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**Challenges of critical collegueship: examining and reflecting on mathematics teacher study group interactions.**

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Summary: This article examines mathematics teacher collegiality by focusing on both the ways in which teachers interacted as critical colleagues in a long-term professional development project and the evolving role of the teacher-educator-researcher as the facilitator of this project. The professional development collaboration comprised two phases: one focused on reading classroom discourse literature and one focused on supporting each other through cycles of action research related to mathematics classroom discourse. Lord's (1994) critical collegueship framework is used to examine how a study group of middle-grades (ages 11-16) mathematics teacher-researchers took (or did not take) a more critical stance toward their own teaching practice and that of their colleagues. We found that challenging interactions were related to instances in which the teachers interacted as critical colleagues and were marked by particular features including the use of particular words and the use of personal experience as a form of evidence. We present the ways in which we came to understand what it might look like to scrutinize one's practice and findings related to the development of this type of collegiality across the two different phases of this project. We end with a section in which the teacher-educator-researcher who facilitated the professional development project reflects on the ways in which the analysis caused her to reconsider both the nature of argumentation in mathematics study group settings and what implications this has with respect to her own practice as a facilitator.

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