

Supporting Out-of-Field Mathematics Teaching in Middle Years of Schooling

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Despite an understanding that mathematics is critical for students' future academic and career options, as well as the perception that mathematics can be a 'difficult' subject for some students, out-of-field mathematics teaching remains most prevalent in regional and remote schools in Australia. Out-of-field mathematics teaching has been implicated with poorer student outcomes, including student disengagement and lower levels of participation and achievement (Weldon, 2016; Vale et al., 2021). Research also reveals that transition from year 6 to 7 poses a big challenge for both teachers and students. This transition challenge is further exacerbated in classrooms with out-of-field mathematics teaching (Sniedze-Gregory, 2021).

If out-of-field mathematics teaching is prevalent and inevitable in regional and remote schools, then teachers need effective support to succeed, so that their students can succeed too. There is a need to reimagine the type of support that out-of-field teachers need to succeed. This pilot project investigated the support strategies that are required for out-of-field mathematics teaching in middle years of schooling. The study incorporated an ethnography research approach to capture both in-field and out-of-field mathematics teachers' perceptions of the type of support required for out-of-field mathematics teaching in middle years of schooling (from year 7 to 9) in Far North Queensland during two professional learning workshops.

In this presentation, we share three preliminary findings from the pilot. Firstly, both in-field and out-of-field teachers articulated that with a well-designed and coordinated inhouse program, it can take approximately two years for out-of-field teachers to upskill on-the-job and become in-field mathematics teachers. Secondly, the inhouse program should aim to develop the out-of-field teachers' confidence, knowledge, and skills gap with teaching multiplicative, proportional, algebraic, and functional reasoning strategies from year 5 to 9. Thirdly, that Head of Departments do not have adequate time and resources to mentor and address these issues. There is need for a coordinated approach across schools in the district. These findings will inform the next phase of the project.

References

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