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**A case study on the development and practice of lessons on mathematics-oriented convergence through the professional development of a multi-tiered teacher community.**

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Summary: This study analyzed the cases of three teacher communities participating in an innovative professional development program and clarified the characteristics and the process of lessons for mathematics-oriented convergence that was developed and applied during the program. Each of the teacher communities designed and implemented lessons according to the context of each community and the concept of lessons for mathematics-oriented convergence was developed and refined. The lessons developed by the three teacher communities were characterized as convergence-problem posing lessons using technology, convergence of various subject content focused on mathematical concepts through team teaching, and convergence lessons according to students' achievement levels. The program contributed to teacher community activities by providing sustainable professional development in the area of convergence education, a connection between the content of their professional development and the context of the field, and opportunities for active participation in the process of developing and implementing the convergence lessons.

*Classification:* D39 D49 B50

*Keywords:* convergence lesson; professional development; participation of teacher communities