

# EXPLORING TEACHER PROFESSIONAL DEVELOPMENT IN PROMOTING SECONDARY SCHOOL STUDENTS' SELF-REGULATION OF MATHEMATICS LEARNING

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Taiwan implemented a new mathematics curriculum in 2019. One of the curricular goals aims to develop students' self-regulation of mathematics learning (SRML) to lay the groundwork for life-long learning and career readiness. Teachers play a critical role in achieving the goal. However, we know little about how secondary school mathematics teachers interpret SRML and how to facilitate their practice of guiding students' SRML. Thus, this ongoing study constructed a teacher professional community and applied Lesson Study to promote teachers' proficiency in developing students' SRML.

The researchers adapted the conceptual framework of classroom observation proposed by OECD (2020) toward SRML to promote teachers' profession. Four mathematics teachers serving in a secondary school participated in the study. The teachers and researchers met once or twice a month to plan lessons and discuss teaching materials based on the adapted OECD framework. When the lesson plan and teaching materials were completed, one teacher conducted the teaching materials in a lesson, and other participants observed and recorded what the students performed and responded to the instruction. In addition, the adapted framework contributed to the construction and application of the observational protocol.

After the lesson, we referred to the observational records to reflect on and revise the lesson plan and teaching materials. Subsequently, another teacher used the revised lesson plan and teaching materials in his classroom, which initiated a new cycle of Lesson Study.

Data collections included teacher interviews that were conducted at the beginning of this study and teacher talks that occurred in community meetings. Data analysis revealed that the teachers' views of SRML were varied. Although teachers could conduct a formative assessment to monitor students' progress, they rarely guided students to self-assess their learning and provided self-regulated feedback. We expect to report the transformation of teachers' views on and instruction supporting students' SRML.

## References

OECD (2020). *Global teaching insights: A video study of teaching*. OECD Publishing.