

Evaluation Summary

QuickSmart is a supplemental maths program developed by the SiMERR National Research Centre. It is designed as a 90-session program over 30 weeks to develop students' automaticity and fluency in basic maths operations (such as addition, subtraction, multiplication and division) with the aim to free up students' working memory for higher-order maths tasks.

This was an 'effectiveness trial' to test whether the program and delivery model had an additional impact over a control group with only regular maths instruction, and delivered under everyday conditions in 70 classrooms across 23 schools.

The evaluation found that:

- 1 QuickSmart, as experienced in this trial, did not have an additional impact on maths achievement, however there is some evidence suggesting greater gains for students who received more QuickSmart sessions.**
Overall and for Primary students, on average, there was one month's additional progress, but this trial was not commissioned to detect this level of difference so this finding needs to be treated with caution. There appear to be higher gains for students attending more QuickSmart sessions but low numbers of such students mean we cannot draw this conclusion with confidence.
- 2 In this trial, schools experienced difficulties achieving the recommended number of sessions, although it appeared to be more feasible in Primary settings.¹**
QuickSmart recommend that students attend 90% or more of the 90 sessions in the program. In this trial, 12% of Primary students and 0% of Secondary students achieved this level of attendance. Difficulties in timetabling, variation in program delivery and coordinating QuickSmart sessions with regular maths classes were identified as challenges, although these were more easily managed in Primary schools. Recruitment difficulties and delayed commencement of the intervention may also have affected some schools' ability to achieve 90 sessions in 30 weeks.
- 3 There was strong evidence that QuickSmart improved Primary students' maths interest and maths confidence, although this did not extend to self-efficacy.**
Primary school teachers supported the finding that QuickSmart students were more confident participating in maths classes; typically seen as an important precursor to better maths achievement. The same benefits were not found for Secondary students.

The direct costs of delivering QuickSmart are very low (\$151 per student per year for QuickSmart over three years), however there are also start-up and staff release costs and time to attend training and to deliver the sessions to be considered.

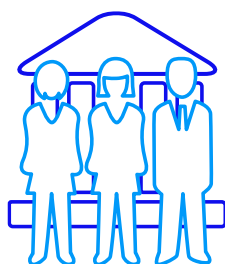
¹ In this trial, 11 of the 12 Primary schools and four of the 11 Secondary schools were existing QuickSmart schools.

Unanswered questions

- **Impact of more QuickSmart sessions:** With the low number of students achieving 75% or more of 90 sessions in 30 weeks, we cannot answer the question of whether QuickSmart, when delivered in its entirety, has an additional impact on students' maths achievement. The evidence suggests that greater exposure to QuickSmart sessions may lead to better outcomes but the evaluation was not able to confidently determine this due to low student numbers attending 75% or more QuickSmart sessions in this trial. A future randomised controlled trial should test QuickSmart in schools that fully implement the 90 sessions of the program as prescribed.
- **Maths automaticity and achievement:** The findings from this trial do not mean that the underlying concept of maths automaticity is flawed. There is some research that suggest maths automaticity leads to maths achievement but even with a good foundation in maths operations, students need to grasp relationships between number facts, and then apply and link maths ideas to solve maths problems. Future trials should assess whether this is the case.

Considerations

Schools & Systems



- Schools and systems considering the program may wish to pilot test QuickSmart's impact when implemented as prescribed (90% or more of QuickSmart's 90 sessions). They should use the evidence from the pilot to determine the feasibility of implementing more widely. In considering the program, schools and systems should manage timetabling and coordination of QuickSmart sessions in order to improve program volume and quality.
- Although QuickSmart was designed as a 30-week program, this evaluation found that schools experienced difficulties implementing 3 x 30 minute sessions per week consistently over 30 weeks to deliver more sessions. Schools considering the program need to plan a longer period in a school calendar year to ensure adequate time to deliver 90 sessions. If in-school evaluation is built into the process, it is important to plan and ensure sufficient additional time for administrative and testing processes prior and during intervention.

- Other critical enablers include appointing a program coordinator to oversee effective program delivery in schools, selecting Teaching Assistants with more teaching experience to deliver the program as QuickSmart Instructors and ensuring they undertake advanced levels of training to better support students.
- Schools implementing QuickSmart have access to the OZCAAS monitoring tool to track each student's maths progress, in comparison with non-participating students, as part of the program. It is recommended that schools work with SiMERR to undertake advanced levels of training to ensure effective implementation and help with transfer of maths automaticity to regular classroom activities and problem solving.



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