



John Pegg  
and  
Lorraine Graham  
on their  
instructional  
program to  
improve literacy  
and numeracy  
for middle school  
students, which is  
seeing inspiring  
results.

Students who experience ongoing failure in upper-primary and lower-secondary school face a myriad of difficulties in pursuing post-school options and contributing to society through employment and aware citizenship. Those who exhibit consistent weaknesses in basic skills, such as the recall of number facts, or who experience difficulty with reading and comprehension, are particularly vulnerable.

These students are usually caught in a cycle of continued failure, as it is particularly difficult to bring about sustainable change within the usual classroom environments for students who, by Year 5, are persistently at or below national benchmarks.

There is well-documented evidence in Australia of a substantial systemic decline in achievement for these vulnerable students in terms of reaching national benchmarks from Year 3 to Year 5 to Year 7 and on to Year 9.

Data from national assessments (NAPLAN summary reports) underpin a compelling case for the need to develop instructional programs that improve the numeracy and literacy outcomes for Australian students performing in the lowest 30 per cent of the achievement spectrum. This cohort includes students performing around or below the national numeracy/literacy benchmarks.

Many indigenous and geographically isolated students, as well as those in low-socio economic areas, are particularly in need of such a program. It was this notion that was the catalyst for the development of the QuickSmart program.

The program is designed for middle-school students (ages 10 to 13 years) in the bottom 30 per cent of the achievement range for whom we need to reverse the trend of ongoing poor academic performance.

# A second chance SUCCESS

QuickSmart is a long-term, yet cost-effective intervention program that was developed through the National Centre of Science, Information and Communication Technology and Mathematics Education for Rural and Regional Australia (SiMERR) at the University of New England, Armidale. It has been under development and refinement since 2001, and currently approximately 5 per cent of schools in Australia, involving thousands of students, access the program.

It is a research-based program that is highly supported, well-resourced and built around a professional learning program for principals, supervising teachers, teachers and teacher assistants. It draws on advances in neuroscience and the nature of the brain, and emphasises deliberate practice, formative assessment, strategy instruction, development of

'can do' attitude and the confidence to 'trust your head'. Those who deliver the intervention learn how the focus in two key areas.

The numeracy component centres on improving students' understanding and recall of basic number facts, their performance of elementary calculations, and the development of problem-solving skills in ways that are fun and motivating. Both structured and incidental strategy instruction are important features of numeracy lessons, with the aim of moving students on from relying on slow and error-prone strategies to the use of more sophisticated and efficient strategies, including automatic recall.

The literacy component centres on improving students' automaticity of word recognition, their fluency in reading connected texts, and their development

**Results demonstrate average student growth of up to four years over a 30-week period.**

understanding and targeted feedback, teacher and peer modelling, guided and independent practice activities, and high on-task time.

Students report greatly improved results on independent tests, as well as a new confidence about their learning based on feedback and acknowledgement of genuine observable improvements that are obvious to peers, parents, teachers and the students themselves.

Students undertaking the program normally do so in pairs for three 30-minute lessons a week, for 30 weeks. The program provides extensive support materials, including a variety of teaching and learning resources. The computer-based Cognitive Aptitude Assessment System is incorporated as a component in each lesson for formative assessment purposes and as a motivating activity.

The program also provides professional learning for principals, teachers, and teacher assistants. Instructors actively encourage students to demonstrate a

of vocabulary and comprehension skills. Instructors learn how to focus on improving students' word recognition and decoding times in ways that are fun and motivating.

Both interventions are supported by a set of carefully developed, quality resources.

Independent (NAPLAN, state-wide or standardised tests) assessment results gathered from QuickSmart and comparison students over the last nine years have consistently demonstrated average student growth of improvement between two to four years over a 30-week period as measured by effect size statistics. The higher figure represents those students who complete the full 30 weeks, and in which there is whole-school support for the initiative.

Also, data collected indicates that schools can expect a sizeable impact on learning improvement on standardised test results for participating students in the first year of implementation.

# Success

Data shows that in the second and subsequent years of implementation of the program in a school the impact is often doubled.

The program is successful with indigenous and non-indigenous students, who both achieve substantial and lasting benefits from the program, with both groups of students experiencing similar rates of growth.

Interviews and surveys of many hundreds of students, parents, teachers, and principals have also yielded consistently positive qualitative data, with many stories documented recounting improvements for the QuickSmart students not only in their

performance in class, but also in their attitudes to and behaviour in school, their school attendance rates and their levels of confidence both inside and outside the classroom.

The narrowing of the achievement gap between the QuickSmart and comparison students enables low-achieving students to proceed with their studies successfully, to maintain improvement and to learn to 'trust their heads' in the same ways that effective learners do. Results from studies following up on students two, three and five years after exiting the program demonstrate that students maintain the gains from the program years after they have completed

instruction with most showing above state-average improvement in subsequent years.

Many tens of thousands of students in Australia struggle with numeracy and literacy during their middle years of schooling. Current classroom instructional activities do not appear to overcome the learning problems experienced by many of these students, nor do such instructional approaches lead to substantial improvements in students' academic performance over time. Consequently, there is a need for an educational intervention to support such students and to deliver long-term gains.

The QuickSmart program is an example of an evolutionary student intervention program of research that is having a strong positive impact on the performance of thousands of under-achieving students in Australia. It stands as one of a very few interventions, either nationally or internationally, in which evaluations have examined implementation at all sites over the years of its development. Thus, the successes of QuickSmart scale-up are well opened to public scrutiny.

John Pegg and Lorraine Graham are from the SiMERR National Centre at the University of New England. Go to [www.une.edu.au/simerr/quicksmart](http://www.une.edu.au/simerr/quicksmart)

## ONLINE ACCESS for your school

### Benefits:

- 12 months online access for all staff to the best news and views
- Weekly breaking news email alerts for all staff
- Only \$200 + gst

Simply email [subs@apned.com.au](mailto:subs@apned.com.au) or call 02 9936 8666

[www.educationreview.com.au](http://www.educationreview.com.au)

**Education Review**

*Australia's Leading Independent National Education Publication.*