

# Investigating the links between Mathematical Knowledge for Teaching and Teacher Classroom Practices in Irish post-primary schools

**Short title:** Mathematical Knowledge for Teaching and Teacher Classroom Practices

What knowledge is required for high-quality mathematics instruction? What are the classroom practices associated with such knowledge and instruction? In this research, the significance of teachers' content and pedagogical content knowledge for high-quality mathematics instruction at post-primary level and the influence such knowledge may have on students' progress and learning experiences in mathematics will be investigated. The research will be undertaken in the national landscape of curriculum reform, where large-scale teacher professional development, including the up-skilling of out-of-field teachers and introduction of Lesson Study, has taken place. This mixed-methods project will include the design and trialling of survey instruments measuring teacher knowledge and will also include learner questionnaires on their mathematical experiences. Furthermore, qualitative data of case-study classroom practices will contribute to the research findings. The research will be relevant to national and international mathematics education research and the successful candidate will develop a range of research and teaching skills during the conduction of this thesis. The references below may provide interested candidates with deeper insight into this project.

All interested candidates should meet the requirements of the UCD School of Mathematics & Statistics and should communicate their interest to Dr Aoibhinn Ni Shuilleabhain prior to their application: [aoibhinn.nishuilleabhain@ucd.ie](mailto:aoibhinn.nishuilleabhain@ucd.ie).

## References

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