

Out-of-Field Teachers: Who is Teaching Senior Secondary Mathematics in New Zealand?

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Confident, experienced, well-qualified, and well-supported mathematics teachers are more likely to enjoy and be satisfied with their teaching, to use pedagogical practices known to be effective in mathematics, and to provide equitable, high-quality learning experiences (Berg et al., 2025; See & Gorard, 2020). A steady supply of competent and confident secondary mathematics teachers with strong mathematical content and pedagogical knowledge, who remain in the profession, is therefore essential. Despite this, shortages of mathematics teachers remain an enduring problem internationally (Chauke et al., 2025) and in New Zealand (Steering Committee, 2024).

In 2025, our research team surveyed teachers of secondary mathematics in New Zealand to investigate who is teaching these classes and their experiences of doing so. We were particularly interested in the proportion of out-of-field mathematics teachers. For the purposes of this study, these were defined as teachers who had not completed a qualification that included at least one 300-level university mathematics paper (3rd year of a bachelor's degree), or equivalent, and/or who were not qualified secondary teachers. We also explored teachers' experiences of teaching mathematics in these circumstances.

In this short communication, we present a subset of preliminary findings focusing on the most senior level of mathematics taught by respondents in relation to gender, qualifications, experience and experiences of out-of-field teachers. Teaching senior mathematics is particularly sensitive to teachers' subject expertise (Vale et al., 2021), as it demands conceptual clarity, deep mathematical understanding, and less reliance on procedural approaches. Topics such as calculus, proof, and advanced algebra require specialised content knowledge and pedagogical content knowledge that are unlikely to develop without substantial disciplinary preparation.

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