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Teachers' content and pedagogical content knowledge on rational numbers: a comparison of prospective elementary and lower secondary school teachers.

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Summary: Rational numbers are amongst the most difficult topics in the elementary and secondary school curriculum and teaching them requires an appropriate knowledge base of teachers to properly deal with students' difficulties. We investigated prospective teachers' content knowledge (CK) and pedagogical content knowledge (PCK) on rational numbers, the relationship between CK and PCK, and differences in CK and PCK among prospective elementary teachers (trained as general classroom teachers) and lower secondary teachers (trained as subject-specific classroom teachers). The results revealed gaps in prospective teachers' CK and PCK, a positive correlation between CK and PCK, and a better CK but not PCK for secondary compared to elementary school teachers.

Classification: F49 D79

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