

CRAFTING LESSON STUDIES IN INITIAL TEACHER TRAINING: CHALLENGES FOR ACADEMIC TUTORING¹

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This communication presents the results of a research project focusing on the pedagogical potentiality of Lesson Study for initial teacher training. Specifically, we focus on academic tutoring and how university teachers can accompany and enhance the reconstruction of practical knowledge by student teachers. Over the course of our research, we have identified a series of strategies that help university teachers to develop this work, but also a set of challenges that need to be resolved.

Research context

The project is developed through several case studies dealing with experiences of using Lesson Study in initial teacher training at Málaga University. This paper focuses on a Lesson Study case study process developed as part of the subjects Practicum III and Degree Essay, which are seen in Year Four of the Infant Education Degree course. The first two authors are the tutors of both groups. Each one of us carried out the case study for the other group. The third author supported the group 2 case study.

These subjects are closely related to each other, as required by the University's governing board. The regulations of Faculty of Education of University of Malaga establish that the subject Practicum III must consist of a period of practical training lasting four months in a Pre-school centre (ages 3 to 6 years). During the Practicum III, students must design an Autonomous Intervention Project, showing their ability to diagnose, plan and develop an educational proposal in line with a given context in their practicum centre. The Degree Essay focuses fundamentally on reflection on the Independent Intervention Project completed, analysing its strengths and weaknesses, and the improved design of this proposal by incorporating the learning developed throughout the process. This structure is conducive to developing the seven Lesson Study stages over the two semesters of the course, providing ample time to develop the entire process) (Soto, Serván and Caparrós, 2015).

Our cases comprised two LS groups with different tutors. One of them was formed by four students (group 1) and another by six students (group 2). Group 1 carried out its practical training at two different schools (three at one school and the fourth student at another); Group 2 carried out its practical training at four different schools (two schools with two students and two schools with one student). One student from each group was chosen for further study.

Designing the research

The information collection strategies we used to investigate the chosen case were observation (OB), interview (E), documentary review (DOC) and the researchers' diary (DI).

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Observation	11 seminars, 2 work meetings, four experimental lessons, tutor sessions and defence of the Degree Essay
Interviews	Two group and two individual sessions, at the beginning and end of the process.
Documentary review	All versions of the Autonomous Intervention Projects (LS design) and the two portfolios and LS of the two students chosen for further study.

Table 1.
Tools for collecting information

All information, for both case study 1 (EC1) and case study 2 (EC2), was transcribed and categorised for analysis. As indicated above, this work presents the results of the tutoring of university teachers in the LS process.

Theoretical framework: The meaning of academic tutoring

Both tutors shared the meaning of their work, which they had designed together within the framework of the research project that these experiences formed part of. The purpose of the tutoring was for the student teachers, through the Lesson Study process, to reconstruct their practical knowledge and develop their practical thinking.

We have defined practical knowledge, or knowledge-in-action by Schön (1998), as the set of beliefs, skills, values, attitudes and emotions which operate automatically, implicitly, without the need for consciousness, and which influence our perception, interpretation, decision making and action. Practical thinking fulfils a more holistic, systemic function and includes knowledge-in-action and reflective knowledge-on-action. In other words, it comprises all resources (conscious and unconscious) which we, as human beings, use when trying to understand, design and intervene in a specific personal or professional life situation.

Few individuals, including teachers, are aware of these maps, images and artefacts which make up their repertoires of practical knowledge and which they put into action in each situation. Such repertoires contain assumptions, organised to a greater or lesser degree, on one's own identity, on the identity of others and on the context, which act as a platform for perception, interpretation and decision-making. These assumptions constitute a microcosm of diverging day-to-day knowledge which occasionally contradicts the theories explicitly espoused by the individual in order to explain his or her behaviour (Zanting, Verloop and Vermunt, 1998). To this end Argyris (1993) emphasises the need to differentiate between "theories-in-use" and "espoused theories". The personal and professional efficiency of each individual is related to the level of congruence which he or she is able to achieve between these "theoretical" devices –espoused theories and theories-in-use–, and there is little doubt that serious differences between the two imply high doses of dysfunctionality in interpretation and in action (Soto et al., 2015).

The main purpose of our tutoring is therefore to shorten the distance between our students' espoused theories and their theories-in-use, through the design, experimentation and cooperative evaluation of curriculum-making projects within the framework of Lesson Study, thus developing their practical thinking. In this regard, we understand that the curriculum can be seen as creation or recreation based on generating proposals, and involves a creative process by the teacher, who interprets classroom life and recomposes and redirects his or her forecasts in line with events and

requirements. The teacher is therefore a creator of circumstances, a builder or creator of the curriculum (Clandinin and Connelly, 2000). We try to make our students understand the capacity they have to make the curriculum; to create contexts based on the needs and interests of children, where they can develop skills through relevant learning; to mediate between the children and these contexts; and to observe and assess the learning of these children, in order to reflect on their own practice in a process of continuous improvement.

Developing the experience: Core aspects of tutoring

The tutoring carried out in the research cases was characterised by a series of fundamental core areas:

- Accompanying throughout the methodological and cooperative Lesson Study process, by means of a series of documents for guidance through its different stages and follow-up seminars.
- Creating a climate of trust and closeness in order to reduce the emotional tension of questioning one's own ideas and values.
- Detailed, individualised feedback on the various individual and group tasks.
- Questioning, posing questions that stimulate reflection among students, allowing them to find their own answers.

Accompanying the methodological and cooperative process of Lesson Study

The two experiences studied come together in a meticulously thought-out tutorial function, both in terms of form (drafting of materials and support guides) and in the more human face-to-face part of this accompaniment.

With regards to the more formal aspects, the LS process is introduced in the first seminar, providing students with a joint guide for both subjects in order to explain the different stages of the process. This guide has been drafted collaboratively by the different teachers who use LS in the framework of these subjects. Below are images of the guide cover, the page where the stages of the LS are presented, and one of the pages where these stages are explained (stage 1, finding a focus for the LS; stage 2, cooperative lesson design; and stage 3, first experimental lesson).



Figure 1.

Academic guide in which the stages of LS are explained to students

The content of the guide is explained in detail in the first seminar, and any doubts the students may have are resolved. Here we can see one of the slides of the presentation used, which explains the stages of the LS in relation to both subjects:



Figure 2. Prezi presentation used to explain the stages of LS and their relationship with the subjects

The seminars and intermediate tasks are then organised, accompanying the different stages of the LS:

Stages of LS	Seminars and tasks
Stage 1: Search for the focus in the first two seminars.	- Seminar 1 (SE1) where the process, meaning and structure of the LS are presented, followed by a time at the practical training school in order to diagnose the needs and interests of children and their own training requirements, allowing us to find a focus for the LS. - Seminar 2 (SE2) where the focus of the LS is decided (Stage 1), followed by a period of bibliographic review on the different themes of this focus.
Stage 2: Design the Experimental Lesson (EL)	Seminar 3 , group meetings and subsequent seminars.
Stage 3: First Experimental Lesson (EL1)	Seminars are held after the two Experimental Lessons, in order to review them cooperatively in the light of the evidence collected.
Stage 4: Review and redesign	
Stage 5: Second Experimental Lesson (EL2)	
Stage 6: New review of the Lesson	- Final group seminar to take stock of the whole process. -At least four individual tutorials in the second semester in order to complete the Degree Essay, which accompanies the search for a new focus and the development of a new proposal for improvement.
Stage 7: Dissemination in extended context	Last seminar , where the defence of the Degree Essay is prepared.

Table 2. LS stages and relationship with the seminars and tasks developed by students

Other documents that accompany the LS methodological process are offered throughout these stages and at appropriate times, such as the teaching response table and an observation table model. In the teaching responses table, students are asked to put forward hypotheses on different situations that may occur over the course of the proposal and to envisage teaching actions in response and in keeping with the goals they have in mind for the LS.

Likely situations	Teacher's responses: things to remember
<p>Here you would set out which unexpected situations may occur when developing the proposal that may require the intervention of the teacher.</p> <p>Examples to guide you: The children.... Something's not working... There's a conflict... This material... It isn't happening as it should....</p>	<p>Here you would set out which things you should remember about your own performance. You can also envisage how you would make use of the responses you have anticipated from students in the previous column in order for them to develop more relevant learning.</p> <p>Questions to guide you: Is there a specific issue I should keep in mind? What will I be doing in each planned activity? How will I respond to the difficulties the children may encounter? What common mistakes should I avoid? I'll make sure not to do or say...</p>

Table 3.
Table on the teaching role proposed to students

The observation table has a column to set out the goals of the lesson, another one for hypotheses on situations that will demonstrate the development of these goals, and a third column to collect evidence of children's learning through notes or images.

Goals/Assessment criteria	Expected responses	Evidence
<p>Here you would set out how you are going to assess whether the didactic proposal is meeting its specific purposes, describing the learning goals you have established for the children and the specific assessment criteria and means you will use. You should explain what you are going to focus on, which children's behaviour you will observe and which products they will make. You should also describe how you will collect information about these aspects.</p> <p>Questions to guide you: What should I focus on in order to know if I am reaching my goals? What have I learned regarding pupils' learning? How will I know that the children have overcome their difficulties? What skills should the children have developed at the end of the proposal? How will I know that they have developed them? What information will I collect to prove it?</p>	<p>Here you would set out what the children would do, and anticipate their possible responses to the activities you propose.</p> <p>Questions to guide you: What do I expect from the children? How will they respond to what I ask? How will they use the resources and materials I place at their disposal? What difficulties will the children encounter?</p>	

Table 4.

With regards to supporting the methodological process in person in the different seminars, the tutors have –beyond the documents– played an active role, living the process from within, while collecting, contributing and reformulating the information, always at the service of the group. The role of the tutors has been fundamental in order for the group to find common points both when agreeing on a focus for the Lesson Study and also when preparing a joint design.

For example, in the first stage (search for the focus), both tutors struggled to extract the common concerns they came across when reading the portfolios and online exchange forums. The case 2 tutor prepared a document sharing these concerns, which provided support in the seminar on finding the focus, and also facilitated the process by providing continuous form paper where students could note down the agreements they reached with regard to their aims as teachers and the children's needs and interests.

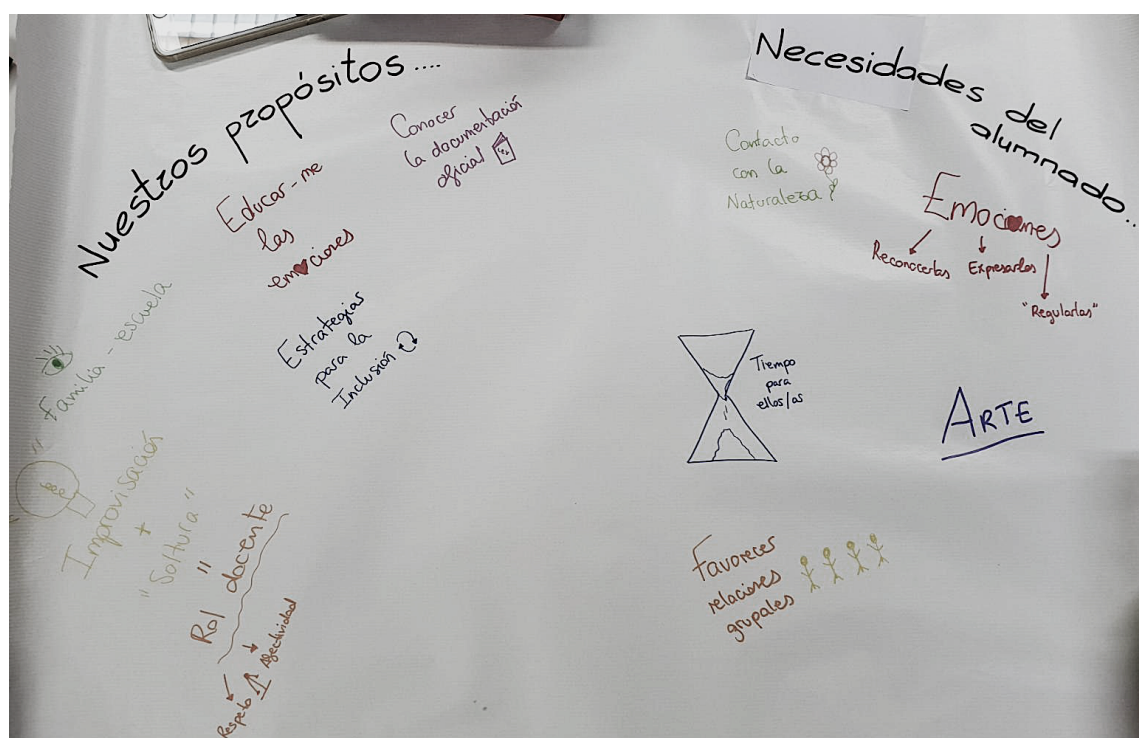


Figure 3.

Visual brainstorming carried out by the case 2 students in the focus search stage

This role was also developed during the design stage, during which the tutors paid careful attention in the seminars in order to find common points between the students. An example of this is when the case 1 tutor (after a dialogue between the participants on the importance of allowing the children to express themselves) took the opportunity to strengthen the common bonds between them, and make them once again see the similarities between their ways of thinking:

"Tutor: Everything you are discussing involves the principles you share. This is something you can take into account when designing, to ensure your proposal is not rigid. You have to think about situations in which the children have freedom to speak, to express themselves, to not limit themselves to what you had initially thought." (EC1, OB-SE2, DUR-LS, 11/2018).

Another strategy that contributes significantly to the smooth development of the LS process is careful group work, establishing clear roles among the members of the group in order to ensure it works effectively and autonomously. At the start of the meetings, the tutors asked to appoint a *moderator*, who would help facilitate the discussion by taking the floor and making sure everyone gets involved; a *secretary*, to note down all agreements reached; and the person known as the *streetlight*, who ensures the discussion remains focused on its goal. This allowed the tutors to remain in the background and to restrict their interventions to those occasions when they saw the need for the group to go deeper into their reflections.

Creating a climate of trust and closeness

Since LS implies questioning one's own ideas and values –which define our teaching and personal identity–, it may involve a highly emotional process in learner-teachers, precisely when their status as beginners makes it difficult for them to question the practice, ideas and values established in the school community and to lay bare their uncertainties and shortcomings. This is why it is necessary to create a climate of trust and closeness when accompanying the tutor.

Right from the very first seminar, care is taken to create this climate through a dynamic presentation in which the tutor and all members of the group introduce themselves:

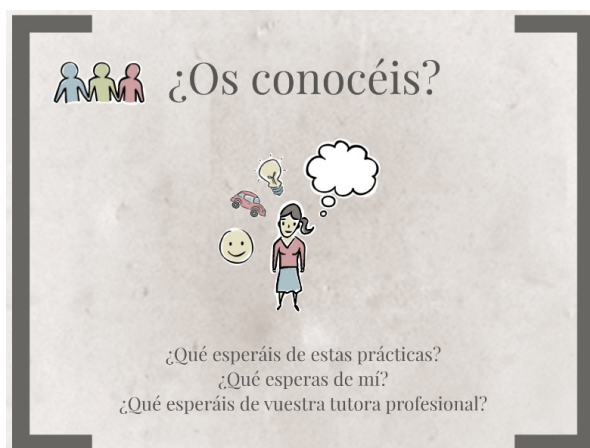


Figure 4.
Viewing the presentation used to strengthen emotional ties with students

On occasions, taking snacks to share during the seminars also helped create a more pleasant climate.

Moreover, in the case of group 2, the tutor had received training in emotional intelligence, and always began the seminars by asking the students about their feelings. She did this using an emotional thermometer, asking students to assess the intensity of their emotions (where red was the highest intensity, and blue the lowest), and whether these emotions were more pleasant (green) or less pleasant (blue).



Figure 5.

Emotional gauge used by the tutor to help future teachers express themselves emotionally

This created a climate of trust in the group, allowing the participants to share more or less intimate situations, and offered some relief at the start of the seminars, thus providing the serenity required to concentrate on the task:

Tutor: *I don't know if any of you have seen this emotional thermometer before, but I can explain very quickly. It was created mainly so we do not have to give a typical "fine" or "not so well" response when asked how we are feeling (...), allowing us to nourish our emotional vocabulary a little more. Emotions can be high or low, depending on the degree of intensity, and with pleasant or unpleasant feelings. The range of emotions we can feel are included in the four boxes. They can be more intense, less intense, more pleasant, less pleasant. I would like you to go to the square which represents how you are feeling right now, not with regards to the practical training but how you actually feel at this moment.*

Au: *I'm worn out.*

Tutor: *Come on, who wants to start?*

S: *Start by saying what? How we are feeling?*

Tutor: *First choose the colour, and then, if you want, give your emotion a name and explain a little about why you are feeling this way.*

An: *I love green. I will say I am low on energy as I am a bit under the weather... well, not so much under the weather, more a little down... several things have happened recently, although I have not given up hope. So I would say my current state is hopeful.*

Tutor: *Your emotion may be low in intensity, but it is pleasant, right?*

An: *It's as if emotionally... physically, I'm not feeling too well, but mentally like I'm hopeful of getting better, both emotionally and physically.*

Tutor: *Anyone else?*

L: *Me too, I am also pleasant in terms of feelings. I'm not ... My feeling right now is not unpleasant, but I am nowhere near my maximum in terms of energy. I would say I am aqua green.*

Au: *Me too, I am very low in energy but doing well in terms of pleasant feelings.*

S: *Well my case is the exact opposite. See the little square just next to low? Well that's me right now.*

An: *The black one?*

S: *Exactly. Black.*

Tutor: *Unpleasant and low?*

L: *Why do you say that?*

S: *Right now I'm feeling depressed.*

Tutor: *But is this feeling related to the practical training, or to personal matters?*

S: *Personal matters.*

An: Yes, we're all affected by lots of different things, right?

Tutor: Come on, let's all give her a hug.

An: No way can you say you are unpleasant, you have made me feel a lot better." (EC2, OB-SE2, DUR-LS, 11/2018, V1, 3:20).

This space was received very positively by the students.

"An: Being asked how you are doing when you arrive. How do you feel? Have you ever experienced this before? Because when I come here I say: Great! It's like being with a group of friends, chatting for a while and then getting to work. For me that was comforting. How are you feeling today? Nobody ever asks me that. You are going to be listened to, if only for five minutes. It makes you feel good. And even if it's just a few minutes, it always ends up lasting a little longer. It's really worth it." (EC2, OB-SE5, POST-LS, 02/2019, V2, 12:33-13:20).

Another important issue that reinforced this climate of trust and closeness was the constant willingness of tutors to resolve students' doubts. They used all the seminars observed to reiterate their willingness to discuss issues with students by e-mail or in personal tutorials, and their openness to answer all kinds of questions.

Feedback

The tutors offered very detailed, personalised feedback in both the group and individual tasks in the different stages of the Lesson Study.

Tutors commented on the diary that students used to collect information about their contexts or reflect on the different experimental lessons. This diary was part of their portfolios, which were hosted in the UMA Portfolio application (based in Mahara) on the University's Online Campus, thus facilitating online feedback through comments on the pages where they shared this diary with the group.

16 de noviembre de 2018
Enviado por Paula Collado Pérez en 16 noviembre 2018, 9:55

Antes de que sea la hora de entrada, Isa y yo hablamos sobre lo que vamos a hacer hoy. Como la actividad de las letras de ayer tuvo éxito, volveremos a sacar las letras para quien quiera volver a hacerlo. Me explica que esta actividad, no es de lectura ni de escritura, sino de lógico-matemática. Pues están haciendo correspondencia uno a uno. Está en la mano por lo que ayer, por ejemplo, Lisa, puso las letras de la mano del papel aunque fueran diferentes. Es decir, estaba haciendo correspondencia de una letra de madera con una letra pintada. No obstante, hay niños y niñas que son capaces de hacer esta correspondencia y además hacerlo con la misma letra. Yo no había pensado que fuera una actividad de lectura ni de escritura, pues en ningún momento se está escribiendo, ni leyendo, incluso ni diciendo las letras, pero tampoco había pensado que fuera una actividad de lógico-matemática, pero ahora con la explicación de Isa me ha quedado mucho más claro. Me gustaría ir dándole cuenta de estas cosas yo sola, pues pienso que me ayudaría mucho más a ver todos los procesos de aprendizaje de los niños y niñas y me podría acompañar mejor en ese proceso. No obstante, pienso que esto lo iré mejorando con la práctica, por lo que espero que cuando termine las prácticas haya sido capaz de conseguir esto.

Cuando llegan los niños y niñas nos vamos todos a la colchoneta para hacer la asamblea. Cantamos las canciones y cuando Isa va a intentar explicar lo que vamos a hacer, todos se levantan antes de que le de tiempo para empezar a hacerlo, pues ya saben de qué van. Isa se queda en una mesa y yo me quedo en la otra, las dos haciendo lo mismo. En mi mesa veo como, por ejemplo, Vega y Tania, hacen una correspondencia con las letras de su nombre correctamente, mientras que Aria, por ejemplo, lo hace con las letras diferentes, pero también asignándole una letra de madera a cada letra pintada. No obstante, no todos quieren jugar a eso, por lo que otros pintan, reorganizan su nombre, pegan pegatinas, etc.



Con Isa está Enzo, quien cada vez lo hace más rápido. Enzo pide hacer muchos nombres de los compañeros y compañeras, no pide el suyo, ni papá, ni mamá... Esto nos sorprende porque es un niño que, por ahora, no se suele relacionar con los demás y la mayor parte del tiempo está jugando solo.

Cuando ya no quieres seguir haciendo palabras, reorganizamos y sacamos plantilla para quien quiera, pues la mesa ya se ha quedado libre.

Me doy cuenta de que Enzo ya está en un nuevo juego. Está haciendo uso del tubo de cartón y las piezas de madera de construcción. Mete las piezas por el tubo para que caigan hasta abajo, observa dentro del tubo antes de meterlas, y después para ver cómo van cayendo. Cada vez que ve cómo una pieza llega al final, se rie. Cuando ya ha tirado por el tubo todas las piezas, las saca formando una fila con ellas, y cuando están todas bien colocadas, pasa a un segundo nivel. Ahora pone el tubo en la mesa de la arena y sigue haciéndolo lo mismo. Sigue el mismo procedimiento en todas las ocasiones y lo repite una y otra vez sin aburrirse. Yo lo observo y no me aburre de hacerlo. Pasa a ser un proceso tan sencillo como el de "mirar, tirar, mirar, sacar", me parece que está siendo muy interesante todo lo que Enzo está haciendo. Él está súper concentrado, y cada vez que consigo lo que espero, es feliz.

Comentarios

María José Serván Núñez
07 noviembre 2018, 2:18

Hola Paula

Aunque ya te comenté algo ayer, unos comentarios más personalizados y tranquilos a tu diario. Como te dije ayer, felicidades. Qué bonitos son los comentarios que haces sobre las situaciones que te regalan los niños y las niñas. Qué bien has aprendido a mirar. Estoy deseando que los juntes con las fotos. Y, aunque son casi perfectos, serían ya casi inmejorables si consiguiéras relacionar lo que has aprendido en la Facultad con estas descripciones y hubiera referentes teóricos que apoyaran lo que vas contando y te ayudaran a ver por qué así están aprendiendo, porque son situaciones que merece la pena describir y registrar con la belleza que lo haces, por qué merece la pena mirarias.

También me parece estupenda la forma en que te das cuenta de que cada niño y cada niña es único e irrepetible y lo mucho que te esfuerzas en respetar eso y cómo lo vas consiguiendo como fruto de este mirar. Eso te ayudará a diseñar propuestas donde nadie quede fuera. Enhorabuena.

Como decíamos ayer, veo que hay dos temas que te preocupan: el miedo de los niños y las niñas a salir al patio y la dificultad del momento de recoger. Creo que merece la pena que pienses más sobre ellos y te atrevas a plantear algunas alternativas desde esa sensibilidad que te da el saber mirar a los niños y las niñas y comprenderlos y la formación más teórica que habrás aprendido en estos años. Seguro que a Isa le vendrían bien tus propuestas.

Una cosita, veo que te planteas cambiar de aula. En principio no es posible, Isa es tu tutora profesional, es tu responsable y deberías estar todo el Practicum con ella. Porque además necesitas conocer bien a los niños y a las niñas para quienes vais a plantear la intervención y luego poder ver consecuencias de la misma en el día a día. Eso no quita que algún día suelto vayas a ver cómo trabajan otras compañeras pero tu referente siempre tiene que ser Isa, ella es la responsable de tu formación en el colegio y con ella debes estar la mayor parte del tiempo.

Bueno, si tienes alguna duda, ya me dices. Un saludo.

Figure 6.

Online academic diary of student (left) with tutor's feedback (right)

The importance of these comments for learning can be seen in an interview with one of the students.

"Our relationship with the practical training tutor has created a special bond with her. I think something has changed between us thanks to the documents and the responses, and the feedback she has provided. Even if it is only through what we write and her responses, obviously. I think this has played a big part. Only the other day I said to her: It's like I'm starting to see the light, I have finally pressed the right key." (EC2, EI, DUR-LS, 11/2018, V5, 0:58-2:09).

design documents of the experimental , shows an example of the profusion gives us an idea of the level of detail

Figure 8.
Example of tutor feedback in the proposal design document

In this feedback, the tutors were careful to strike a balance between specific suggestions for improvement and positive assessment of the qualities of the work, thus ensuring that students felt motivated. An example of this moment, during the design correction seminar in case 1, could be as follows:

"Tutor: This section is good. Very good. You are correctly collating what you think of the curriculum with your ideas about it. You have paraphrased it with literal quotes, and there is a very good exercise. It is very good indeed (...), as distinguishing the goals of the content is one of the most difficult things to do." (EC1, OB-SE4, DUR-LS, 11/2018).

In this regard, it is important to highlight the rigour shown by the tutors' interventions in their comments, demonstrating their mastery of many of the themes that emerged, which is fundamental for progress in the group meetings. The tutors' intervention was key to students understanding the value of theory when designing and assessing the experimental lessons. The following evidence shows the tutor's intervention when students were struggling with two of the concepts studied: environment and installation. In this case, knowledge of the content worked on by the tutor was key to the group's development:

"Tutor: This coexistence between environment and installation... you also have to read about installations. Have you read Javier Abad? He is practically the only person who talks about installations. So it couldn't be easier. In the art world, artistic installations have their theoretical justification, something which is totally outside of the pedagogical (...). Abad is based on Reggio, but he focuses it in a different way. And if you read Reggio, you will never find the word installation, but rather the term projects." (EC1, OB-SE4, DUR-LS, 11/2018).

Judging from the students' comments, it appears that the feedback was very effective.

“An: Another thing we should celebrate is the feedback, which I always eagerly anticipated... It always included some tips for improvement, without ever undervaluing our work...”

S: This motivates you a lot.

An: It is a way of feeling you have been read, that people are taking note of what you are doing and valuing it.” (EC2,OB-SE6, POST-LS, 02/2019, V5, 11:32-11:57).

Questioning

Another core aspect is continuous questioning in order to ensure the students construct their curriculum-making project by themselves, reflecting on the decisions they make and the effects they have on the children, while evolving in both the design of a context in which the autonomous development of skills is increasingly possible and also in the construction of a role that mediates between the children and the context. In this example we can see how the tutor, through her questions, guides the discussion in the seminar after the second experimental lesson, first asking questions that help the students to reflect further and then, once they have reached conclusions by themselves, offering concrete suggestions to resolve the dilemma.

“M: Initially I observed how you stayed in the corner, crouching down with them... Once you had been there for a while, I could see the need for you to move, because at the moment you move they would all go. Finally you moved, you got up and they all moved away... It's the only thing I've seen clear in your role.

L: I was there a long time, right?

M: Yes, you were talking with them and suchlike, but there came a moment when I said: if you get up, maybe you will be able to encourage or invite them.

L: In fact, they did become a little more active once I got up. (...)

Tutor: *Just changing position, or doing something?*

I: Touch the material, there are plenty of brushes...

L: O: Oh, heavens above! I don't know, maybe... arouse their curiosity.

A: In my practical training school, when we see that we have not captured their attention or there is nobody in a micro-environment, we find that the best thing to do is to approach it yourself (...). Pick up your things, stand up and go there, and then start doing whatever activity you want. Simply doing this invites them to come to this space.

Tutor: *Of course, if L. had stepped onto the canvas at the very start, maybe the children would have seen it... if she had taken some material or done something, maybe the children would have...*

Au: Or maybe sit on the canvas...

Tutor: *First try this, something spontaneous, but if you see after a while that it doesn't work then perhaps...” (EC2,OB-SE6, POST-LS, 02/2019, V4662, 4:52-6:39/8:49-10:35).*

Both tutors emphasise the importance of not losing sight of the goals set by the group, meaning the purpose of this questioning is often to bring the students to them. At the time described below, group 1 analyses an unforeseen situation after completing Experimental Lesson 1: the children have started to play something that had nothing to do with the proposal. What should we do in such a situation?

Tutor: Those moments when the children were playing something else, what were they playing?

B: They were playing at being babies.

A: They were playing babies for a while, then they went away and potted around with the resources we had designed for them, but then went back to playing at babies.

Tutor: And what does that tell you?

A: It is the culture of childhood, the need for symbolic play, to play house.

V: It is something that arises spontaneously in children.

Tutor: If it is something that cannot be avoided, then what is the solution? What can you do?

A: Leave them.

P: I would leave them.

A: After all, they have also shown emotions.

Tutor: Yes, but couldn't you do something to integrate this game in your proposal rather than standing aside?

(...)

A: What do we do when something like this happens? Interrupting their game would surely not be appropriate...

Tutor: With regards to the goals... is it good? Is it bad?

A: They exchange emotional states, which is one of the goals, but they stop using the resources we have prepared.

V: But similarly, we cannot disrupt their need for playing.

Tutor: If your goal really is skills development, then your proposal is for children to develop skills. So it is not necessary for them to do something specific.

B: The goals are being developed through something we had not anticipated.

V: The goals are being met, not with the prepared material but rather in a different way." (EC1, OB-SE5, DUR-LS, 01/2019).

This questioning is also used in written feedback, as in this example of feedback and a diary:

"In the second critical incident you reflect on how a child did not want to speak in an assembly about a subject that affects him (the birth of his brother). What happens if a child does not want to speak in an assembly? How do you think the child felt at the time: sad, angry, ashamed? This emotional information of the child can help us in our decision making. Perhaps he felt embarrassed to speak, or maybe he's having a hard time assimilating the new situation at home and doesn't feel like talking about it... As a teacher, what answers would you develop in both cases? How important is the assembly to work on these subjects?" (EC2, RETRO DOC-PF, DUR-LS, 12/2019.).

The challenges of tutoring

Now we have described how Lesson Study tutoring develops in the context of the Practicum III and the Degree Essay, we can address those issues that constitute dilemmas and that both the tutor and the students indicate as problematic. These are the challenges we need to face in order to improve. The case studies provide evidence of three key challenges for the work of the tutors: how to prevent students from losing the sense of the task when formalising the documents, seeking only to satisfy the tutor; how to achieve the balance between interventionism and autonomy; and how to promote students' cooperative work.

Formalisation vs. sense of the task

Throughout the research we have noticed that students get excited when designing and assessing the experimental lesson (at which point they are highly creative), only for this enthusiasm to turn to boredom when formalising it in writing, often losing the sense of the task and being driven solely by the need to meet the tutor's formal requirements. For example, in the following situation from the third seminar, when group 2 was deciding on the teaching responses table, we have an example of this separation between the action to be developed and the documents that are prepared at the request of the academic tutor:

"Au: The child will not understand the word motivating.

L: But your pupil is not going to read this, that task is for Naomi [laughs].

I: Yes, that's for Naomi... I was thinking about the children.

Au: I was thinking about what I'm going to say to a pupil, not what Noemi is going to read" (EC2, OB-SE3, DUR-LS, 12/2018, A9, 33:33-33:56).

In group 1, this discrepancy also emerged when it came to specifying the teaching action within the proposal. Although the tutor spent a long time justifying the importance of specific, consensual teaching responses, some students still did not find the sense of so much specification:

"P: Do we also have to write here the questions we are going to ask pupils in the assemblies?

Tutor: *Yes, of course. Otherwise you will have to improvise, and if you improvise you will make a mistake, and if you make a mistake you will make it alone... You are not going to make mistakes all together, which would be more constructive because then you could help each other out (...). If all four of you think about it together, you will feel very secure, and, if you are then wrong, the four of you can solve it, as you will all have a clear idea of what you have done and be able to find solutions to what has gone awry.*

A: We have such a clear idea of what we would do, and have decided to do it in such a specific way, that we seem to have decided not to explain it.

Tutor: *You will be surprised, as we generally don't see things so clearly once we start to specify.*

A: We would have chosen to act spontaneously rather than adhering to what is on the paper, that's why we have not put it down in writing.

Tutor: *Then what you do is not the same as what B is thinking. There's no doubt about that. There are nuances, hence its richness... When you pool it, you achieve almost perfection, because it is enriched by the way you all see it.*

A: It is very difficult to think about the thousands of things that can happen.

B: Especially with children, who can surprise you with almost anything." (EC1, OB-SE5, DUR-LS, 01/2019).

There are multiple references to this question in the researchers' diary:

"I feel that, although they find the drafted part of the text difficult and cumbersome (seeing this task merely as a way to pass the subject), joint decision making does indeed identify and involve them in group work." (EC2, DI-SE3, DUR-LS, 12/2018, p. 35).

How to stimulate the necessary formalisation of the design and the assessment of pedagogical proposals without losing the sense of what is being done?

Interventionism-autonomy balance

Since making decisions for themselves is complex, students often call for clearer guidance, although they also recognise that learning that comes from the ability to make autonomous decisions.

"I personally thought that she was very lost in terms of what had to be done and how, and as she did not want to... It's like everything here at the university. I'm going to show you the path to achieve your learning, but not directly... I mean I'm not going to give you the key, but rather tell you the path you have to follow. So that was it: a process of discovery alongside Naomi, from the beginning, at which point she was incredibly lost, through to the end, when all aspects related to work became interwoven to form a complete, high-quality work (...)." (EC2, EI, DUR-LS, 11/2018, V4, 3:00-4:44).

In the case of group 1, this lack of support was related to meetings in which the tutor was not present:

"We have often lacked support or guidance from her (the tutor), especially when drafting the proposal or the Essay Degree. We were aware that both of these tasks were very independent in nature, but we were often lost and overwhelmed when perhaps she could have helped us a little more." (EC1, EI, POST-LS, 06/2019).

Where is the balance between interventionism and autonomy? How can we accompany without cancelling out? How can we refrain from intervening without causing a feeling of abandonment? Are these initial burdens essential in order to learn, or could the path be more pleasant?

This is related to the fact that the tutors ask how to implement a structure to ensure students do not get lost, but without imposing, however subtly, the course of action to be followed, which will only result in students doing what they believe is expected of them. There is a thin line which separates appropriate support and accompaniment, to ensure students follow their own path, and excessive intervention, which can stifle students' autonomy. This is particularly true in on-campus seminars.

"I think the debate they are going to have in LE1 is going to be very rich, because all the things I don't want to tell them now are going to come out. Even so, I still think I tell them a lot of things... It is something I always have in mind: to intervene or not intervene? Because there are times I think: I am going to tell them, as they will not realise by themselves. But what I see is that they may realise it by themselves, so I leave it." (EC2, EI-TUT, DUR-LS, 12/2018, V166).

Learning to cooperate

The difficulties in cooperating that emerge from these experiences are reiterated and derive from two distinct factors: firstly, the difficulty in finding shared spaces and times to work (contextual difficulties), and, secondly, the lack of cohesion, listening and care in the group experience (cultural difficulties).

With regard to the contextual difficulties, the students are distributed in different practical training schools in separate cities. Moreover, some students work or are studying other subjects, making it difficult for them to set aside time to meet. This means much of the work is developed online, with all the difficulties this involves.

“Now we are concerned about not being able to meet together regularly. This is also a negative point, because the good thing about teamwork is being able to join up with your team, right? Having these debates via WhatsApp is a nuisance, and also leads to a lot of misinterpretation.” (EC2, EI, DUR-LS, 11/2018, V5-16:18, V6-0:03).

Moreover, apart from the contextual difficulties, there are also cultural difficulties related to the image of belonging to a group that we know from experience predominates in our academic culture. Indeed, one of the students in group 2 refused to take part in the group work and went so far as to expressly ask the tutor not to include her in the Lesson Study, although at the end of the process she recognised the value of cooperative work. This denotes a group that only thinks about meeting the goals set, without any consideration of care for people and the process. It is notable in case 1 that the group refuses to be divided according to the roles proposed by the tutor in the first meetings, assuming solely the role of secretary. This rejection of the moderating role shows a certain lack of awareness and self-criticism towards the importance of taking care of the quality of the group process.

“P. says she doesn't believe a moderator is needed. V. says she believes they can talk without a moderator, and proposes trying to continue without one, only bringing one in if they consider it necessary.

***Tutor:** Well, I think the moderator is important as it is a way to ensure everybody gets to talk, preventing some voices from being heard more than others, even if there are only four people. But if you want to try it... bear in mind that we must not lose our focus, that we must respect each person's turn to speak, and we must ask someone their opinion if they do not speak up by themselves.” (EC1, OB -SE2, DUR-LS, 11/2018).*

In this group it was significant how the tutor finally assumed this role right from the first LS meeting through to the end of the process, always striving to ensure that all voices were heard and considered, especially the voice of P., the student who was in a different practical training school to her colleagues. Thanks to the tutor's moderation, this student had the opportunity to be heard in group meetings. Her words are proof of this:

“She (the tutor) made it possible for me to contribute my ideas in the group seminars, since I am shyer than my classmates and, as they talked a lot, I had a hard time making myself heard; that's why I pointed this out in her tutoring.” (EC1, EI, POST-LS, 06/2019).

Apart from these limitations, the cooperative nature of LS is appreciated and valued in the awareness of the two groups and at the end of the process, both in the experience of group 1:

*“**Tutor:** Don't you think that doing it jointly, all four together, influences this process? Can you imagine doing it individually as your other colleagues have done?*

P: It would have been very tough.

B: We would not have had such a broad vision. It would have been my vision only. Doing it in a group is enriching. We are all contributing, and in the end we achieve something better.

***Tutor:** And this security contributes a lot to you being more than just one...*

A: And also to know that everyone has their own individual strengths...

***Tutor:** Of course, you rely on each other's strengths. This gives a lot of security.” (EC1, OB-SE5, DUR-LS, 01/2019).*

and in the experience of group 2:

“Working in a group has been incredibly important. Why? Because there has been a convergence of ways of thinking, of each individual and their own particular perspectives, when thinking about our future as teachers. This continuous way of questioning things by saying: Well that’s not the way I see it, I believe such and such... has helped me a lot when carrying out the task. Why? Because I have seen that maybe there were aspects I had never thought about which were very positive when it came to carrying it out. For example, the subjects of nature, art (...). Working alongside my colleagues has made me more interested in art.” (EC2, EI, DUR-LS, 11/2018, V2, 4:28-5:37).

Despite this good assessment, we believe that it is a challenge for tutors to create spaces and times that ensure cooperative work during the whole process and avoid the continuous difficulties in cooperating, which are a source of considerable stress among students.

Conclusions

The case studies carried out show both the sense and the core areas when accompanying our students’ LS process as university teachers: the necessary methodological framework; creating a climate of trust, feedback and questioning; and continuously inciting autonomous reflection. However, there are also challenges that need to be addressed in order to make the transition from knowledge to practical thinking more enjoyable: When and how to intervene in order to guide students? How to promote cooperation? How to make sense of academic formalisation tasks?

There is scope for new research and data analysis in the future, and we intend to delve deeper into the difference in guidance by the two tutors, with two different styles, as a way to solve the challenge of when and how to intervene. We also aim to explore how to promote cooperation by learning about LS tutor training programmes, and how they deal with this challenge.