

A Flipped Classroom in Language Teacher Education: Preservice Teachers' and Teacher Educators' Perspectives

Un enfoque de aula en la formación docente: perspectivas de docentes en formación y formadores de docentes

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This case study reports the adoption of a flipped classroom approach in a research methodology course within a Mexican English-language teacher education program. Through a focus group, preservice teachers' artifacts, research logs, and teacher conversations, the authors examine how preservice teachers responded to the flipped approach and how educators designed, modified, and ordered instructional activities to promote research competencies. Results indicate that backward design, scaffolding, and responsive pedagogy helped students understand complicated research concepts. The study also reveals institutional difficulties. By examining both preservice teachers' experiences and teachers' pedagogical decisions, the study contributes to the flipped classroom literature in teacher education and offers an understanding of the macro-, meso-, and micro-level dynamics that are shaped by the implementation of innovations in higher education.

Keywords: flipped classroom, macro-meso-micro tensions, pedagogical innovation, research competencies, teacher education

Este estudio de caso analiza la adopción del aula invertida en un curso de metodología de la investigación de un programa de formación docente de inglés en México. Mediante un grupo focal, artefactos de los estudiantes, registros de investigación y conversaciones con docentes, se examina la respuesta de los estudiantes al enfoque invertido y cómo los educadores modificaron sus actividades para promover la investigación. Se encontró que el aula invertida, el andamiaje y la pedagogía receptiva ayudaron a los estudiantes a comprender conceptos complejos. Al abordar las experiencias de los estudiantes y las decisiones pedagógicas de los docentes, el estudio contribuye a la literatura sobre el aula invertida y muestra cómo las macro-, meso- y microtensiones interactúan en la implementación de la innovación en la educación superior.

Palabras clave: aula invertida, competencias de investigación, formación docente, innovación pedagógica, macro-meso-microtensiones

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Introduction

The instruction of research methodology within teacher education is often fraught with complications. On the one hand, the study of research methods is fundamental to developing the competencies of reflective and evidence-informed practitioners (Creswell & Guetterman, 2024). On the other hand, this area—considered abstract, difficult, and somehow irrelevant to the immediate practice of preservice teachers (Taber, 2017)—presents many challenges. These issues tend to be exacerbated in traditional lecture-based instruction, which provides limited opportunities for applied practice, dialogic learning, and the formation of a personal research identity. Teacher education, however, has recently shifted toward a range of innovative pedagogies—such as the flipped classroom—that attempt to address some of these tensions by privileging student agency and voice, meaningful social interaction, and reflective approaches to teaching and learning. In this context, the flipped classroom has been proposed as a pedagogical approach that allows teachers to reorganize the traditional teaching sequence by moving exposure to theoretical content outside the classroom and dedicating in-person time to analysis, discussion, and knowledge application activities (Bishop & Verleger, 2013). This reorganization is particularly relevant in research methodology courses, where students need opportunities to discuss complex concepts, receive feedback, and progressively apply the components of the research process.

This article details the implementation of a flipped learning approach in a research methodology class for preservice teachers in a teacher education program in Mexico. Two research questions guided the study:

1. How did student-teachers experience the technology-enhanced flipped classroom structure in a course on research methodology with regard to the structure of learning activities and their interaction with complex research ideas?

2. What pedagogical decisions did the two teacher educators make when co-designing and implementing the course, and how did they adjust the instruction during the implementation in relation to the students' learning and the course setting?

Thus, we were able to examine the preservice teachers' learning experiences and the pedagogical decisions that teacher educators make when implementing a flipped classroom in a research methodology course. Rather than assessing the efficacy of a flipped teaching approach, this paper focuses on understanding how preservice teachers experienced this design in a particular setting and the role that teacher educators assumed as they implemented it within an institutional context.

Literature Review

The Flipped Classroom as an Innovative Approach: Foundations and Evolutions

The flipped classroom was conceived in the early 2000s as a reaction to the shortcomings of traditional lecture-style teaching when teaching complex content and promoting active learning (Bergmann & Sams, 2012). Fundamentally, the approach flips the traditional learning paradigm by providing students with basic content knowledge prior to class, thereby enabling class time to be dedicated to application, analysis, and group-based problem-solving (Bishop & Verleger, 2013). Recent empirical research has expanded on the effects of flipping on student achievement and engagement. Strelan et al.'s (2020) systematic review found that students in flipped classrooms scored higher than their counterparts in traditional classrooms across fields, especially when the in-class activities were thought-provoking and participatory. Flipping instruction is more than replacing lectures; it involves restructuring and redesigning the learning process, using scaffolded

activities, and aligning with course objectives (Lo & Hew, 2017; O'Flaherty & Phillips, 2015). Additionally, the flipped approach fosters a pedagogy that supports differentiation and student autonomy. When conducted effectively, it allows students to work through content at their own pace and revisit it as necessary, which encourages deeper understanding and self-regulated learning (Abeysekera & Dawson, 2015). This approach has been especially beneficial in higher education, where students have to balance study with work and other life commitments (Fung, 2020; Lee & Martin, 2020).

Despite these advantages, the literature also illustrates ongoing obstacles. Preservice teachers can initially reject flipped models due to unfamiliarity or misconceptions about the requirement for self-directedness (Hao & Lee, 2016). Making good use of out-of-class time or understanding how pre-class activities relate to classroom work can also pose problems (He et al., 2016; Larson & Linnell, 2023). From the instructor's perspective, challenges include balancing the time invested in developing and implementing flipped materials, the effort required to adapt such materials, concerns about technological access, and the constant need to guide in-class activities.

Investigating how innovative instructional designs work in concrete instructional contexts has significant implications for teacher educators seeking to support the development of research competencies. In this study, we suggest that the characteristics of the flipped classroom have potential for research methodology instruction, an area in which preservice teachers' interest and conceptual understanding are both highly desirable and challenging to accomplish.

Flipped Classroom in Teacher Education Programs

Flipped courses generally enhance preservice teachers' content understanding and professional dispositions when experiential, dialogic, and problem-

based activities are implemented during face-to-face time (Lee & Martin, 2020). When teacher educators effectively use asynchronous resources, intentional scaffolding, and formative assessment, preservice teachers can gain a deeper understanding of student-centered pedagogy (Wu, 2023). This dual focus, as both a student and a future teacher, makes the flipped classroom especially appealing in teacher education environments.

Research in teacher education has found that novice researchers are often challenged by unfamiliar academic language patterns, methodological approaches, and the complexity of conducting research (Lee & Martin, 2020). However, little research has focused on the potential of creative pedagogies (e.g., the flipped classroom) to develop the research skills of preservice language teachers, particularly in Latin American contexts. Among Mexican universities, research has indicated that flipped classroom designs have beneficial effects on students' engagement and participation in the learning process (Salas-Rueda et al., 2021). In English language teaching (ELT), studies have explored the role of flipped approaches in building the students' capacity to control their own learning (Pérez Castilla et al., 2022). Garcia-Ponce and Mora-Pablo (2020) investigated the implementation of a flipped classroom in an English teacher education program in Mexico and found that, while participants regarded the approach as novel and useful, there were also problems associated with increased ownership of their learning process.

However, despite these preliminary studies, less is known about how flipped learning can facilitate the teaching and learning of research methodology in ELT education programs. This gap is especially significant given the persistent challenges associated with fostering research engagement in teacher education programs. Across teacher education, the development of research literacy is considered essential for preparing reflective, inquiry-oriented practitioners. However, in practice,

teacher educators seem compelled to continue using pedagogical approaches or research methodology courses that are too basic for future teacher-researchers (Barkhuizen, 2021).

In this study, the flipped classroom is conceptualized as an instructional approach that reorganizes learning activities so that initial content engagement occurs before class, allowing class time to be spent on collaborative and higher-order learning tasks. The study contributes to the growing body of work by examining the characteristics of a flipped classroom within a research methodology course and how faculty and preservice teachers engaged (or disengaged) with the affordances (and limitations) of the flipped approach.

Method

The study was designed as a qualitative case study (Tisdell et al., 2025) to better understand how a flipped classroom approach was adopted in a research methodology course in teacher education, and how it was implemented and experienced by teacher educators and preservice teachers. The case analyzed in this study involved a particular cohort of students enrolled in a research methodology course.

Context and Participants

The study took place in an obligatory upper-level research methodology course of a bachelor's program in teaching English as a Foreign Language at a public Mexican university. The course, taught in semester seven (out of eight), is intended to provide preservice teachers with an introduction to the basic design of educational research, data collection methods, and ethical research procedures. The course was restructured using the flipped classroom approach, pairing asynchronous instructional videos and readings with in-class collaborative workshops, group feedback, and inquiry-based work. We, as participating researchers and experts in research methodology and instructional design, collaboratively designed and taught the 17-week course

aimed at developing student agency, critical thinking, and development of research skills.

Fifteen preservice teachers (age range: 21–38) participated in the study. Most of them had just begun with their teaching practices in kindergarten, primary, secondary, and high schools. Two of them had no teaching experience at all. Whilst the preservice teachers experienced digital learning during the COVID-19 pandemic, none of them had previously undertaken a course designed and offered as a flipped classroom. They were invited to participate and informed that involvement in the study was voluntary and that their decision to participate or withdraw would not affect their course grades. Pseudonyms were used in all transcripts and reports, and identifying information was removed from artifacts.

We created and delivered the course because we have several years of experience teaching it and had previously implemented blended learning approaches. Important attention was paid to ethical considerations regarding power relations, which dictated the conditions for participation (see above).

Data Collection and Analysis

To capture both the preservice teachers' learning experiences and our decision-making about the flipped classroom, data were collected from four sources:

Teachers' planning files (TPFs). These files consisted of course outlines, weekly activity plans, instructional materials, and notes documenting adjustments made during the semester (see Appendix). These documents illuminated the choices we made to plan and organize activities and integrate the asynchronous and in-class parts. We gathered TPFs early in the class and updated them based on our observations as the course progressed.

Research log. We kept a weekly log of classroom observations and recorded classroom practices, preservice teachers' interactions, and reflections on the implementation of the flipped classroom. The entries

formed a record of the preservice teachers' asynchronous and in-class work.

Focus group. This was held at the end of the semester to gather preservice teachers' experiences with the flipped classroom. It lasted around 60 minutes and was audio-recorded and transcribed verbatim. The questions focused on the participants' perceptions of the course design, including how much they engaged with pre-class material, how much in-class collaboration was used, and whether their understanding of research concepts and processes had improved.

Participants' artifacts. These were collected as evidence of the participants' engagement and learning progress. These artifacts included drafts of the participants' research projects, worksheets from asynchronous tasks, and online posts during discussion forums. Through these materials, we observed how the preservice teachers utilized course content at various points during implementation.

We organized and coded data from all instruments and conducted thematic analysis. The iterative analysis process included both inductive and deductive coding. In the first instance, we generated a set of *a priori* codes, guided by the literature to identify themes related to learner autonomy, scaffolding, and engagement in flipped learning contexts. Additional codes emerged deductively during subsequent rounds of analysis of participant responses and observational data. We coded the data after reading it several times and finding similarities across sources. Finally, we grouped the codes into broader themes to provide perspectives on recurring practices and contrasting experiences in the application of the flipped classroom. Triangulation of data from multiple sources corroborated the analysis.

Findings

From the preservice teachers' views on the use of the flipped classroom model, two main themes resulted: (a) autonomy and time management, and (b) cognitive engagement and emotional challenges. As for

the teacher educators' views, there were also two main themes: (a) design rationales: from emergency pedagogy to purposeful scaffolding, and (b) the instructors' responsive strategies and challenges during the course implementation.

Preservice Teachers' Experiences With the Flipped Classroom

Autonomy and Time Management

The preservice teachers emphasized the flexibility of the flipped approach that allowed them to manage their time as they worked through the course content and assignments. Thus, they were able to balance their work schedules, parenting, and commuting. The structured deadlines and clear calendar helped participants organize and plan activities. For example, Participant 6 noted that the structure of the class helped him plan and use his time during the week in a more productive manner:

What was easiest for me was submitting assignments and discussion groups, since from the start we had a calendar that indicated the days each assignment was due, and that way I could plan ahead and organize myself better. (Discussion forum)

His positive views coincide with those of Participant 1 and Participant 14. During the focus group, they described the ability to self-pace as essential to manage stress and maintain a healthier balance between study and personal life:

I think it [allows me] to do things at my own pace. Because at some point, I do get a little bit stressed when we have to [work and keep up] with everybody else. . . . So, being able to do it on my own helps me. I didn't have to depend on somebody else's time. Because that's probably the group work that we did. The rest of it was like on our own. For example, we had to watch all the videos [which] was a little bit tedious, but I watched it like a Netflix series. (Participant 1)

To be honest, it's very good to organize your time. I think that has helped me because I work and I have a lot of things. It helps me with how I organize my time. And... when do I find time? I always do it in the transportation when I go to places because sometimes, I'm just tired. (Participant 14)

However, some participants, such as Participant 13, expressed difficulties with independent work and self-regulation; their preference leaned more towards more rigid classroom settings:

I think it's one of the most demanding classes, although that same demand leads us to discover our ability to conduct research professionally. I must admit that I'm more familiar with a more traditional class rather than a flipped class. It was challenging because it involved a lot of organization and independent work. Personally, I feel more comfortable when I'm constantly guided and supervised to ensure I'm doing the project correctly. (Discussion forum)

Participant 4, on the other hand, expresses her difficulties during the class, but she acknowledges that this is more related to her own personal struggles:

I was worried. But I think it's probably more [about] my own personal academic struggles and being kind of anxious about my performance. It definitely is a bit intimidating, because I feel that my peers are very capable. Sometimes, that is like a personal setback, but I don't think the flipped classroom had any type of disadvantage. I do think that it was more advantageous. (Focus group)

The participants seem to have had positive experiences with the flipped classroom, although many acknowledge the difficulties they faced in adapting to this approach. They also mention their personal struggles and how they found ways to make time for themselves to process the information they received, even watching videos or completing worksheets while commuting. This shows that the participants find ways to study independently.

Cognitive Engagement and Emotional Challenges

Although most participants described the flipped model as intellectually engaging, they also mentioned the emotional demands of doing independent work. Some participants found the process of creating a research project daunting, given that this was essentially their first formal foray into research. The flipped classroom appeared to both mitigate and intensify these emotions, depending on participants' confidence levels and prior experience.

For example, Participant 10 felt anxious at the beginning due to the uncertainty of not knowing whether she would be able to do research:

I have a hard time being organized, and I was also very afraid because I don't know how to do research; I think that puts a lot of pressure on me. I had no choice but to face it and dare to ask more questions because, since it's something new to me, I had a lot of doubts. We were always given more explanations in class, which really helped us understand better because we already had some background on the topic. Now I look back and I can't believe I completed a research project! (Discussion forum)

For Participant 12, the material was difficult, but she appreciated the class structure. She even mentions the misconceptions from her peers in other semesters:

I really liked the class design, the organization of the topics, and the fact that we didn't have to come to classes every week. I had to find my own time to do the activities and to read the information. Students from other semesters sometimes asked me why I was not having class...they thought we were not having class, just because they didn't see the whole group in the classroom. But I told them that I did have things to do...and they replied, "so, that is the easiest class then". . . they have no idea! The material was difficult because of the concepts, but we were given time to digest the information. (Focus group)

From the outside, other students thought that because there were sessions without face-to-face classes, the class was easier. However, as Participant 12 mentioned, the material was difficult because it was related to the research area, but the structure of the class facilitated understanding of the contents. Participant 10, on the other hand, reports worries related to fear of failure:

I tend to get [very anxious]. I didn't like research methodology, because I don't feel like a good researcher. [On the one hand], I was feeling motivated, like "Okay, I want to do my best, I want to fulfill [the teacher's] expectations." But on the other hand, like, "I don't want to disappoint [the teacher], because she knows about this." It was like one of my biggest struggles initially... not to disappoint my teacher. But now, I can say that I did a research project! (Focus group)

These thoughts indicate that although the flipped model provided space for self-paced learning, it also called for emotional resilience, particularly in such an academically demanding setting. The course content was already demanding, even though their classmates from different semesters said the subject was easier because they had asynchronous classes. In summary, the participants were aware of the course's demanding characteristics and the emotional and affective cost of approaching a subject like research.

Teacher Educators' Views of the Flipped Classroom

Design Rationales: From Emergency Pedagogy to Purposeful Scaffolding

The introduction of a flipped-class model was a consequence of initial changes made in response to the COVID-19 pandemic. We found the need to "keep" and "reinforce" the digital skills the preservice teachers had learned during emergency remote teaching. We also redesigned the course to be less theoretically focused and

more practical, fostering preservice teachers' autonomy as they navigated the course structure organized around the stages of the research process.

Although the course was not initially conceived as a flipped class, the shift was based on our observation of the preservice teachers' needs and positive reactions to independent learning:

When we designed the course years ago, it wasn't with a flipped classroom approach in mind. But then, COVID-19 happened, and we needed to make adjustments. Then, we went back to face-to-face classes, and we thought that we needed to take advantage of the skills that our students had acquired during lockdown. And this was also... part of the [University's] new educational model. At first, we considered leaving some classes for independent work, but then, with the experience of other universities that were already adopting the flipped classroom model, we redesigned the course to [follow] this approach. (Teacher 1, research log)

Teacher 2 focused on planning, specifically about which content to allocate for asynchronous work and which to reserve for in-class involvement. Accessibility and clarity in the choice or design of materials were also considered:

To plan the class, it was necessary to see the distribution of contents and what topics and activities could be delivered online or face to face. Also, it was important to identify [the theoretical and practical parts] of the class. In other words, I had to see in which sessions the theory could be taught, so the [preservice teachers could] do the research activities [autonomously]. (Research log)

We emphasized intentionality in organizing materials, selecting readable texts, and designing worksheets that aligned with the preservice teachers' weekly research milestones:

The biggest challenge I faced was to dissect [and organize] the material... to [ensure] that I balanced quality and quantity. Finding [challenging but accessible material so

that the preservice teachers] could work [autonomously]. I love creating handouts for students, but I needed material that helped [them] move forward every week, that [allowed them to] see the research process in a friendlier manner. I know that research is not one of their favorite subjects, and with that in mind I tried to design handouts that could [serve as] scaffolding [for] the process every week. (Teacher 1, research log)

Teacher 2, on the other hand, acknowledges that he has not received formal training in designing a flipped classroom. However, he based his design on his own experience:

I have a fair amount of knowledge regarding the flipped classroom methodology. However, I did not receive any formal training on the planning and implementation of the approach. Since it is not the first time I've tried to implement the approach, I think I have developed several strategies to deal with this kind of methodologies [sic]. I still think that I need to receive more practical information on how to implement it whilst addressing several challenges and needs that I perceive in my class. (Research log)

We were keenly aware of how we wanted to design the course to enhance the skills preservice teachers had developed during the pandemic.

Responsive Strategies and Challenges During the Implementation

We continuously adapted our instruction as a response to the preservice teachers' questions, performance, and affective reactions. Teacher 1 mentioned uploading more resources halfway through one week, since the preservice teachers claimed to be confused about specific topics:

As the course progressed and I saw that the [preservice teachers] responded well to this new class format, I became more motivated to add other worksheets designed for their needs or if they had any questions. The entire

outline was already organized, including the materials and the way to work with the [preservice teachers]. But if questions arose about, for example, the difference between one concept and another, I would upload material that week to address them, just to make sure that we discussed that in class that week. (Research log)

Additionally, Teacher 1 created handouts to walk students through the basic steps of doing research. Teacher 2 also acknowledged the rewarding feeling of helping students develop their projects from scratch:

I learned that some students prefer traditional classes, but overall, the experience was positive. Having all the materials organized, but above all, being able to work with them through the process of creating a research project from scratch, step by step, was something they appreciated. (Research log)

However, there were also challenges. Distance sessions and autonomous activities left preservice teachers feeling confused, as Teacher 2 reported. Some participants interpreted asynchronous sessions as an absence of instruction, which made them underestimate the time required for coursework and, consequently, fall behind the expected progress:

I think the greatest challenge for the preservice teachers was their sense of confusion when carrying out distance sessions or activities that require independent work . . . I also believe that they perceive a flipped classroom as difficult because they are used to receiving weekly face-to-face classes, and for them, having asynchronous lessons makes them think that they do not have classes and, therefore, that there is not much work required from them. (Teacher 2, research log)

Furthermore, Teacher 2 expressed concerns about a bigger issue. This is related to the institutional authorities' vision of what teaching is:

It is my perception that, sometimes, authorities here perceive our flipped practices as evidence that we do

not teach our classes because they are used to traditional teaching where the teacher is expected to deliver all lessons face to face. I have received comments from the director asking why I am not sometimes with my students in the classroom. This, to me, shows some kind of resistance from the authorities. (Research log)

In general, we were satisfied with the course, although we acknowledge that some participants considered asynchronous lessons to be equivalent to not having class or activities. This same view is held by the authorities, who apparently still hold a traditional view of education.

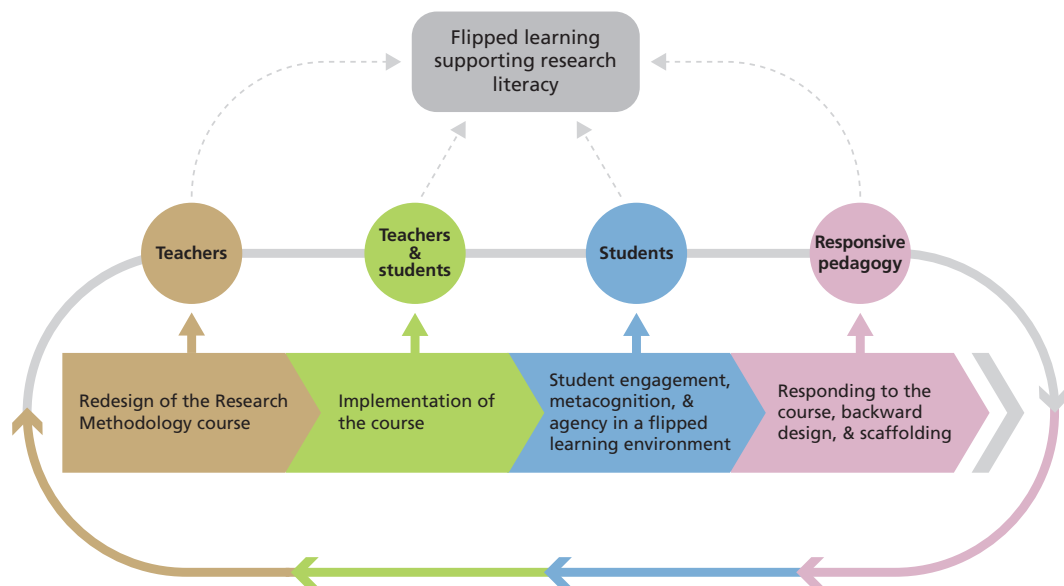
Discussion

This study aimed to investigate how preservice teachers experienced a flipped classroom approach in a research methodology course and how the teacher educators designed and tailored the course to the preservice teachers' academic and affective learning needs. The results suggest the pedagogical potential of flipped learning under well-designed, contextualized implementation of the model. Next, we address

the first research question concerning the preservice teachers' experiences within the flipped classroom.

Drawing on the data sources, the study highlighted that flexibility and autonomy were important in motivating the participants to engage and manage their time. These results are consistent with previous research, which suggests that flipped classrooms are more conducive to students' control over their learning pace (Abeysekera & Dawson, 2015; Broadbent & Poon, 2015). This flexibility is particularly beneficial in teacher education, where preservice teachers frequently work, commute, and care for their families. Nevertheless, as Participants 3 and 10 reported, autonomy was also perceived as a source of stress, underscoring the importance of deliberate support features within self-directed learning environments (Lo & Hew, 2017). The course design, with weekly handouts, a clear breakdown of tasks, and structured pedagogical models (in our case, the flipped-classroom one), aligns with principles of effective scaffolding (McKenney & Reeves, 2012). In this case, scaffolding helped reduce anxiety and increase participants' self-efficacy and capacity to complete a final research project. Figure 1 summarizes the implementation.

Figure 1. Summary of the Implementation of the Flipped Classroom



Our pedagogical construction of the course was deeply grounded in the intentional use of backward design (Wiggins & McTighe, 2005), as evidenced by preservice teachers' reported experiences. Instead of organizing student development on a week-by-week basis, the course was framed by the intended goals for the preservice teachers—their ability to design and carry out a small-scale research project by the end of the semester—followed by a mapping of the skills, concepts, and dispositions necessary to achieve those goals. This planning allowed us to decompose complex activities into scaffolded weekly tasks that logically built toward the final product, including the formulation of research questions, methodologies, and data analyses. In this vein, backward design is reflected not only in the order of tasks but also in a system of iterative decision-making during the course, allowing us to revise materials and tasks as needed in light of student responses. It was precisely this design logic that proved pivotal in the flipped learning environment, where clarity of intention and the integration of the synchronous/asynchronous components were critical to establishing coherence and sustaining participant engagement. The purposeful backward alignment of goals, support, and assessments thus illustrated research-informed, responsive pedagogy in the context of initial teacher education.

Although the flipped classroom was viewed as beneficial, the emotional dimensions of learning to do research were also evident. This is in line with findings from previous research (Chen et al., 2018), in which students frequently found learning research methodology stressful due to unfamiliarity with academic language, anticipated failure, and a lack of confidence. These emotions were more evident among participants for whom the course was their first exposure to research procedures and who were not familiar with the flipped approach's self-directed focus. Nevertheless, we conclude that the deliberate scaffolding built into the flipped design—through structured tasks, guided worksheets, and the staged development of research

components—was crucial to mitigating these affective challenges. By dividing intricate research processes into manageable, step-by-step phases and facilitating feedback and reflection, the course design seemed to help these preservice teachers gradually build confidence and reduce initial anxiety. Also, the need to live up to high standards and the freedom to pace one's learning prompted the preservice teachers to seek help, analyze the content more deeply, and persist despite challenges. These results underscore the importance of incorporating metacognitive prompts and reflective tools into a flipped classroom to help students regulate their learning strategies and emotions (Schunk & Zimmerman, 1994). In this sense, scaffolding not only served as cognitive support but also as an affective buffer, allowing participants to continue engaging with research tasks that initially appeared overwhelming.

Regarding the second question about our decision-making process and the implementation of the flipped classroom, our interventions demonstrated pedagogical intentionality and adaptive instruction. Our use of resources and adaptation of instructional practices across the semester reflected responsive pedagogy (Smith et al., 2016). Teacher 1's choosing to post additional materials in response to student confusion, and Teacher 2's concern that students might not engage seriously if there were no clear expectations or consequences attached, are extensions of the ongoing push and pull between structure and flexibility. This reactive nature is especially important in flipped environments, where teacher educators need to prepare for and respond to varying levels of student engagement and preparedness. This observation also prompts a broader point: flipped classrooms in teacher education, rather than serving as static instructional models, work best as dynamic pedagogical ecologies. This also highlights the importance of tailoring a course that is intentionally scaffolded and responsive to the learners' contexts.

However, some repercussions can be considered at the macro, meso, and micro levels. "Research at the

macro level focuses on policy, at the meso level on organizations, and at the micro level on individual relationships” (DeCarlo, 2018, p. 154). At the macro level of this study, we find that the state and federal education policies seek educational excellence, continuous improvement, innovation, and digital transformation. The aim is to ensure “the affordability and availability of digital technologies for all, and strengthening educational practices in face-to-face, distance, and hybrid modalities” (Secretaría de Educación Pública, 2023, p. 8). Regarding the meso level, where the school curriculum resides, there are two conflicting forces: although the university’s educational model places students at the center of learning, the administrative authorities promote antiquated classroom policies that stifle innovation. University authorities, as highlighted by Teacher 2, questioned the legitimacy of asynchronous instruction, expressing concerns that reduced classroom presence equals diminished academic work. This reflects a broader discourse in higher education where visibility, control, and performativity often outweigh pedagogical effectiveness as criteria for teaching quality. In contrast, at the micro level, students and instructors expressed openness to more flexible, student-centered approaches. Institutional responses to this innovation revealed a tension between bottom-up pedagogical reform and top-down managerial expectations. This tension highlights the necessity of professional trust in teacher educators’ judgment and institutional policies that support pedagogical flexibility and evidence-informed practice. For us, this project is an invitation to revisit what counts as “work” and “teaching” within policy and leadership around teacher education. Based on the results, we represent these conflicts in Figure 2.

Conclusions

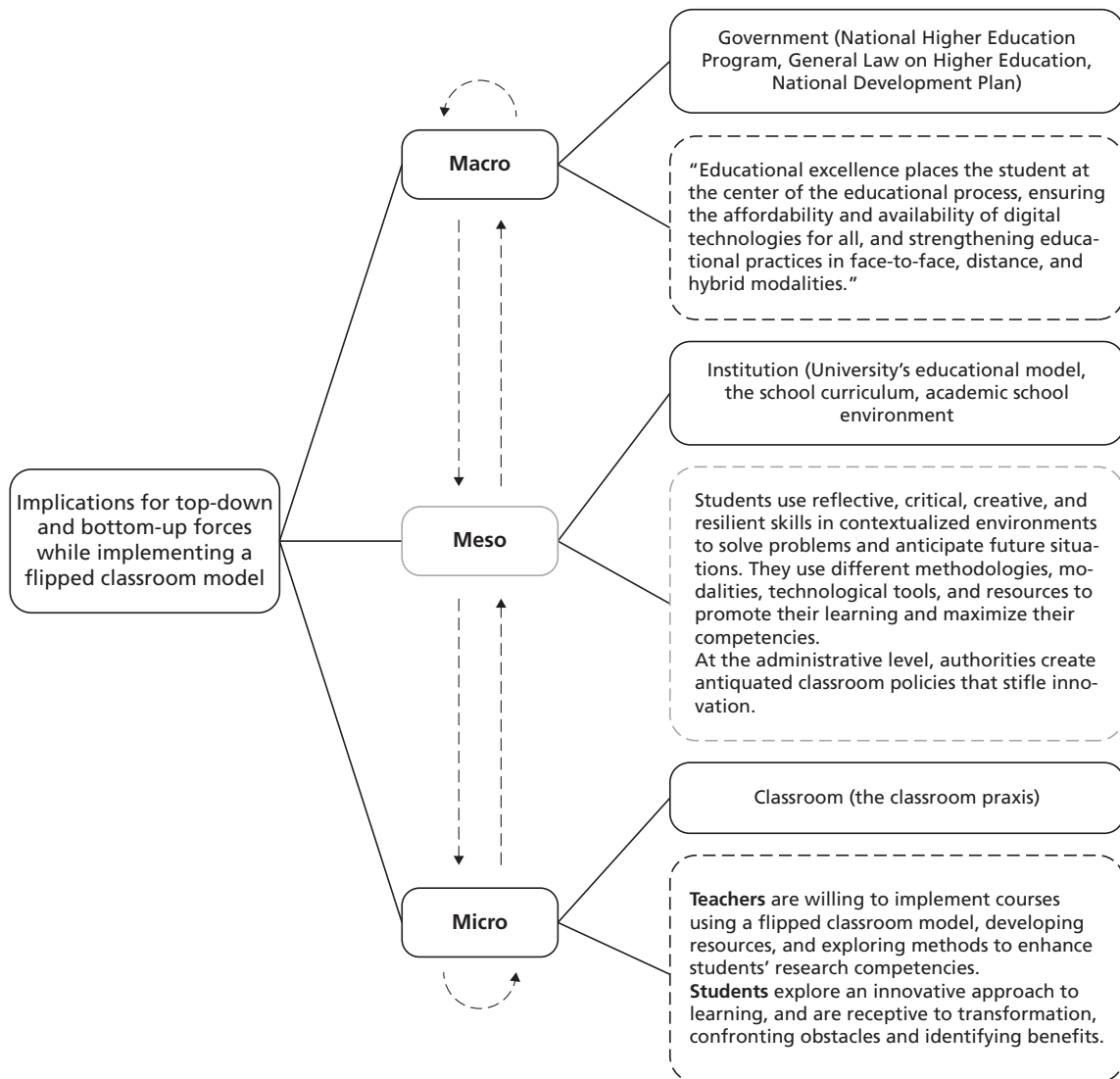
This study investigated the implementation of a flipped classroom model in a research methodology course in a language teacher education program in Mexico. In relation to the first research question, the

results show that the preservice teachers experienced the flipped classroom as an environment that promoted their autonomy in time management and the progressive development of their research projects. However, our data also indicate that this model requires high levels of self-regulation and poses cognitive and emotional challenges, particularly for participants with little research experience. In this sense, the structured materials, examples, and sequenced activities played a key role in supporting the comprehension of complex methodological concepts.

Regarding the second research question, the findings show that implementing the flipped classroom required a continuous process of decision-making by the teacher educators. The teacher educators organized the course content, combining asynchronous activities to review theoretical concepts with in-person sessions dedicated to mentoring preservice teachers’ research processes. This implied continuous adjustments of the materials and course activities, reflecting a responsive pedagogical practice oriented towards supporting the participants’ emerging needs. The openness shown by participants indicates that substantive change in teacher education often begins from the ground up, when top-down requirements and structural interventions are out-of-date. These findings are crucial because they show that educational reform is more than just rhetorical advocacy at the policy level. It also requires institutional cultures that trust the educators’ professional judgment, acknowledge the legitimacy of multiple teaching and learning modalities available to learners, and create spaces for experimentation.

The findings also reveal contradictions at the institutional level. At the macro level, federal educational policies encourage the adoption of hybrid and flexible modalities to foster innovation in higher education. Yet at the meso level, resistance remains within the university. Institutional forces, however, frequently equate “quality teaching” with what is visible in person, thereby devaluing instruction that extends beyond

Figure 2. Representation of Conflicts Across Levels



Note. The dotted arrows illustrate how the three layers should be integrated with one another. The boxes with solid lines represent the discussion levels in the context of implementing a flipped classroom model. The boxes with dashed lines represent the threats that continue to impede the growth and clear integration of the three levels of analysis. The gray boxes represent blurred or conflicting positions operating within the level discussed.

traditional classroom walls. This managerial view (based on anachronistic ideas of productivity, monitoring, and physicality) results in a gap between policy rhetoric and institutional practice.

Thus, the implementation of pedagogical innovations such as the flipped classroom is mediated by institutional tensions operating at different levels of the educational system. While at the macro level edu-

cational policies promote digitalization, at the meso level these orientations are translated into institutional models that do not always provide clear support mechanisms for teachers. Consequently, at the micro level, teacher educators should interpret and adapt these institutional expectations within their own teaching practices. This misalignment shows that innovation in teacher education depends not only on the adoption

of new pedagogical approaches but also on the institutional conditions that facilitate their development and sustainability.

This study is subject to some limitations that must be considered when interpreting the results. First, the analysis is based solely on one course and on one relatively small group within a specific teacher education program. Second, because the teacher educators were also the researchers in this study, their position may have influenced the interpretation of the results, despite the measures taken to ensure transparency in the analytical process. Therefore, the results must be understood as a contextualized analysis of a specific pedagogical experience.

Despite these limitations, the study provides a contextualized investigation of the experiences and negotiations around flipped classroom activities within a specific institutional framework. The findings should be interpreted as exploratory and illustrative, providing guidance for further research rather than being a conclusive determination regarding the overall efficacy of flipped learning in teacher education.

The results offer relevant implications for teacher education. In particular, they suggest that the flipped classroom can be an effective pedagogical strategy for teaching research methodology when accompanied by careful didactic design and support mechanisms that progressively guide students' research process. Moreover, the results highlight the importance of generating institutional conditions that enable teacher educators to experiment with innovative teaching approaches.

The study emphasizes the pedagogical knowledge and reflective capacity of teacher educators as they negotiate competing institutional logics and respond to the students' needs. By focusing on a case of course-level innovation—grounded in collaboration, responsiveness, and empirical reflection—this study highlights the role of students and teachers as agents of pedagogical transformation in higher education.

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Appendix: Structure of the Flipped Research Methodology Course

The flipped structure combined asynchronous preparation with in-class application activities designed to support the progressive development of the preservice teachers' research projects.

Course phase	Mode of engagement	Example activities	Pedagogical purpose
Pre-class preparation	Asynchronous	Short video lectures on research concepts, guided readings, and worksheets prompting key questions	To introduce core concepts and allow preservice teachers to engage with content at their own pace
Individual preparation tasks	Asynchronous	Identifying research questions, reviewing sample studies, and responding to prompts in online forums	To encourage initial interpretation of methodological concepts
In-class sessions	Synchronous	Small-group discussions, analysis of research articles, and problem-solving tasks related to research design	To apply concepts and clarify complex ideas collaboratively
Project development	Synchronous & asynchronous	Drafting sections of research proposals, peer-feedback activities, and instructor guidance	To support the progressive development of preservice teachers' research projects
Reflection and feedback	Synchronous	Whole-class discussions, clarification of methodological decisions, and formative feedback	To consolidate understanding and address conceptual difficulties