*, with strict control over who speaks and when and specific questions targeted at participating students. Here, once the student presents the case to the classroom for discussion, the tutor uses most of the session time to explore the situation. In other words, she intervenes mainly to open up the conversation to include other members of the group.

The second characteristic method identified for this same tutor is the *Inclusion of explanatory and interpretative elements* in the situations being discussed. In other words, throughout the course of the sessions, the intervention evolves towards the interpretation of the situation by the tutor, supported by a series of questions. Through these questions, the tutor either incorporates or encourages her students to incorporate new elements or factors rooted in academic knowledge, which will help the group interpret and assess the situation and offer partial solutions to the problems posed. The tutor establishes explicit relationships between the different elements of the case and academic knowledge, and incorporates these links into the debate as relevant factors to bear in mind in order to fully understand and interpret the situation.

In Case H, of the 16 interactivity segments identified, four were found to appear most frequently. One segment in particular was identified in all the sessions of the intervention, related to the exploration of the situation being discussed, guided by the tutor (SEG). This segment is usually followed by an exploration of one specific element of the situation (SEE) or a pedagogical debate segment (SDP), and the incorporation of academic knowledge into the discussion by the tutor (SUC). These four interactivity segments are present in all sessions, although not necessarily in the same order, with the exploration of the situation often appearing during the initial stages, followed by the incorporation of academic knowledge and pedagogical debate.

Two characteristic practices were identified for this tutor. One was (as in the previous case) the use of highly structured interactions, with strict control over who speaks and when, and specific questions targeted at participating students. This type of practice is described above, and is the same as that used here.

The second is the incorporation into the debate of general pedagogical principles rooted in academic knowledge. In other words, the tutor steers the conversation towards general aspects, academic knowledge or pedagogic principles, initially in specific reference to the situations being discussed but then in broader terms, focusing on the principles themselves. The specific situation being discussed is the starting point for a subsequent, more generalized, discussion of the principles of action and interpretation models involved, based on experience and/or knowledge of the discipline. The tutor brings up concepts and experiences that prompt reflection, while at the same time opening up the conversation to participants to enable them to voice their arguments and opinions.

Finally, the aims previously agreed upon with the tutors for the design of the curricular innovation focused on fostering debate and reflection among students engaging in teaching practice, as well as on encouraging the establishment of links between the situation being discussed and the academic knowledge taught in other subjects on the degree. An analysis of the tutors' discourse revealed that the means by which they pursued these aims are characterized by an ongoing promotion of students' active engagement through highly structured classroom participation, a strong focus on interpreting students' personal experiences in the classroom during teaching practice, and significant interventions aimed at establishing links with academic knowledge.

We would like to include one more argument to close these conclusions. The results invite us to think carefully about the role currently played by reflection on teaching practice in the university context, especially the practicum, in an institutional scenario in which the main reference and principal aim is the acquisition of academic knowledge. Examining university teacher training degrees and the characteristics of a specific reflective practicum prompts us to rethink the ways in which we can contribute to processes of reflection among trainee teachers. It also leads us to think about the status afforded to this reflection in practical professional experience [20,33], in comparison with the importance attached to academic knowledge. The tutors fostered debate, encouraged participation, and strove to include in the debate students' previous practical experiences, both within and outside the university, as well as those based on their observations during the practicum and even, on occasions, their everyday knowledge. Participants in collaborative seminars used all the semiotic resources at their disposal to analyze the situations discussed. They also indirectly included the voice of the school tutors with whom the students work in their practicums (voice here being understood in its Bakhtinian sense, including the interpretation of the situation) [49,50]. That is, the voice of the school tutors is also present in the reflection of the classroom through the discourse of the student teachers in most of the interactivity segments. It appears in the segments *pedagogical discussion* and *exploration of the situation guided by the tutor* in an explicit way, bringing the manifestations of school tutors to the here and now in a direct style. However, it is always a ventriloquization [49,50] that does not have the power of the voice of school tutors, and that cannot easily dialogue with other voices.

As the analysis of the segments shows, the elements that define the intervention are the promotion of students' active engagement through highly structured classroom participation, a strong focus on interpreting students' personal experiences in the classroom during teaching practice, and significant interventions aimed at establishing links with academic knowledge. In other words, the reflection, highly structured by the tutors, focuses on the treatment of the experience of the student teachers during the practicum establishing relationships between the practice and the academic knowledge of reference, being the latter legitimized to provide an interpretive framework.

However, the direct voice of the school teachers themselves would add a professional discourse to the debate that is neither an academic reference nor a purely practical experience. We believe it is important to create activity scenarios in which the analysis of teaching practice merges with theoretical models. We also believe that theoretical principles should not be considered hierarchically superior to reflections on practice, which are characterized by values and interests of specific educational situations. In addition, reflections that imply a professional voice cannot be substituted by the voices of academic/scientific knowledge, or by the voice of the concrete experience, which are the voices that mainly inhabit the educational discourse. The results obtained in this study indicate that in the university context, academic knowledge, theories, and models continue to constitute the principal framework for interpreting and explaining practice. We must, therefore, strive to fully understand what exactly this means for the creation of adequate activity scenarios, for the design of a reflective practicum and for university-level teacher training in general.

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Appendix A

Table A1. Duration and frequency of each segment identified in the sessions and situations analyzed in the case F (*f* = Frequency).

SITUATIONS	SESSION 1		SESSION 2		SESSION 3		SESSION 4		SESSION 5		Total Minutes	<i>f</i>
	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10		
SIA Introduction of the activity			0:00:57		0:04:02	0:00:39	0:01:07	0:01:06	0:03:07	0:00:53	0:11:51	10
SRC Presentation/reminder of the activity instructions	00:02:36										0:02:36	2
SIC Introduction of the activity and presentation of the activity instructions	0:02:44	0:01:49		0:01:12							0:05:45	3
SCS Contextualization of the situation		0:00:22	0:00:57			0:01:02					0:02:21	3
SLS Reading of the situation		0:03:17	0:02:12	0:02:28	0:01:56	0:02:26	0:02:52	0:03:39	0:03:04	0:02:46	0:24:40	9
SLS_T Reading of the situation by the tutor	0:04:01										0:04:01	1
SCE Clarification of elements of the situation		0:02:17							0:00:56		0:03:13	2
SCE_T Clarification of the situation by the tutor	0:00:40				0:02:41				0:00:56		0:04:17	3
SEC Joint exploration of the situation					0:07:28	0:01:14					00:08:42	2
SEG Exploration of the situation guided by the tutor	0:12:36	0:17:34	0:16:34	0:08:10		0:03:07	0:8:12				01:06:07	9
SEE Exploration of an element of the situation	0:04:20		0:03:19		0:05:38			0:16:15			00:29:32	6
SPP Responses to the tutor's questions	0:09:14		0:04:43	0:02:15							00:16:12	3
SFE Focusing	0:09:44				0:15:34						00:25:18	2
SIS Tutor's interpretation of the situation						0:06:44			0:04:19		0:11:03	2
SIP Tutor's interpretation supported by questions	0:05:38				0:21:35		0:22:25	0:24:37	0:37:24	0:12:50	2:13:29	10

Table A1. *Cont.*

	SESSION 1		SESSION 2		SESSION 3		SESSION 4		SESSION 5		Total Minutes	f
SITUATIONS	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10		
SUC Use of academic knowledge			0:03:35								0:03:35	1
SDP Pedagogical discussion	0:09:33					0:05:26			0:07:47		0:22:46	3
SS Summing up				0:00:54							0:00:54	1
SC Closure of the session	0:00:10			0:01:07		0:01:28		0:01:06		0:01:28	0:05:19	5
SCNR Conversation not related to session content						0:06:13			0:04:01		0:10:14	2
TOTAL	1:01:06	0:25:19	0:32:21	0:16:06	0:58:54	0:28:19	0:43:37	0:46:43	0:49:28	0:30:03	6:31:55	79
SESSIONS DURATION	1:01:06		1:13:46			1:27:13		1:30:20		1:19:31		

Table A2. Minutes and percentage of each segment identified in the sessions and situations analyzed in the case F (S = Session; T = Total).

	S1		S2		S3		S4		S5		T
SITUATIONS	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	
SIA Introduction of the activity			57 2.94%		242 6.85%	39 2.30%	67 3.38%	66 2.35%	187 6.30%	53 2.94%	711 3.11%
SRC. Presentation/reminder of the activity instructions	156 4.25%										156 0.68%
SIC Introduction of the activity and presentation of the activity instructions	164 4.47%	109 7.18%		72 7.45%							345 1.51%
SCS Contextualization of the situation		22 1.45%	57 2.94%			62 3.65%					141 0.62%
SLS Reading of the situation		197 12.97%	132 6.80%	148 15.32%	116 3.28%	146 8.59%	172 8.67%	219 7.81%	184 6.20%	166 9.21%	1480 6.47%
SLS_T Reading of the situation by the tutor	241 6.57%										241 1.05%
SCE Clarification of elements of the situation		137 9.02%							56 1.89%		193 0.84%

Table A2. Cont.

	S1		S2		S3		S4		S5		
SITUATIONS	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	T
SCE_T Clarification of the situation by the tutor	40 1.09%				161 4.56%				56 1.89%		257 1.12%
SEC Joint exploration of the situation					448 12.68%	74 4.36%					522 2.28%
SEG Exploration of the situation guided by the tutor	746 20.34%	1054 69.39%	998 51.42%	490 50.72%		187 11.01%	1113 56.10%		1410 47.51%		5998 26.21%
SEE Exploration of an element of the situation	260 7.09%		199 10.25%		338 9.56%			975 34.78%			1772 7.74%
SPP Responses to the tutor's questions	554 15.11%		283 14.58%	135 13.98%							972 4.25%
SFE Focusing	584 15.93%				934 26.43%						1518 6.63%
SIS Tutor's interpretation of the situation						404 23.78%				259 14.36%	663 2.90%
SIP Tutor's interpretation supported by questions	338 9.21%				1295 36.64%		632 31.85%	1477 52.69%	834 28.10%	770 42.71%	5346 23.36%
SUC Use of academic knowledge			215 11.08%								215 0.94%
SDP Pedagogical discussion	573 15.63%					326 19.19%				467 25.90%	1366 5.97%
SS Summing up				54 5.59%							54 0.24%
SC Closure of the session	10 0.27%			67 6.94%		88 5.18%		66 2.35%		88 4.88%	319 1.39%
SCNR Conversation not related to session content						373 21.95%			241 8.12%		614 2.68%
TOTAL MINUTES	3666 100%	1519 100%	1941 100%	966 100%	3534 100%	1699 100%	1984 100%	2803 100%	2968 100%	1803 100%	22883 100%

Table A3. Duration and frequency of each segment identified in the sessions and situations analyzed in the case H (S = Session; *f* = Frequency).

	S1	S2	S3	S4	S5	Total Minutes	<i>f</i>
SITUATIONS	s1	s2	s3	s4	s5		
SIA Introduction of the activity	0:00:54					0:00:54	1
SRC Presentation/reminder of the activity instructions	0:02:25	0:06:05	0:01:01		0:01:26	0:10:57	4
SIC Introduction of the activity and presentation of the activity instructions	0:00:47	0:02:01				0:02:48	2
SCS Contextualization of the situation		0:01:31		0:01:41		0:03:12	2
SCS_T Contextualization of the situation by the tutor				0:00:52	0:01:37	0:02:29	2
SLS Reading of the situation	0:03:47	0:01:57	0:02:07	0:02:12		0:10:03	4
SLS_T - Reading of the situation by the tutor					0:02:28	0:02:28	1
SEG Exploration of the situation guided by the tutor	0:09:19	0:23:16	0:20:39	0:13:47	0:04:30	1:11:31	11
SEE Exploration of an element of the situation	0:04:38		0:11:24	0:03:40	0:04:39	0:24:21	6
SPP Responses to the tutor's questions	0:02:24			0:08:13		0:10:37	3
SIS Tutor's interpretation of the situation			0:06:25	0:04:54		0:11:19	2
SIP Tutor's interpretation supported by questions			0:11:51			0:11:51	1
SUC Use of academic knowledge	0:02:42	0:02:26	0:02:36		0:04:10	0:12:00	7
SDP Pedagogical discussion	0:50:16	0:42:17	0:23:35	0:32:48	0:26:30	2:55:26	15
SC Closure of the session	0:00:39	0:00:48	0:00:41	0:00:21	0:00:27	0:02:56	5
SCNR Conversation not related to session content	0:13:35					0:13:35	1
TOTAL	1:31:26	1:20:21	1:20:19	1:08:28	0:45:47	6:06:21	67

Table A4. Minutes and percentage of each segment identified in the sessions and situations analyzed in the case H (S = Session; T = Total).

	S1	S2	S3	S4	S5	T
SITUATIONS	s1	s2	s3	s4	s5	
SIA Introduction of the activity	54 0.98%					54 0.24%
SRC Presentation/reminder of the activity instructions	145 2.64%	365 7.57%	61 1.27%		86 2.77%	657 2.94%
SIC Introduction of the activity and presentation of the activity instructions	47 0.86%	121 2.51%				168 0.75%
SCS Contextualization of the situation		91 1.89%		101 2.46%		192 0.86%
SCS_T Contextualization of the situation by the tutor				52 1.27%	97 3.13%	149 0.67%
SLS Reading of the situation	227 4.14%	117 2.43%	127 2.64%	132 3.21%		603 2.70%
SLS_T Reading of the situation by the tutor					148 4.77%	148 0.66%
SEG Exploration of the situation guided by the tutor	559 10.19%	1396 28.96%	1239 25.71%	827 20.13%	270 8.71%	4291 19.21%

Table A4. Cont.

	S1	S2	S3	S4	S5	
SITUATIONS	s1	s2	s3	s4	s5	T
SEE	278		684	220	279	1461
Exploration of an element of the situation	5.07%		14.19%	5.36%	9.00%	6.54%
SPP	144			493		637
Responses to the tutor's questions	2.62%			12.00%		2.85%
SIS			385	294		679
Tutor's interpretation of the situation			7.99%	7.16%		3.04%
SIP			711			711
Tutor's interpretation supported by questions			14.75%			3.18%
SUC	162	146	156		256	720
Use of academic knowledge	2.95%	3.03%	3.24%		8.26%	3.22%
SDP	3016	2537	1415	1968	1590	10526
Pedagogical discussion	54.98%	52.62%	29.36%	47.91%	51.29%	47.13%
SC	39	48	41	21	374	523
Closure of the session	0.71%	1.00%	0.85%	0.51%	12.06%	2.34%
SCNR	815					815
Conversation not related to session content	14.86%					3.65%
TOTAL MINUTES	5486	4821	4819	4108	3100	22334
	100%	100%	100%	100%	100%	100%

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