

## **Building Secondary School Mathematics Teachers' Effective Teaching Practices Through Professional Development with Lesson Study**

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**Abstract :** Effective teaching plays a central role in students' success in school. The main purpose of the study was to understand how engaging in a lesson study could help to develop secondary school mathematics teachers' effective teaching practices to support students' learning better. The research was conducted in Jimma City and employed design-based research with qualitative and quantitative data collected from two secondary schools and 12 mathematics teachers. A purposive sampling technique was used to select participants. Interviews, observations, document analysis, and questionnaires were the main sources of data. Qualitative data were analyzed through coding, categorizing, and thematizing supported by Atlas-ti qualitative data analysis software. Quantitative data were analyzed using mean, standard deviations, medians, and a Wilcoxon-ranked signed test supported by statistical packages for social sciences software. The findings of the study revealed that engaging in lesson study built mathematics teachers' effective teaching practices. School leaders' positive attitudes and initiative towards the lesson study were found to be supportive. Teachers' collaboration, commitment with determination, and active participation during the study periods were also found to be supportive. Shortage of time and teachers' high teaching load had constrained teachers' active engagement in lesson study during study periods. In conclusion, the lesson study provided a more practical link between teachers' professional learning activities and actual classroom practices. Therefore, it would be crucial to integrate lesson study into the present school-based teachers' pedagogical capacity-building program in the country. It would also be beneficial to extend the merits of lesson study to other school subjects and more schools in the country based on their specific school contexts to build teachers' effective teaching practices.

**Keywords :** effective teaching practices, lesson study, mathematics teachers, professional development, secondary school

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