Negotiating Gendered Subjectivities of Mathematics Teachers in Chinese Lesson Study: A Feminist Poststructuralist Inquiry

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This feminist poststructuralist inquiry explores how gendered discourses within Chinese Lesson Study (CLS) shape female mathematics teachers' subjectivities, as the latter confront contradictory demands: proving mathematical competence in a masculinized discipline while performing feminine deference to predominantly male Teaching Research Staff (TRS). The study addresses three questions: What are female mathematics teachers' experiences of CLS? How do gendered discourses and power relations shape their subjectivities? What spaces for resistance exist? Using feminist poststructuralist discourse analysis (FPDA), I examine how teachers position themselves within competing discourses and trace moments where they reproduce, negotiate, or resist available subject positions. Data include two semi-structured interviews with 12–16 female teachers across China and written reflections after CLS sessions. The research contributes to understanding how collaborative teacher development may unintentionally reproduce gender inequalities, with implications for creating more equitable professional development approaches in mathematics education in China.

Keywords: Gender; Subjectivities; Mathematics Teachers; Chinese Lesson Study; Feminist Poststructuralist

The rationale and focus of this research

My aim is to explore how gendered discourses in Chinese Lesson Study (CLS) shape female mathematics teachers' subjectivity.

The study is situated at the crossroad of mathematics education and teacher learning, with CLS as the institutional context through which teachers' subjectivities are formed and negotiated. I seek to identify how gendered power relations, expressed through the structure and practices of CLS shape what it becomes possible for female mathematics teachers to say, feel, and do as professionals. The study examines multiple interconnected structures and practices within CLS: hierarchical critique sessions where senior teachers evaluate junior ones publicly; peer collaboration sessions where teachers jointly plan and observe lessons; interactions with Teaching Research Staff who provide authoritative guidance; the formal speaking order protocols during post-lesson discussions; the collective lesson planning meetings where pedagogical decisions are negotiated; and the documentation and reporting requirements that formalize teachers' contributions. Through this research, I seek to identify the specific discourses, interactional moves, and emotional rules through which gendered norms are enacted in CLS, and to trace how female mathematics teachers take up, contest, or rework the subject positions those norms offer them across successive CLS cycles.

This study is important because it addresses a significant gap in understanding how collaborative teacher development structures may unintentionally reproduce gender inequalities. Why do I treat CLS as a gendered site? Drawing on Foucault's discourse framework, CLS operates as a disciplinary mechanism that produces particular kinds of teacher subjects through practices of observation, examination, and normalization (Foucault, 1977; Ball, 2013). Research on gendered power inequalities in school settings demonstrates that female teachers often face different expectations than their male colleague: they are expected to be nurturing and supportive while also proving their academic competence, to be collaborative while demonstrating individual excellence, and to accept criticism gracefully while asserting professional expertise (Yang & Mohd Radzi, 2025; Cunningham et al., 2022). CLS represents a particularly concentrated context where these gendered power inequalities become clearly visible. Mathematics is historically masculinized and tightly policed for correctness and rigor, which intensifies credibility work for female teachers in public critique (Ernest, 2018; Mendick, 2006; Solomon, 2012). CLS takes centre stage as the organizational structure that organizes practice, talk, and affect; mathematics is the disciplinary medium that sharpens the visibility of gendered positioning within that structure. The phenomenon under study is gendered subjectivity formation in CLS, observed in the mathematics domain. The study centres on female mathematics teachers. While gender dynamics are relational (Connell, 2009), focusing the sample on female teachers aligns the conceptual lens (poststructuralist feminism) with the data strategy and removes an ambiguity that weakened the Report. Male colleagues and male Teaching Research Staff (hereinafter referred to as TRS) appear as interlocutors within participants' accounts and in documents, but the research focus is on the ways female Mathematics teachers' subjectivities are produced and negotiated in CLS. – exactly the same but indented.

Research Questions

What are female primary and secondary mathematics teachers experiences of Chinese Lesson Study? How do gendered discourses and power relations shape and constrain the subjectivities of female mathematics teachers within the context of Chinese Lesson Study? What are the spaces for resistance within and between the different experiences, discourses and subjectivities?

Methodological Conceptualisation of the Study (Proposed Design)

This research project is an interrogation of teacher experiences as narrated and reflected upon by teachers themselves (following Davies & Harré, 1990), not an observational study of live practice. The main methods will be interviews and written reflective accounts. The reflective accounts are being used to enrich the second interview's outcomes, rather than being analysed separately. It is presumed that the structured post-CLS written reflections (a guided template with specific prompts that participants complete independently within 24-48 hours of their CLS activity) and "just-in-time" interviews shall be scheduled within one week of a CLS cycle, so that episodes, utterances, and feelings are captured with high specificity.

As noted in the section above, CLS involves specific practices that I will explore through teachers' experiences, which have been duly listed above. I am interested in how female mathematics teachers experience each of these activities and relationships. Discourse operates as both data and analytical lens. As data, I collect teachers' narratives, reflections, and interview talk. As analytical process, feminist

post-structuralist discourse analysis (FPDA) interrogates how teachers are positioned through available discourses; for example, the "good teacher" discourse that requires female teachers to be both mathematically rigorous and emotionally nurturing (see, e.g., Walkerdine, 1998; Skelton, 2002; Zhou, 2023). In my analysis, I plan to trace how teachers deal with competing discourses, e.g., reproducing dominant narratives (for example, "I thanked them for the feedback") while resisting others ("but I knew my approach was valid").

Proposed Methods and ethical Considerations

Each teacher will participate in two interviews connected to their CLS participation plus a short written post-CLS reflection. Since CLS practices are determined by school leadership, procedures vary across schools. Given the generally low participation of teachers in research interviews in China, participants will be recruited from many different schools and regions. To expand access, all interviews will be conducted online. The online format gives me much better access to a wider sample of participating teachers, and research demonstrates that online interviews can yield equally rich data when rapport is carefully established (Deakin & Wakefield, 2014). The timing of the second interview depends on when each participant's school schedules their CLS cycle, making precise timelines difficult to specify in advance.

A questionnaire link will be provided on the recruitment poster, distributed through teacher WeChat groups, professional networks, and school partnerships where possible. Completing the questionnaire should take 3-5 minutes and will cover three areas: Personal information (name, years of teaching experience, school, and contact details); CLS process (a short description of how CLS is conducted in the teacher's school, with 3-4 questions about steps and frequency); and Interview participation (whether the teacher is willing to take part in two interviews). This will allow me to select those teachers who will be willing to take part in the interview process, whilst also enabling me to gain wider understanding of their demographics' diversity and peculiarities of their schools' CLS practices.

I plan to interview 12-16 female primary and secondary mathematics teachers. To allow for attrition, I will initially recruit 25 participants. This range is based on similar interview studies in education that require depth of engagement over time (Kelchtermans, 2009). Participants will be selected based on questionnaire responses. I will specifically choose female mathematics teachers from a wide range of schools and regions who are willing to participate in interviews and whose schools have regular CLS implementation. Before the interview, they will receive a consent form and information sheet. The first interview will take place within one week of receiving their signature. Straight after the first interview, I will send participants an electronic reflection template to complete. I will begin with informal rapport-building conversations about their teaching context before formal questioning (see Section 9 to Ethics Form).

Two semi-structured interviews per participating teacher (Interview 1 baseline; Interview 2 within one week post-CLS). Duration 50-70 minutes; audio-recorded with consent; conducted via online platforms (video or audio-only based on participant preference). Anchoring: Interview 2 begins with the participant's written reflective accounts. I will analyze three key policy documents in my background section to establish the institutional context of CLS: (1) the Ministry of Education's 2019 "Guidelines for Primary and Secondary School Teaching and Research Work" which mandates CLS participation; (2) provincial-level "Teaching Research Staff

Management Regulations" that define TRS roles and evaluation authority; and (3) sample school-level "CLS Implementation Plans" that specify critique protocols and speaking orders.

The first interview explores female mathematics teachers' experiences of CLS without imposing predetermined categories. Questions are deliberately open to capture participants' own framings and interpretations.

CLS structure and institutional context: This dimension addresses RQ1 by exploring teachers' experiences of CLS activities－planning meetings, classroom observations, critique sessions, peer collaboration, and interactions with TRS. Rather than assuming these are problematic, I want to understand what teachers themselves find significant, challenging, or supportive. Design purpose: To understand the institutional mechanisms through which gendered power operates. Example questions: "Could you tell me about your experiences with CLS in your school?"; "What has CLS been like for you?"; "Could you walk me through what happens in CLS at your school?" Follow-up prompts: "Tell me more about that."; "What was that like for you?"; "What else do you remember about that?"

Teachers' perceptions and understanding: This dimension addresses RQ2 by exploring what meanings teachers attach to their CLS experiences. I'm interested in how they make sense of expectations, evaluate their own and others' contributions, and understand what counts as professional success in their context. Design purpose: To reveal the discursive resources teachers use to understand their professional positioning. Example questions: "What does being a mathematics teacher in CLS mean to you?"; "What stands out when you think about your CLS experiences?" Follow-up prompts: "What makes you say that?"; "Can you think of an example?"

Teachers' responses to CLS structure: This dimension addresses RQ3 by exploring how teachers actively engage with CLS－their strategies, choices, and adaptations. I want to understand moments of agency: when they speak or stay silent, agree or resist, conform or innovate. Design purpose: To trace how subjectivity is actively negotiated and potentially transformed. Example questions: "Can you tell me about a memorable CLS experience?"; "How do you approach CLS sessions?" Follow-up prompts: "And then what happened?"; "How did you experience that?"; "What sense do you make of that?"

While the first interview captures broad experiences, the second interview uses the reflection as a concrete anchor to explore particular moments of negotiation, resistance, or accommodation that reveal how subjectivities are actively constructed rather than simply imposed. Example question based on reflection: "You wrote that [specific incident]. What exactly was said and how did you decide how to respond?" Reflection Template Rationale: The reflection template captures immediate post-CLS responses before retrospective reconstruction occurs, providing data about in-the-moment interpretations crucial for understanding subjectivity formation. Unlike interviews which allow probing, the template needs specific prompts that teachers can answer quickly while memories are fresh. Reflection Template: Please describe today's CLS session - what stood out to you? How did you feel at different points during the session? Were there moments when you wanted to say something but didn't? What influenced this?

Addressing Sensitivity in the Study

Discussing experiences of professional marginalization, critique, and gendered power dynamics may evoke strong emotional responses. Female teachers may recount

instances of being dismissed, having their mathematical competence questioned, or experiencing what could constitute workplace bullying. As Yang and Mohd Radzi (2025) found, Chinese female educational leaders proceed between "struggle and compromise," and articulating these struggles can surface feelings of frustration, anger, or distress.

All participants will receive information about government-mandated benefits such as "Rural Teacher Support Plans", "National Teacher Training Program" and "Teacher Education Network Alliance", while maintaining clear boundaries that the research interview is not therapeutic support.

Likewise, the mathematics teaching community in Chinese cities is often small and interconnected, creating anxiety about confidentiality. Teachers may fear that even with pseudonyms, their critiques of CLS or descriptions of gendered dynamics could be traced back to them, potentially affecting their professional standing. This sensitivity is heightened when participants from the same school might discover each other's involvement, creating concerns about collegial relationships and workplace dynamics. To address this, I will ask participants to conduct online interviews in a private space, not their workplace or public areas, to support anonymity.

Discussing how CLS structures may perpetuate gender inequalities touches on sensitive institutional matters. Teachers may worry that criticizing mandatory professional development structures could be seen as disloyalty or resistance to school leadership. Given Cunningham's (2021) observations about interconnected leadership networks in Chinese schools, participants may fear professional repercussions for revealing systemic issues. I will emphasize that the analysis examines structural patterns rather than individual schools, and findings will be presented constructively to enable positive change rather than institutional blame. Having worked in Chinese mathematics education for several years, I recognize that many potential participants may be colleagues or acquaintances from previous research projects or professional development sessions. When I interview teachers who I already know, using convenience sampling in drawing on my own professional networks as well as social media ads, there is a risk they might assume shared understandings or worry that criticizing CLS could affect our professional relationship. To address this, I plan to begin these interviews by explicitly acknowledging our prior connection but stressing that this research conversation is separate and confidential. I will explain that I am interested in their honest experiences, not what they think I want to hear.

With teachers I do not know, the challenge is different. Building sufficient trust for discussing gendered experiences in professional settings takes time, especially when these discussions touch on power dynamics within their schools. As Yang and Mohd Radzi (2025) found, Chinese female educational leaders often balance between struggle and compromise, carefully managing what they reveal about institutional challenges. Before starting the interview proper, I will ask my participants directly about that matter, as a kind of ice-breaker, so as to better establish mutual understanding and rapport in this regard.

The consent process needs to acknowledge the ongoing nature of participation. While participants will sign formal consent initially, I recognize that their comfort with the research focus might shift as interviews progress. Before each interview, I will remind participants that they can withdraw from the study and withdraw their data at any time during the data collection period. Given that Nurmansyah et al. (2025) identify how gender perspectives often reveal patriarchy's persistence in educational

structures, participants need to understand that the analysis will examine systemic issues, not just individual experiences.

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