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**Adaptações do Lesson Study na disciplina de Estágio
Supervisionado em Matemática: contribuições para a
Formação Inicial**

**Adaptations of Lesson Study in the Supervised Internship
Course in Mathematics: Contributions to Initial Training**

Renata Camacho Bezerra¹

Richael Silva Caetano²

RESUMO

Uma primeira versão deste artigo foi publicada nos Anais do Seminário Internacional de Pesquisa em Educação Matemática (IX SIPEM) e trata de uma pesquisa qualitativa, do tipo estudo de caso, cuja análise adotada foi a interpretativa. A questão que orientou a pesquisa foi: “Como uma adaptação do *Lesson Study*, realizada na disciplina de Estágio Supervisionado I, pode contribuir para a Formação Inicial no que tange à com a constituição da identidade profissional do futuro professor de Matemática?”. Na produção de dados, foram utilizados a observação participante, o trabalho narrativo individual intitulado “Livro da Vida” e um questionário. Os resultados da investigação indicam que a colaboração e a reflexão, pontos basilares do *Lesson Study*, quando do processo de elaboração e realização de um plano de aula, foram importantes e permitiram, ao futuro professor de Matemática, a constituição da identidade profissional.

PALAVRAS-CHAVE: Estudos de Aula. Colaboração. Reflexão. Planejamento. Formação.

ABSTRACT

The first version of this article was published in the Proceedings of the 9th International Seminar on Research in Mathematics Education (IX SIPEM). It reports on a qualitative case study, in which the

¹Institution: Universidade Estadual do Oeste do Paraná. E-mail: renata.bezerra@unioeste.br. Orcid: <https://orcid.org/0000-0002-4461-8473>.

²Institution: Universidade Estadual do Oeste do Paraná. E-mail: richael.caetano@unioeste.br. Orcid: <https://orcid.org/0000-0002-9644-3847>.



<https://periodicos.ufms.br/index.php/pedmat/index>
perspectivas.educacaomatematica@gmail.com

adopted analytical approach was interpretative. The guiding research question was: “How can an adaptation of *Lesson Study*, carried out in the Supervised Internship I discipline, contribute to Initial Training with regard to the constitution of the professional identity of the future Mathematics teacher?” Data were collected through participant observation, an individual narrative activity entitled “*Book of Life*”, and a questionnaire. The findings of the study indicate that collaboration and reflection, key elements of the *Lesson Study*, were essential during the process of planning and implementing a lesson plan and contributed significantly to the gradual construction of the professional identity of the prospective Mathematics teacher.

KEYWORDS: Lesson Studies. Collaboration. Reflection. Planning. Training.

Introduction

This article was developed within the scope of the Interfaces in Mathematics Education Research Group (Grupo de Pesquisa Interfaces em Educação Matemática - GPIEM) at the Universidade Estadual do Oeste do Paraná (UNIOESTE) and is an expansion of an article published in the Proceedings of the International Seminar on Mathematics Education Research (IX SIPEM) (Bezerra; Caetano, 2024). For this article, we developed and analyzed the case of another research participant in addition to this expansion.

This study questions the initial training of mathematics teachers since “[...] teacher training has been a major challenge for educational policies” (Gatti, 2014, p. 35). Moreover, undergraduate courses often fail to promote in-depth mastery in the areas of activity of future teachers. The context of the present study is the Supervised Internship I discipline.

As Pimenta and Lima (2017) point out, during the internship, which is considered a time for reflection on practice, teacher training students often conclude that the theories addressed in the course are not suitable for understanding or acting in practice. This indicates a mismatch between theory and practice within the teacher training course. Gatti (2014) asserts that we need to move forward to overcome this mismatch and the dichotomy between theory and practice in the degree program in order to transform initial teacher training.

In this scenario, the supervised internship of teaching degree programs should undoubtedly provide an opportunity for future teachers to immerse themselves in activities that discuss “[...] the elaboration of the pedagogical proposal, school regulations, resource management, the choice of teaching materials, the evaluation process, and the organization of teaching environments [...]” (SBEM, 2003, p. 22–23), as well as the development and execution of lesson plans. Additionally, we believe the

Initial Training course should provide opportunities for future teachers to analyze reality beyond appearances, enabling them so they can intervene in the multiple relationships involved in different educational situations (SBEM, 2003, p. 12).

As teachers of the Supervised Internship I course, which is part of the mathematics degree program at the Foz do Iguaçu campus of UNIOESTE, we emphasize that, in line with what Pina Neves, Fiorentini, and Silva (2022) have already pointed out, *Lesson Study* (LS) is an alternative to the initial training of mathematics teachers. This is because it allows future mathematics teachers to become familiar with their workplace (i.e., the school and the classroom).

LS, considered here as a training context, was initially designed for continuing education. There are still a few studies addressing LS in/for the initial training of mathematics teachers, as Staub, Bezerra, and Caetano (2024) have identified.

Motivated by the limited number of Initial Training studies that use *Lesson Study* and the importance of investigating alternatives to Initial Training for mathematics teachers, mainly due to the decline in undergraduate programs (Bof, Caseiro; Mundim, 2023; Queiroz, 2023), this research was designed to answer the following question: "How can an adaptation of *Lesson Study* carried out in the Supervised Internship I course contribute to initial training in terms of the constitution of the professional identity of mathematics teachers?"

We understand the constitution of professional identity as a dynamic, historical process at the intersection of the individual and the collective that enables individuals to identify as belonging to a particular professional class. Staub, Bezerra, and Caetano (2025) noted the possibility that *Lesson Study* could contribute to this formation, prompting which prompted our investigation into the professional identity of mathematics teachers. For this reason, the present research returns to investigating this possible phenomenon.

To answer the proposed question, this article is divided into five sections. The first section presents the context that motivated our research. The second section presents theoretical elements that guide our understanding of the formation of professional identity among mathematics teachers. In the third section, we summarize the LS training context and explain how it was adapted for the Supervised Internship I course. The fourth section presents the methodology and results that enable us to answer our guiding question. Finally, the fifth section discusses the final considerations.

Professional Identity (of the Mathematics Teacher)

The process of identity construction is "[...] stable and provisional, individual and collective, subjective and objective, biographical and structural, involving various socialization processes that, together, construct individuals and define institutions [...]" (Dubar, 2020, p. 136). In relation to the constitution of the professional identity of future mathematics teachers, it is possible to see that:

[...] identity [...] seems intertwined with one's perspective on the world of work and on ways of acting in school. One's training interferes with the construction of one's identity, subjectivity, and meaning of learning to teach (Ciríaco; Morelatti, 2020, p. 5).

Furthermore, we can say that individual identity is "[...] a process of social construction of a historically situated subject"; professional identity, on the other hand, "[...] is constructed based on the social significance of the profession, its traditions, and the historical progression of its contradictions" (Iza *et al.*, 2014, p. 275).

Various researchers have studied professional identity across different in various theoretical contexts. There seems to be a consensus, however, that professional identity is constructed through the recognition of oneself within social relations. This idea is evident in the works of Rodrigues and Cyrino (2024), Cyrino (2021), Dubar (2020), Paula and Cyrino (2017), Sales and Chamon (2011), Morgado (2011), Marcelo Garcia (2009), Núñez and Ramalho (2008), Moreira and Cunha (2008), Monteiro (2006), Guimarães (2005), Libâneo (2004), Galindo (2004), Brzezinski (2002), Pimenta and Anastasiou (2002), Pereira and Fonseca (2001), Gatti (1996), and Nóvoa ((1995).

Teacher identity and professionalization are not viewed "[...] solely from the point of view of their subjectivity, but rather as the constitution of identity through interaction between individuals and their personal and social trajectories" (Alves *et al.*, 2007, p. 269). In other words, an individual's professional identity results from both individual and collective construction (Carmona, 1993). Thus, we can affirm that "[...] a professional identity is constructed [...] based on the social significance of the profession, the constant revision of its social meanings, and the revision of its traditions" (Pimenta, 1996, p. 76).

In this sense, future mathematics teachers can and should be viewed as subjects "[...] endowed with intentionality and knowledge of their own who, at every moment, seek to make the best use of the means at their disposal to create, conduct, and improve opportunities for learning, as well as for personal and professional development" (Ponte, 1993, p. 12).

Given this, we believe that reflection and collaboration — fundamental concepts in the *Lesson Study* training process and the Supervised Internship I course — can contribute to the formation of future mathematics teachers' professional identities. This process involves "seeing oneself" as a future mathematics teacher and gradually identifying with that role.

Lesson Study in the Supervised Internship Course

The following objectives were proposed in the planning of the Supervised Internship I course in the Mathematics Degree Program at the Foz do Iguaçu campus of UNIOESTE: coordination between the university and the school, understanding of the social, political, and economic context in which the course is situated, reflection on the teaching and learning of mathematics, discussion of the theoretical and practical aspects of teaching mathematics in the classroom, and involvement in the cycle of reflection-action-reflection in the teaching and learning of mathematics (UNIOESTE, 2018). These objectives aim to provide future mathematics teachers with dialogical and transformative practices and with space for critical reflection throughout the entire process (Bacco, 2016).

We also believe in articulating specific knowledge (mathematics) with pedagogical knowledge and other specific teaching knowledge to enable teachers (and future teachers) to innovate in different teaching situations, as indicated by previous studies (Nóvoa, 2009; Curi, 2005; Blanco; Contreras, 2002; Bezerra, 2000).

In line with what has already been highlighted, we proposed adapting *Lesson Study* to the discipline. Through this experience, we hoped future teachers would understand the connection between theory and practice and develop the necessary teaching knowledge, as observed in several studies (Bezerra; Caetano; Morelatti, 2023; Pina Neves; Fiorentini; Silva, 2022; Vieira; Ponte; Mata-Pereira, 2022; Ponte; Wake; Quaresma, 2020; Richit; Ponte; Tomkelski, 2019; Estrella; Mena-Lorca; Olfos, 2018; Fujii, 2018; Bezerra, 2017; Isoda; Arcavi; Lorca, 2007; Stigler; Hiebert, 1999). These studies investigated *Lesson Study* in mathematics teacher training.

Lesson Study originated in Japan in the late 19th century. It is centered on collaboration and reflection, with a focus on continuing education for teachers. As it has spread around the world, however, it has been adopted not only in continuing professional development (CPD) but also in initial training (IT), as evidenced by several studies (Amâncio; Zaidan, 2023; Martins; Duarte; Ponte, 2023; Pina; Neves; Fiorentini, 2022; Fonçatti, 2022; Souza, 2021; Silva, 2020; Macedo; Bellemain; Winsløw, 2020;

Coelho, 2014; Burroughs; Luebeck, 2010; Fernández, 2005). These studies indicate that *Lesson Study*, when employed in initial teacher training, becomes an important context for integrating theory and practice in these courses.

In the context of our research specifically, studies by Bezerra, Caetano, and Peron (2022), Pina Neves, Fiorentini, and Silva (2022) and Souza (2021) have shown that *Lesson Study*, when incorporated into the initial teacher training of mathematics students, enables future mathematics teachers to identify with the role of teacher. This provides evidence of the development of a professional identity as a "teacher."

In *Lesson Study*, future teachers choose a common question about student learning, plan a lesson to make it visible, and examine and discuss their observations (Murata, 2011, p. 2, our translation and comment). It is in this process that future teachers develop a greater understanding of student learning processes (Baptista; Ponte; Velez; Belchior; Costa, 2012, p. 493, our comment). This occurs because, when lesson plans are developed in groups and jointly (sometimes collaboratively), it becomes possible to reflect on the different variables involved in "planning" a lesson.

Since leaving Japan, *Lesson Study* has spread worldwide and been adapted in different ways (Stigler; Hiebert, 2016). In Brazil, for example, some authors, such as Bezerra (2017), Baldin (2009), and Félix (2010), argue that factors such as the country's size, regional differences, social and cultural differences, the organizational structure of education and schools, and teachers' individualistic culture in the classroom and lesson planning have promoted (or required) adaptations different from *Lesson Study*.

In this sense, we present an adaptation of *Lesson Study* for FI based on the work of Bezerra (2017), which we have used.

STAGE 1 – Lesson Plan Planning: Future teachers jointly select a mathematical concept and an objective for lesson preparation. This stage is divided into seven phases:

- a) Future mathematics teachers conducted a survey with mathematics teachers from the public school system in Foz do Iguaçu, Paraná, Brazil, to identify the grade level and mathematical concept with which they struggled the most. The concept "Equation" for the eighth grade was recurrent in this survey and was therefore chosen by the group.
- b) After choosing a subject of study, the future teachers conducted research on the topic in official documents, textbooks, and supplementary materials.

- c) In groups, the future teachers studied the chosen mathematical concept.
- d) The future teachers reported to each other on their experiences with the chosen mathematical concept.
- e) Together, the future teachers devised challenging tasks (problem situations) for teaching the chosen mathematical concept.
- f) In groups, the future teachers sought to anticipate students' reasoning for each task, discussing the task's difficulty and possible changes.
- g) The future teachers worked together to solve the tasks, thus "provisionally" completing the lesson plan.

STAGE 2 – Teaching the Lesson: A future teacher from the group taught the lesson to the other students enrolled in the Supervised Internship I course. Afterwards, there were discussions and restructuring of the previously developed lesson plan. The following week, another future teacher from the group taught the lesson to the teacher training students using the restructured lesson plan. After reflecting on the lesson and making changes to the lesson plan, it was finally taught to eighth-grade classes in two public schools in Foz do Iguaçu. The lessons were recorded using video, audio, photography, and field notes. These records were important for supporting the group's later reflections.

STAGE 3 – Reflection: After the class with peers and elementary school students, the future teachers evaluated the class they developed with their classmates and eighth-grade students, as well as the lesson planning process.

The adapted *Lesson Study* cycle described here took place over 15 classes (meetings) in the Supervised Internship I course. In this research, we seek to understand how the *Lesson Study* training context can contribute to the development of future mathematics teachers' professional identities. In the next section, we discuss the methodology and results.

Research Methodology and Results

This research is classified as qualitative, since “[...] it basically covers those studies that develop the objectives of understanding socio-educational phenomena and transforming reality” (Sandín Esteban, 2010, p. 130). Furthermore, in line with the findings of Lüdke and André (1986), the Supervised Internship I course served as the

natural environment that constituted the direct source of the data described and analyzed by the researchers.

To conduct the research, we used the formative context of *Lesson Study*, seeking to observe our phenomenon – the contribution of *Lesson Study* to the constitution of the professional identity of the mathematics teacher – within the group (students enrolled in the Supervised Internship I course in the 2023 academic year), analyzing behaviors, observing reality, and interpreting the responses found in different situations, as suggested by Lüdke and André (1986).

During the Internship course, future mathematics teachers shared various experiences from their educational process in Basic Education and Higher Education. These experiences were problematized during the *Lesson Study*, with a view to reflecting on the processes of teaching and learning mathematics. By reflecting on training and future teaching practice in a contextualized way, we seek to give voice to teacher trainees by understanding their experiences, attitudes, beliefs, thoughts, and reflections (Perez Serrano, 1994), this being a moment to learn from the experience of the “other.”

We chose the case study as a strategy for our research because, as Yin (2002) indicates, our phenomenon is characterized as an empirical investigation of a contemporary phenomenon that occurs within its real-life context, as well as facing a technically unique situation, with many variables of interest, in addition to being based on various sources of evidence. These sources were constituted through the following instruments for data production: a) participant observation of classes developed during the Supervised Internship I course; b) final narrative work, individual and in writing; and c) questionnaire.

Participant observation, which consists of a “[...] strategy that involves [...] not only direct observation, but a whole set of methodological techniques presupposing a high level of involvement by the researcher in the situation being studied” (Lüdke; Andre, 1986, p. 28), took place throughout the training context of the *Lesson Study* carried out in the Supervised Internship I course.

The final narrative work, individual and written, was based on narratives. These are a type of text that aims to tell a story, whereby

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instruments: a) participant observation of classes developed during the Supervised Internship I course, b) final written narrative work, and c) a questionnaire.

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[...] narratives are infinite in their variety, and we find them everywhere. [...] Through narrative, people remember what happened, put the experience in sequence, find possible explanations for it, and play with the chain of events that construct individual and social life. Storytelling involves intentional states that alleviate, or at least familiarize, events and feelings that confront normal everyday life (Bauer; Gaskell, 2015, p. 91).

These narratives were written at the end of each Supervised Internship I class and, more broadly, at the end of the *Lesson Study* training program. These narratives were compiled in a final project called the "Book of Life".

The following questions were asked in a questionnaire administered after the course ended: "How did the *Lesson Study* activity in Supervised Internship I contribute to your training as a future mathematics teacher?" and "Did the *Lesson Study* activity in Supervised Internship, I enable you to rethink any ideas about what it means to be a mathematics teacher? If so, please discuss."

Of the eleven teacher training students who took the course, we will present a case study of one student, Ana, in this text. Due to page limitations, we will not present the case studies of the other students. This research was approved by the University Ethics Committee (case number 52030621.5.0000.0107). The analysis of the data used to prepare the case study below was interpretative in nature (Minayo, 2012) and provided evidence to provisionally answer our research question.

Ana, a 21-year-old woman, stated in her final narrative work that her interest in the Bachelor of Science in Mathematics program stemmed from her love of mathematics. She described mathematics as a discipline with "rigor" and "formulas." She indicated that she is attracted to all subareas of mathematics except Combinatorics and Statistics, as she does not like the "maybe" aspect that characterizes these subareas. She said her choice of UNIOESTE was based on economic considerations, since the institution is in Foz do Iguaçu, a city close to her home. Therefore, she could only afford to attend a university close to home.

The beginning of her undergraduate studies coincided with a turbulent period marked by shifting global economic and social dynamics following the 2021 onset of the pandemic. Due to the pandemic, UNIOESTE modified its calendar, so she began her studies in November of that year. This change negatively impacted her because she had to abruptly change her routine. In her final narrative, the graduate student wrote: "I was a little upset because I am systematic, and changing my routine literally overnight is not something I like". During our participant observation at the beginning of the Supervised Internship I course, we observed Ana's "systematicity" and her difficulty adapting to the necessary changes.

Although she did not enroll in the teaching degree program because she wanted to be a math teacher, her interest in teaching changed during the course. During one of the dialogues with the academics, Ana stated that she began to realize the importance of teaching and learning pedagogical subjects in Mathematics Education when she started a paid internship at a Kumon school. According to her, these subjects were the most difficult in the program and required more dedication. This dialogue arose when the teacher-training students shared their experiences during in Stage 1 (Lesson Planning) of *Lesson Study*. Thus, Ana indicates her professional identity as a (future) mathematics teacher by recognizing the importance of these subjects for her professional training.

In relation to the Supervised Internship I subject, Ana mentioned at the beginning of her final narrative work that it was the subject that scared her the most out of all the third-year courses. She explained, "I kept thinking about what my classes would be like, whether the students would learn what I was teaching, and if they would participate or want to hit me. My thoughts just kept going.". During participant observation, the student indicated that she liked to be in control of the situation. This is likely why she was not interested in the subareas of mathematics (combinatorics and statistics), which are characterized by the "mathematics (or philosophy) of maybe". Since teaching is a social practice resulting from pedagogical practice and, therefore, not "controlled," such uncertainties caused Ana fear because teaching would occur in the internship discipline.

Regarding the training context provided by the *Lesson Study* adaptation, Ana was apprehensive about working in a group. During Stage 1 (Lesson Plan Planning), in Phase e) "Together, the future teachers thought of challenging tasks (problem situations) for teaching the chosen mathematical concept", the student reported the following:

Then, we were divided into three groups, different from the groups mentioned above. This time, we planned a lesson on equations. I must say that it was one of the most difficult things I have ever done. I don't like working in groups, but the problem was that the members of my group, me included, had different opinions on how to plan the lesson. Reaching a consensus was difficult; we had some disagreements—I may have mentally cursed some people out mentally and/or cursed them out before going to sleep—but we managed to finish. (Ana's final narrative work, 2024).

In her narrative, Ana indicated that she felt uncomfortable working in groups. We believe this stems from her academic background in basic education. In our participant observation, she stated that she did not participate in group activities. Additionally, Ana said that in higher education, group activities consisted of a "patchwork quilt", meaning each person did a part that was put together at the end. Alternatively, concerned about not getting a grade, she did the entire group's work alone. At this point, we reflected: "If the student teacher has not learned to work in a group, listening carefully to what others have to say and contribute, she will probably have initial difficulties doing so as a student and, likely, as a teacher!".

However, according to her response in the questionnaire below, Ana realized that *Lesson Study*, characterized by collaboration and reflection with others, contributed to her academic training, even though she found group work difficult and had an aversion to it. At the end of her "Book of Life", the student concluded as follows: "I still have a lot to learn, as we all do, through reflection with others. But I sincerely hope that I never lose my passion for teaching and watching students learn."

Regarding the questionnaire administered at the end of the course, Ana summarizes and corroborates the previously presented points in her response.

Question 1) The Lesson Study that I participated in during the Supervised Internship I course showed me that group lesson planning is very time-consuming. When we compared our lesson plans, we realized that group discussion enriches the plan. However, I did not feel comfortable with all the discussion and disagreements that occurred during the process. As I wrote in the "Book of Life," I sometimes felt like cursing out my colleagues, which I did mentally because the planning wasn't progressing and we weren't going to finish the plan. However, the experience was enriching, especially because I realized all that teachers need to consider when planning and conducting a class. Teachers need a lot of mathematical and pedagogical knowledge to think about these issues!

Question 2) I still think individual work is more economical in terms of time, and I prefer it for personal reasons. However, group work, even when exhausting and stressful, is helpful in our training process. Lesson Study showed me that being a math teacher means knowing much more than just math content. The pedagogical aspect is important for teachers to understand how to act in class situations. I am still afraid of graduating because I know I have a lot more to learn

before I can face the classroom. The internship helped me with this issue, and the joint reflections conducted at various points during Lesson Study helped me learn how to prepare a lesson plan and the precautions I need to take when putting it into practice. (Questionnaire answered by Ana, 2024)

The case study of Ana presented here reveals that *Lesson Study* played an important role in her professional identity formation as a future mathematics teacher. Since a professional teaching identity is dynamic and emerges from social interactions, formative experiences, and the collective meaning of the profession (Dubar, 2020; Pimenta, 1996), the formative context of *Lesson Study* in the Supervised Internship I course — based on collaboration and joint reflection — contributed to Ana's professional identity formation.

Ana entered the degree program because she loved mathematics as a subject, not necessarily because she wanted to teach it; however, this changed over the course of the program. The Supervised Internship I course, "mediated" by the formative context of *Lesson Study*, provided her with opportunities to envision herself as a teacher. This was an important element in her process of forming a professional identity.

These moments align with the literature on the training potential of *Lesson Study* in integrating theory and practice (Bezerra; Caetano; Morelatti, 2023; Pina Neves; Fiorentini; Silva, 2022), as they confront teacher education students with real challenges, prompting them to consider not only the subject matter but also the students, their challenges, pedagogical strategies, and their role as educators.

Ana initially struggled with collaboration, specifically group work, due to her preference for individual work and difficulty dealing with divergent opinions. However, she recognized throughout the process that exchanging ideas with her peers enriched her lesson planning and revealed aspects of teaching she had not considered before. This aligns with the notion that professional identity is built through collective efforts (Alves *et al.*, 2007; Carmona, 1993).

Reflection, both individual in the "Livro da Vida" (Book of Life) and collective in discussions, allowed her to address her insecurities, such as the fear of not being able to control the classroom, and to develop a more realistic and critical analysis of the profession. She moved from a technical and "closed" view to a more complex one, full of pedagogical and human nuances.

Thus, *Lesson Study* provided Ana with a formative context to transform her ideas about teaching, face the uncertainties of teaching mathematics, articulate

mathematical and pedagogical knowledge, and reinforce the idea that teaching involves more than content mastery; it also requires knowing how to interact, plan, reflect, and adapt.

According to the evidence presented, the adaptation of *Lesson Study* in initial training, involving collaboration and reflection, fostered the development of Ana's professional identity as a future mathematics teacher. In line with Ciríaco and Morelatti (2020), this constitution occurred during Initial Training because training interferes with the construction of professional identity. It will also continue throughout her career because, as Dubar (2020) discusses, such a constitution is always in motion and unfinished.

Final Considerations

The aim of this research is to answer the following question: "How can an adaptation of *Lesson Study*, carried out in the Supervised Internship I course, contribute to initial training in terms of the formation of professional identities among mathematics teachers?".

According to Ana's case study, the activities developed in the Supervised Internship I course, based on the adapted *Lesson Study* training context, constituted situations conducive to the formation of professional identity in the initial training of future mathematics teachers. These activities included: a) collaborative work, b) the exchange of personal and professional experiences in and with the group, c) reflection in and with the group, d) support in the preparation and execution of the lesson plan, e) reflection on the needs and difficulties of students, and f) the preparation of reports.

Discussing and reflecting with the group, where the connection between specific, didactic, and pedagogical knowledge was evident during lesson preparation, execution, and reflection, created an environment for self-reflection and awareness of the profession, consequently fostering professional identity formation (Dubar, 2020). In this sense, future teacher Ana's case study provided evidence for the discussion of this constitution, which was permeated by all the uncertainties and complexities of the process. This shows how temporal and dynamic this movement is (Rodrigues & Cyrino, 2024). Furthermore, the class held by the academics for themselves and 8th grade elementary school students contributed to their perception of themselves as "teachers" and the "support" of "others" was important in this process of becoming "math teachers".

In our research, we found that, as previously noted by Bezerra, Caetano, and Morelatti (2023) and Pina Neves, Fiorentini, and Silva (2022), adapting *Lesson Study* for initial training allows student teachers to understand that their future role as teachers will be complex and full of details, not merely technical tasks requiring specific mathematical knowledge, as Ana demonstrated at the beginning of her teaching degree program. Additionally, it demonstrated how the group's collaborative and reflective actions, facilitated by *Lesson Study*, contributed to the development of the mathematics teacher's professional identity.

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