

“How might we explain what is happening here?” Help offered by Practicum Tutors in Preservice Teacher Education

“Cómo podríamos explicar lo que está pasando aquí” Las ayudas ofrecidas por tutores y tutoras del Prácticum en la formación inicial del profesorado

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Abstract

Reflection is a vital component in professional teaching practices. The idea from which reflection itself stems is that of teachers' agency in their own professional development. Our study is rooted in recent research into the need to support processes of reflection among student teachers. From a historical-cultural perspective, our aim is to analyze the discursive interactions which take place during collaborative seminars in an innovation experience within a reflective Practicum, and to describe 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 her students. We identified 24 types of discursive educational supports or Aids to Joint Reflection. Results indicate a profile characterized by the presence of aids related to three dimensions: dialogical, interpretative and theory-practice relationships. Contributions are made for the training of student teachers and for practicum tutors.

Keywords: instructional aids; higher education; teaching training; critical sense; teaching practice; educational aids.

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Resumen

La reflexión es un componente vital en las prácticas docentes profesionales. La idea de la que parte la reflexión misma es la importancia de la agencia de los futuros docentes en su propio desarrollo profesional. Nuestro estudio tiene sus raíces en investigaciones recientes sobre la necesidad de apoyar procesos de reflexión entre los estudiantes de magisterio. Desde una perspectiva histórico-cultural, nuestro objetivo es analizar las interacciones discursivas que tienen lugar durante los seminarios colaborativos en una experiencia de innovación dentro de un Prácticum reflexivo, y describir cómo los tutores universitarios apoyan y fomentan la reflexión sobre la práctica. Utilizamos un diseño de casos múltiples en el que cada caso es una unidad de aula formada por una tutora y sus alumnos. Identificamos 24 tipos de apoyos educativos discursivos o Ayudas a la Reflexión Conjunta. Los resultados indican un perfil caracterizado por la presencia de ayudas relacionadas con tres dimensiones: relaciones dialógicas, interpretativas y teoría-práctica. Se realizan aportes para la formación de futuros maestros y tutores de prácticas.

Palabras claves: ayudas instruccionales; educación superior; formación docente; sentido crítico; práctica docente; ayudas educativas.

Introduction and objectives

Our study is specifically rooted in recent research into the need to support processes of reflection in teacher training in a structured manner in the university classroom, concretely in the Practicum.

The Practicum constitutes an ideal context for constructing knowledge. Firstly, it offers student teachers a chance to immerse themselves in real schools, thus placing them in a position to both observe and experience a diverse range of educational practices. Secondly, it also affords them the opportunity of interacting not only with pupils in their class, but with an agent who has not been present in their teacher training trajectory, namely the professional tutor. And finally, this experience is later analyzed with university academic tutors. The Practicum is, therefore, a moment of reflection in action and on action (Schön, 1991). It enables experience in practice, to blend with academic theory.

In this regard, our general aim is to study how theory and practice are integrated by means of the analysis of the discursive interactions which take place during these university classroom sessions, within a reflective Practicum. In the work that we present here, we have studied how the educational aid is articulated through discursive resources during processes of reflection on action within an activity of curricular innovation. It is part of the research project (Martinez et al., 2016), in which three Spanish universities have participated. The objectives of the intervention have been to create a context for joint reflection on the situations experienced in schools by student teachers. This planned context has consisted of collaborative seminars shared by groups of student teachers working together with one academic tutor. The researchers' objectives have been to describe the ways in which academic tutors intend to promote critical reflection of their practices.

Conceptual framework

The importance attached to reflective practices has gradually increased in theoretical explanations, training plans and intervention programs. The literature on the definition of reflection and its incorporation into teacher training programs is extremely extensive (Clarà et al., 2019; Gelfuso, 2021; Loughran, 2002; Postholm, 2018), and it is not the aim of this paper to review all the proposals which have been made. Nevertheless, we would like to point out two important issues. Firstly, to define reflection it is necessary to take into account the context of reflection (Loughran, 2002), the components of it and the deconstruction of our ideological beliefs and assumptions. All of them are important in order to understand reflection as action-oriented and placing it in a social, historical and institutional contexts or practices (Brookfield, 2017; Toom et al., 2015). Secondly, the critiques of the abusive use of reflection, which highlight its use as a mere slogan (Zeichner, 2008; Zeichner & Liston, 2013), only serve to underscore the wide range of different proposals which exist in relation to its application in training programs. The use of reflection cannot be separated from a specific conception of the teaching and learning processes. Furthermore, reflection itself can be used for a wide range of social and educational purposes (Zeichner, 2008; Zeichner & Liston, 2013), including training student teachers to replicate a specific curriculum or teaching method. This is diametrically opposed to the idea on which reflection as a method is based, namely the teacher's own agency in his or her professional development (Flores-Lueg, 2022; Turunen & Tuovila, 2012).

From a cultural perspective (Ratner, 2000), the agency is a social construction that develops in interactive processes. In the case of teacher training, the activities that allow the joint reflection of preservice teachers serve to build the teacher's own agency (Miller-Rushing & Hufnagel, 2022). The capacity for self-reflection and management is then promoted through reflective shared practices. Agency and joint reflection are, therefore, closely related processes.

Reflection is a basic tool for teacher training, it must form part of a wider proposal which clearly specifies the status of a trainee teacher's reflections in the training process (Matusov & Marjanovic-Shane, 2019; Saiz-Linares & Susinos-Rada, 2020; Zeichner, 2008). Reflection constitutes a type of knowledge that proposes a change of the relationship between theory and practice. This shift, of an epistemological nature, challenges the hierarchical relationship between theoretical-academic knowledge and knowledge of/in educational practice. Research has shown the difficulty of establishing the link between theory and practice, or between university and school, since reflection is left aside when working in real classrooms (Crichton & Valdera Gil, 2015; Diez-Fernández & Domínguez-Fernández, 2018; Flores-Lueg, 2022).

In the context of teacher training, we can define the agency as the intentional causal intervention in the world, subject to the possibility of reflective monitoring of the intervention (Ratner, 2000). From a cultural perspective, we are interested in studying the relationships which exist between different types of knowledge, the psychological processes that take place in teaching and learning settings, and the nature of the agents involved in this construction. This background 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. Knowledge, as an activity located in an academic context, cannot be directly transferred among different activity contexts (Lerman, 2012).

The training of new teachers and their professional practice could therefore be thought of as their participation in communities of practice (Farnsworth, et al. 2016), 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 this help trainee teachers become active members of their community of practice (Matusov & Marjanovic-Shane, 2019). This context for practice analysis can be materialized in the Practicum. These ideas are shown in Figure 1.

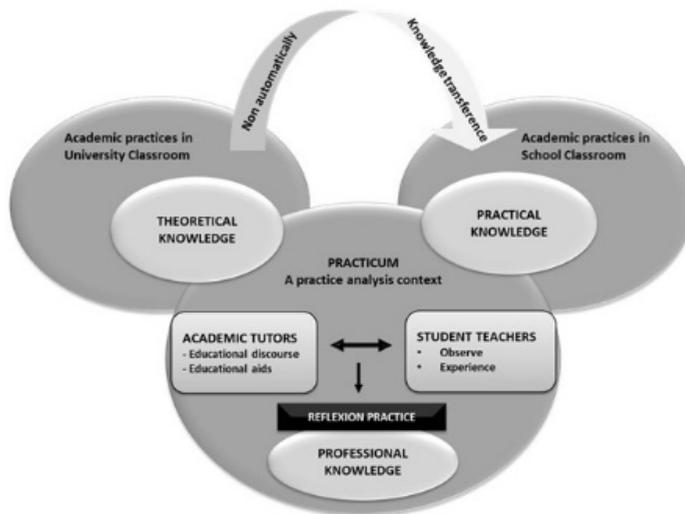


Figure 1. Practicum as a context of reflective practices.

What are the implications of viewing the teaching and learning process as a joint effort between the teacher and the student? Such a view requires an explanation of what educational aid would look like in these joint coordination processes (Clarà et al., 2019). Educational aids are actions through which teachers attempt to influence students' development and learning. Educational aids refer to verbal support in tutor-students interactions and educational discourse, and what the academic tutor does to help student teachers to reflect. In Schön terms, the ways in which a tutor tries to illuminate what practitioners say, by exploring the understanding of their own patterns of spontaneous activity in their teaching practices (Schön, 1991). Those aids are carried out through of a series of procedures for regulating joint activity in discourse such as

propose questions, enhance the participation, direct the discussion to crucial aspects, request justifications, and so on (Clará et al., 2019).

With few exceptions in the field of teacher training (Mauri et al., 2017), the processes of joint reflection on the action have been studied little from the point of view of educational aid. Further, the works that focus on the analysis of educational aids have been mainly carried out in contexts of primary or secondary education, but not in the university field. Neither have they been analyzed in depth from the viewpoint of the discursive actions that articulate it (Veen & De La Croix, 2016).

Up to this point we have tried to justify at least three fundamental aspects. The first one is the central role that reflection on practice plays in teacher's professional development. Secondly, we have insisted on the idea that reflection on educational practice is a social and shared phenomenon. Third, we have referred to the importance of discourse to materialize the educational aid that allows the academic tutor to support student teachers in their reflection processes, and to the need to analyze the characteristics of that help.

Although the training programs for student teachers insist on the need to promote reflection processes, the way of understanding and promoting reflection is not homogeneous (López-de-Arana Prado et al., 2019; Mauri et al., 2017), as we have already pointed out. In line with interests similar to ours, some authors have focused on the study of the processes involved in reflection. Gelfuso (2016) systematizes a framework to facilitate reflective conversations consisting of a series of movements from analysis to synthesis. In the same way, Harford and MacRuairc (2008) have shown how facilitators can foster reflection by posing questions and pointing out uncertainty, rather than providing contributing to the discussion with answers.

The study presented here aims to deepen this discussion through analyzing joint reflection sessions. Concretely, our study has two specific aims. The first one is to identify segments or structures of participation in the classroom discourse and elaborate a category system that collects all the existing diversity. The set of segments constitutes the developmental history of a classroom session embodied in a sequence of different types of interrelation structures among academic tutors and student teachers. Such interactivity segments imply different aims and actions displayed by the participants. The second is to identify educational aids, that is, the tutor's verbal support to help student teachers to reflect, and develop a category system for defining a typology of aids.

Methodological strategy

In accordance with the theoretical/methodological approach of the study, the analysis focuses on the description of educational discourse. Due to the recent emergence of this research topic in teacher training Practicum, in order to achieve the research goals, we have opted for an exploratory case study that is justified to investigate research questions that have not previously been studied in depth. It is, therefore, a qualitative methodology that relies on the identification of patterns using quantitative (numerical) and qualitative (non-numerical) methods (Hannes et al., 2015; Twining et al., 2017). In summary, from a methodological point of view, our work is based on the estab-

lishment of a series criteria for sample selection, according to the teaching principles of the chosen tutors. From there, reflection and pedagogical discussion sessions were designed on cases elaborated by the students, to observe and record the categories of analysis that emerged during the debate.

Participants and selection criteria

This is an exploratory study with a multiple case design in which each case is a classroom unit made up of an academic tutor and his or her student teachers. The sample selection process corresponds to what LeCompte (2009) call criterion-based selection, and Staller (2021) call purposeful sampling, that is, we selected cases that provide the most abundant information for the aim of the study.

To select the cases, we developed an initial in-depth interview with possible academic tutors in the Degree who already were qualified as good experts according to the assessment from the university on teaching staff. The questions of the interview were how important reflection on practice was for them in the design of their classes; likewise, what role did they assign to the relationship between the experiential knowledge of the student teachers in the Practicum and the academic knowledge taught at the university. In case both aspects were already integrated in the teaching practices of the academic tutors, and if they wanted to participate in the research, they became candidates as participants.

According to the criteria for quality studies, the estimation of the number of cases in qualitative research must reach the saturation point of the data, being 3 to 6 cases enough for the saturation of the 90% (Guest et al., 2017). Taking these selection criteria into account, the sample was made up of 8 cases.

From those 8 cases, 2 extensive cases were selected for the present study. These were composed of an academic tutor and 15 student teachers (Case F), and an academic tutor and 9 student teachers (Case H), respectively. The student teachers were between 20 and 22 years old and belonged to a middle socioeconomic level, with a higher proportion women. They were in the sixth semester of training out of a total of eight at the University of Seville, and they were doing their Practicum period in middle socioeconomic level schools. Regarding the two tutors, they were PhDs in Psychology and teaching staff at the Faculty of Education for more than two decades. They have a wide and long history in the tutoring of student teachers and the management of work groups.

In case studies, the generalization of the data to broader contexts is not based on a statistically representative random sample, but rather on the deepening of a case or a small number of cases (Denscombe, 2017; Yin, 2018). Since our interest is to be able to explain not only what happens in a specific case, but what this implies for the explanation of teacher training processes, the cases have been selected based on their analytical generalization (Yin, 2018) according to the criteria for strategic selection of critical and typical cases (Denscombe, 2017; Schreier, 2018). Thus, the generalization of the results refer to the conceptual model that emerges from the analysis and serves to analyze the construction of professional knowledge during the Practicum.

Research phases

The procedure was divided into several different phases:

Phase I. The aim of the research project and the procedure to be followed were discussed and negotiated with the academic tutors. Tutors undertook to abide by a series of action principles. These principles included the commitment to encourage reflection on practice and try to foster relationships between the experience of student teachers and the theoretical/academic knowledge. The result was an innovative activity that was included in the Practicum itself.

Phase II. This involved requesting the participation of student teachers in the innovation activity and explaining details on the number of sessions, their schedule and the duration. It was also explained that each of the student teachers had to contribute in writing one of their experiences in the schools during the Practicum. The seminar sessions would be to discuss each of these experiences together. A selection of the main topics discussed in the seminar sessions are presented in Table 1.

Table 1.

Topics of the situations described by student teachers in a written narrative (selection).

CASE F	CASE H
s1. Controversy over the decision of the management team regarding children repeating grades.	s1. Controversy over the decision of the management them regarding children repeating grades.
s2. Refusal of the parents of a child with Down Syndrome to receive support from the school.	s2. Differences between the teacher and the student teacher about working with an ADHD child.
s3. Measures a teacher takes with a child who lies by saying that she receives threats from two classmates.	s3. Discrepancy between the teacher and a mother about the inappropriate behavior of a child in classes.
s4. Xenophobic behavior of a child and decisions taken by the school.	s4. Conflict resolution by a teacher in a fight between three children, one of them with ADHD.
s5. Learning problems of a girl with an unstructured family due to parental divorce.	s5. A teacher withdraws the ABN methods of teaching mathematics by cognitive dissonance.

Phase III. The seminars were developed. They encompassed 5 sessions, each lasting approximately ninety minutes. The academic tutor offered student teachers instructions of the type "Write a situation experienced during practice at school that has particularly called your attention. You must write it in the most descriptive and literally possible way, trying to avoid interpretations". In each session, discussions were held between student teachers and the academic tutor, beginning with a description of the written situation(s) presented by a student teacher. In each session, one or more student teachers were called upon to present their descriptions. Next, the debate was opened up to the entire group, so that student teachers could interact, debate and reflect jointly upon the situation presented. All 10 sessions (5 for Case F and 5 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, specifically the educational discourse of the two tutors.

Coding and analyses

The Atlas.Ti v7 software program was used to systematize the data gathered from the classroom discussions. Its use enabled us to locate and code both in vivo elements, assess their importance and weight, establish relationships and generate families (Silver & Lewins, 2020). The category systems were created and applied in order to identify and systematize the aids and segments for joint reflection. A set of tables was drawn up that show different indexes of relationship of each type of aid with each segment of interactivity, expressed in percentages, that is, an analysis of contingency pairs. All calculations were made according to the time duration (seconds) of each category.

This study follows the recommendations of recent theorists, especially the contemporary methodologists (Elman et al., 2016; Gerring, 2017; Yin, 2018). They consider that all research, especially in case studies, must integrate both qualitative and quantitative techniques and analyzes, without this implying that the foundations of qualitative methodology are distorted. Hence, we have included data with a mixed design.

Category systems

The data gathered in relation to the 8 cases studied were processed and organized using two category systems designed specifically for this research project by the working team. The unit of analysis used was individual interventions or turns.

The first category system, based on the concept of participation structure, was used to identify the different Interactivity Segments (SI), i.e. the different ways in which the activity was organized in the joint reflection (Clarà et al., 2019). As Mauri et al. (2017) describe it, the technique consist of identifying segments or structures of interaction and participation. The segment changes when the shared task of the participants changes or when participants start to interact differently. This method enabled to describe the classroom sessions in terms of shared activity segments (Table 2).

Table 2.

Description and examples of the Interactivity Segments categories

Interactive Segments	Definitions	Examples
SEG. Exploration of the situation guided by the tutor.	It is carried out in a guided way by the tutor's questions to a student teacher or to the group in general. The questions focus on partial aspects for the interpretation of the situation.	<p><i>T: This girl's parents are divorced, right?</i></p> <p><i>ST: Yes.</i></p> <p><i>T: Does she live with her grandmother?</i></p> <p><i>ST: No, she doesn't live with her now, but they spend a lot of time...</i></p> <p><i>T: They spend a lot of time together, don't they?</i></p>
SEE. Exploration of an element of the situation.	The tutor focuses the conversation on a concrete factor related to the situation, and the student teachers take positions.	<p><i>T: In this situation, we find risk factors. What does she have to protect herself?</i></p> <p><i>TS: Maybe in three or four years, as she has an older sister, she can help her.</i></p>
SIP. Tutor's interpretation supported by questions	The tutor asks successive questions to the student teacher who has prepared the situation. The tutor makes interpretations or assessments related to the situation.	<p><i>T: So, what does the father accuse the teacher of?</i></p> <p><i>TS: Of abuse.</i></p> <p><i>T: The faculty always lies to the teacher, so talking to parents from the beginning is better.</i></p>
SUC. Use of academic knowledge	The tutor incorporates theoretical framework for the interpretation of the situation or encourages student teachers to remember academic knowledge and to identify the connections of these with the situation.	<p><i>T: Do you remember when you studied the experimental models of punishment?</i></p> <p><i>TS: Yes.</i></p> <p><i>T: And does this case fit with the theory about punishment?</i></p> <p><i>S: Sure, because the behavior decreases.</i></p>
SDP. Pedagogical discussion	The conversation focuses on general pedagogical principles linked to the interpretation of the situation. However, they are finally used as the focus of discussion itself.	<p><i>T: Emotional aspects have not been considered to decide if the girl repeat grade or not.</i></p> <p><i>TS: Emotional aspect are never considered.</i></p> <p><i>T: No, feelings and affections are always out of the curriculum.</i></p>

The second category system was developed in relation to the analysis of the Aids to Joint Reflection (Table 3). That meant to identify the verbal support in tutor-students interactions and educational discourse (Clarà et al., 2019). As in the first category system, it is an inductive method of defining categories from the data. Some categories are established, the analysis begins and it is observed if they work or must be re-categorized before continuing with the analysis. It is a cyclical process between coding and analysis, until the categories are finally defined.

These categories were organized in three dimensions (Mauri et al., 2017). The first, Aids for fostering dialogue, referred to the interventions of the academic tutor to encourage participation, debate, and the creation of an exploratory discursive atmosphere for the description of each situation worked. The second dimension, Aids for helping with interpretation supposed to enhance the joint reflection to understand in depth the explanatory factors of what is stated in each situation. The third, Aids for establishing relationships between academic knowledge and practical situations involved promoting different links between previously acquired theoretical knowledge and the practical situation that is the object of joint reflection, between it and experiential knowledge, or knowledge generated in other situations of educational practice.

Table 3.

Description and examples of the Educational Aids categories most frequent

Dimensions	Aid	Description	Examples
Aids for fostering dialogue	CD	Presenting and/or reminding participants of the importance of dialogue	<i>T: The important thing here is that you consider everyone's opinions and are useful for you, not only your ideas</i>
	CDE	Taking the contribution of different student teachers into consideration	<i>T: Some of you have talked about the importance of content, others have talked about methodology.</i>
	CEc	Taking the contribution of specific student teachers into consideration (rephrasing)	<i>ST: Because Rubén needs some help. T: Some specific support for that child.</i>
	CM	Opening the conversation up to other members of the group	<i>T: What do you think about your partner's ideas?</i>

Dimensions	Aid	Description	Examples
Aids for helping with interpretation	IAD	Encouraging participants to identify tensions or dilemmas	<i>T: But, what options are you thinking about?</i>
	IAF	Encouraging participants to consider new factors	<i>T: More things that get your attention in this situation?</i>
	IID	Identifying tensions or dilemmas	<i>T: What do you think about the tutor leaving the girl without going to the playground?</i>
	IIF	Identifying new factors	<i>T: The child's age must also be considered, right?</i>
	IM	Proposing a new interpretative framework	<i>T: Can we interpret the situation as an example of constructivism?</i>
	IRF	Reminding participants of a previously established factor	<i>T: The origin of the problem is, as we have said before, in the family.</i>
Aids for establishing relationships between academic knowledge and practical situations	RAA	Encouraging participants to make connections with academic knowledge	<i>T: That need to catch attention, how could we call it?</i>
	REA	Making connections with academic knowledge	<i>T: Do you remember the concept of scaffolding, don't you?</i>
	REE	Making connections with experience-based knowledge	<i>T: It's a very classic argument to say I can't pay attention to just one student.</i>
	RES	Making connections with other situations	<i>T: This theme is the same one that came out the other day in the textbook.</i>

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. After obtaining satisfactory reliability values for each category, the entire system was applied to 100% of the data.

Findings and discussion

We proceed to expose the main findings in the two cases, first F and then H. Our purpose does not seek to establish a comparison between these cases in terms of similarities and differences, but rather to present an in-depth study of each one of them.

Analysis of Case F

Aids for fostering dialogue and aids for helping with interpretation appear with same frequency (41.3%), and together account for 82.6% of all aids provided by the academic tutor. In the first of these dimensions, the most characteristic aids are opening up the conversation to other members of the group (CM 12.8%) and taking the contribution of a specific student teacher into consideration and rephrasing it in more academic terms (CEc 7.73%). The second dimension is characterized by the identification of new factors and elements for understanding the educational situation being discussed (IIF 20%). The third dimension accounts for 17.1% of all aids provided. In this dimension, of particular interest are aids for making connections with academic knowledge (REA 10.9%).

These aids are not evenly distributed across all the different moments of the debate, or across the different ways in which the academic tutor structures the social interactions of the group (interactivity segments –SI–). In the Case F profile, the three interactivity segments which appear most often in the sessions are Tutor's interpretation supported by questions (SIP 29.81%) and Exploration of the situation guided by the tutor (SEG 17.96%).

In relation to the interactivity segment Tutor's interpretation supported by questions (SIP), aids were distributed across the three dimensions analyzed, with a similar percentage corresponding to both fostering dialogue (39.33%) and helping with interpretation (37.81%). A smaller percentage corresponding to establishing relationships between academic knowledge and practical situations (22.95%) was found. The results also show that these aids appear more often in this SI than in any of the others. The most frequent aids for fostering dialogue are opening up the conversation to other members of the group and asking a student teacher a specific question to encourage them to expand on their contribution to the conversation (CM 12.7% and CA 12.4%). In relation to aids for helping with interpretation, the most frequent were identifying new factors for reflecting on the situation (IIF 13%) and establishing a new global interpretative framework (IM 10.3%). In the third dimension, the most frequent aid used was making connections with academic knowledge (REA 14%).

When the academic tutor organized the activity by exploring the different elements of the situation in a highly guided manner (SEG), she provided a wide range of differ-

ent aids. The most frequent aids (52.19%) belonged to the dimension aids for helping with interpretation. The academic tutor provided aids for identifying new factors (IIF 25.5%) or referred back to factors mentioned earlier by either herself or a student teacher (IRF 13.4%). The second most frequent dimension of aids (41.91%) were those designed to foster dialogue. Among these, of particular relevance are those aimed at encouraging student teachers to participate in the conversation (CM 13.1%) and those consisting of taking a student's contribution into account and rephrasing it in more general, complex or precise terms (CEc 10.6%).

To conclude our analysis of Case F, we can characterize the profile which refer to the strongest relationships observed between interactivity segments and the different types of aid identified (analysis of concurrences). The results indicate that the strongest segment-aid pair structures are located in the SEG and SIP interaction segments.

The interactivity segment, tutor's interpretation supported by questions (SIP), is extremely important, not only because it is the largest segment in terms of the percentage of time spent on it in all sessions (29.81%), but also because an increasing amount of time is spent on it as the sessions progress. In this interactive segment, the strongest contingent pairs identified correspond to opening the conversation up to other members of the group (SIP-CM 3,15%), identify factors which are relevant for interpreting the situation (SIP-IIF 3,22%) and establish links with academic knowledge (SIP-REA 3,5%).

At the same time, another segment in which more intense relationships were observed with specific aids is the SI Exploration of the situation guided by the tutor (SEG). The SEG segment is characterized by the academic tutor providing aids aimed at opening up the conversation to other members of the group (SEG-CM 3.08%) and identify (SEG-IIF 4.05%) or remind (SEG-IRF 2.14%) student teachers of factors which are relevant for interpreting the situation. The SEG is a very important structure for the development of the sessions, since it is the second-most common interactivity segment as regards total time duration (17.96%).

Both the CM and the IIF aids appear in both interactivity segments, and their presence is significantly stronger than that of the others. We can therefore conclude that these are the most common aids used by the Case F academic tutor to foster reflection during Practicum sessions.

Analysis of Case H

Aids for fostering dialogue and aids for helping with interpretation appear with similar frequencies (32.08% and 39.41%, respectively), and together account for 71.49% of all aids provided by the academic tutor. In the first of these dimensions, the most characteristic aids are opening up the conversation to other members of the group (CM 11%) and taking the contribution of a specific student teacher into consideration for rephrasing it in more academic terms (CEc 10.3%). The second dimension is characterized most particularly by the identification of new factors for understanding the educational situation (IIF 16.3%) and reminding student teachers of factors discussed earlier (IRF 13.2%). The third dimension accounts for 28.5% of all aids provided. In this dimension, of particular interest are aids for making connections with experience-based knowledge (REE 11.2%) and aids for making connections with academic knowledge (REA 8.56%).

We will now outline the distribution of the aids for reflection across the interactivity segments that are most representative of the way in which the academic tutor in Case H structured the sessions.

The SI Pedagogical discussion (SDP) was the segment in which most aids for reflection were provided. These aids were distributed fairly evenly across all three aid dimensions analyzed. In relation to the first dimension, the most frequent aids were opening up the conversation to other members of the group (CM 13%) and taking the contribution of a specific student teacher into consideration for rephrasing it in more general, abstract or complex terms (CEc 12.7%). However, the most common aids used by this academic tutor belongs to the second dimension. It was the identification of new factors for understanding the educational situation (IIF 17%). In the third dimension, links were established with both experience-based knowledge (REE 14%) and other situations previously analyzed in class (RES 8.46%).

The interactivity segment Exploration of the situation guided by the tutor (SEG) was also rich in aids. In relation to the first dimension, the most frequent aids were again opening up the conversation to other members of the group (CM 13.3%) and taking the contribution of a specific student teacher into consideration and rephrasing it in more academic terms (CEc 10.5%). In relation to the second dimension, the academic tutor's most characteristic aids were to identify new factors for reflecting on the educational situation (IIF,13.5%) and to refer back to factors that had been mentioned earlier (IRF 11.69%). Aids aimed at making connections with academic knowledge (REA 9.68%) and experience-based knowledge (REE 8.65%) were also observed.

In the Exploration of an element of the situation segment (SEE), the majority of the aids provided belonged to the second dimension (46.91%), and consisted of identifying new factors (IIF 16%), referring back to factors mentioned earlier (IRF 18.44%) and encouraging participants to consider new factors (IAF 8.37%). This does not mean, however, that other aids focusing on dialogue were not identified, and indeed these first dimension aids accounted for 24.99% of all those provided. Thus, the SEE segment contains tutor interventions aimed at opening up the conversation to other members of the group (CM 8.04%) and taking the contribution of a specific student teacher into consideration and rephrasing it in more academic terms (CEc 9.9%). Finally, the most common aids used to establish relationships between academic knowledge and practical situations were making connections with experience-based knowledge (REE 10.9%) and academic knowledge (REA 9.3%).

In the Use of academic knowledge interactivity segment (SUC), although fewer aids were provided, aids were once again found from all three dimensions. This segment is mainly characterized by the presence of aids from the second dimension (57.96%). These aids mainly consisted of identifying new factors (IIF 23%) and referring back to factors mentioned earlier (IRF 25.9%). Moreover, aids referring to the third dimension were also identified (29.45%). These included making connections with academic knowledge (REA 17.1%) and experience-based knowledge (REE 11.2%).

As with Case F, to conclude our analysis of Case H it can be stated that the strongest segment-aid pair structures are located in the Pedagogical discussion (SDP), Exploration of the situation guided by the tutor (SEG) and Exploration of an element of the situation (SEE) .

The strongest contingency pairs identified in the analysis of Case H correspond to the Pedagogical discussion segment (SDP). Thus, the conversation was focused on general pedagogical aspects, ideas and principles which were initially linked to the interpretation of the specific situation being analyzed, but eventually became a topic of debate in their own right. The academic tutor identified new factors (SDP-IIF 6.28%) and offered them up for reflection, while at the same time opening the conversation up to other members of the group (SDP-CM 4.79%), to enable everyone to voice their opinion. She also referred back to factors identified previously (SDP-IRF 3.34%) and took student teachers' contributions into account, reformulating them in more general, abstract, complex or precise terms (SDP-CEc 4.69%).

Another segment in which intense relationships were observed with specific aids is the SI Exploration of the situation guided by the tutor (SEG). In these segments the academic tutor took the contributions of specific student teachers into account, but rephrasing them in more general, abstract, complex (SEG-CEc 2.5%) and opened the debate up to the group in general (SEG-CM 3.18%). She also identified new factors (SDP-IIF 3.22%) and referred back to factors identified previously (SEG-IRF 2.79%).

Finally, in the Exploration of an element of the situation segment (SEE), the most strongly associated aids are the identification by the academic tutor of new factors for reflecting on the situation (SEE-IIF 2.69%) and specific references to previously-identified factors (SEE-IRF 3.19%).

The IIF aid appears in all three interactivity segments, and its presence is significantly stronger than that of the others. The academic tutor's aim is to encourage joint reflection on the action, and she achieves this mainly by identifying important factors of the situation.

Conclusions and final remarks

We have analyzed how educational aid is articulated through different ways in which the activity was organized (SI). The results in both cases indicate the presence of classroom organization methods based on the exploration of experiences described by student teachers through structured questions. Many aids are provided aimed at fostering student teacher engagement, highlighting student teacher contributions to the conversation, rephrasing said contributions in more academic terms and, above all, introducing new interpretative elements into the discussion. These elements interpretative can either be ones that have already been brought up, thus ensuring a greater degree of consistency and cohesion between the different interpretative frameworks developed. One fundamental profile of both academic tutors was that all aids were provided through asking a large number and types of questions.

Regarding the variability of interventions in both tutors, in the case of academic tutor F, reflection was fostered not only by providing new factors that could be used to interpret the situation, but also by including more global interpretative models. In the case of academic tutor H, she used aids involving making connections between different types of knowledge, drawing parallels between situations experienced in the Practicum and autobiographical experience.

The results have shown that although there are many coincidences in the functions that are fulfilled in the classroom between the two academic tutors analyzed, the functions are not equal in terms of their architecture. We agree that reflection is a spontaneous practice. Even when there is the purpose of intervening by making student teachers reflect, the course of the conversation does not follow standardized patterns, but flows according to the dynamics of the conversation itself. Although the SI identified show common functions between both academic tutors, neither did they occur in the same order, nor with the same frequency, nor with the same coordination between different SI.

A first conclusion that we can draw from our results is that even when Practicum academic tutors are encouraged to promote practical reflection, such reflection do not consist of a sequence of consecutive standardized steps. Instead, it can be described as a situated cultural activity, dependent on the context of the action, and which is dynamically articulated according to the discursive course of interactions.

With regard to teacher training, this means that rather than directing efforts to develop interventions based on a prescribed series of phases, even if they are designed to be flexible, it is necessary to train Practicum academic tutors in strategic behavior. This will allow them to know the functions that they can implement to build effective reflective practices in the classroom. This results in which diverse patterns of intervention are shown and characterized, will be clearly useful for the training of practicum academic tutors.

In addition, our study has deepened into the procedures that Practicum academic tutors use within the discourse to regulate joint activity of student teachers in the classroom (Aids to Joint Reflection). We have classified them into three dimensions, which have been those of dialogical, interpretive and theory-practice relationships.

A second conclusion is that the academic tutors' aids have not been characterized by prioritizing the elicitation of the relations between theory and practice, nor the establishment of a defined version of what the intervention in a school classroom should be like. A high percentage of the reflection aids have consisted of Aids for Fostering Dialogue and Aids for Helping with Interpretations. We agree that reflection processes mean not only decision making (Clarà et al., 2019), but to a greater extent the diversification of the ways and perspectives of understanding and interpreting educational situations (López-de-Arana Prado et al., 2019; Loughran, 2002; Postholm, 2018).

The Aids for Establishing Relationships between Academic Knowledge and Practical Situations, meanwhile, were only some part of the intervention. More frequently, the interpretive frameworks were constructed by helping student teachers to identify new factors to interpret the experience, rather than by establishing a global conceptual explanation that would guide the interpretation of experience.

Among the aids for establishing links, the academic tutors not only encouraged participants to make connections with academic knowledge, but also with experience-based knowledge or other situations of a school nature or not. Authors such as Matusov and Marjanovic-Shane (2019) have precisely pointed out that reflection implies the whole person, including their emotions and interests. Mathew et al. (2017) have stated that student teachers are able to understand themselves through reflective practices that

connect very different aspects of their experience. From them we extract the idea that reflecting on multiple aspects of teaching helps to develop more integrated and complex frameworks of understanding.

We consider that the academic tutors analyzed in this work have cooperated in the development of the student teachers agency and an identity within a community of practice (Flores-Lueg, 2022; Miller-Rushing & Hufnagel, 2022; Ratner, 2000), making them understand their actions as intentional interventions and the possibility of improving the understanding of an educational situation through reflection. The dialogue of the academic tutors strongly charged and oriented to questions about specific aspects placed the reflection as a strategic behavior about what we interpret and what we do in a concrete educational performance. In this sense, the complementary analysis of the students' interventions will be fundamental in future studies. Also, given that our main interest was to analyze the discourse of the tutors, a disaggregation by sex was not carried out in the sample of students, although the inclusion of the gender dimension would suppose a possible improvement.

Finally, we understand that the set of elements described in this work, both in terms of interactivity segments and discursive aids, must be taken into account in an agenda not only for student teacher training, but also for Practicum academic tutors training. Many of the actions of academic tutors are invisible to themselves. The discursive resources they use are mostly developed as routines or techniques. This routinization of teaching resources has to be transformed into a conscious process, into strategic knowledge. The qualitative contributions of this study imply being able to restructure the Practicum towards a format that clearly reflects the connection of the context of practical teacher training with the schools and communities in which they are integrated. This also entails a conception of teacher training from the necessary integration of theoretical explanatory models with singularity, the management of uncertainty and the development of critical thinking necessary for the performance of the teaching profession. For the socialization of student in the teaching functions, being the tutors responsible for generating reflection processes, it seems obliged to pay attention to the competencies and training that the Practicum tutors need. We believe the categorization of aids that has been described in our work is in itself an analytical tool for academic tutors. The very fact that the Practicum academic tutors consciously know the range of help they provide in their intervention, what they are aimed at and how they structure them over time, would allow raising the level of routines to a strategic knowledge. It would enable control -agency- and open the field to improving teaching.

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