Maintenance of Academic Gains in Subsequent Years

In 2002 the academic performance of twenty-two students who completed the QuickSmart programme in 2001 was followed up with the CAAS and it was found that these students had maintained their improvements for up to 12 months following the intervention. Also, in 2005, 41 students who had been in the QuickSmart Literacy or Numeracy programme in 2003/2004 were reassessed with the CAAS. Results indicated that they had generally maintained their quick and accurate responses up to 2 years later, with most students making continued gains in speed and accuracy (94% of the 2003 cohort, and 95% of the 2004 group).

In 2006, students who had been involved in QuickSmart between 2001 and 2005 were invited to respond to a request to be interviewed about their participation, and how QuickSmart had helped with their Literacy or Numeracy basic skills since they completed the program. Parents of these students were also given the opportunity to comment on the QuickSmart experience for their children, either by face-to-face or telephone interview or by responding to the questionnaire in writing. This research reflected the need to determine by empirical evidence that the effectiveness of the intervention remains strong over time. This is a critical consideration in the evaluation of any intervention method.

Six local schools were asked to distribute letters to 55 students known to still be in the area, and twenty-three students and eight parents agreed to be interviewed. Fifteen of these students had been included in the 2005 follow up data, and three were from the 2002 group. 17 students interviewed in 2006 were in Years 7 to 10, and 6 were in Years 5 and 6. At the time of intervention they had been in Years 4 to 8.

Questionnaires
Questions for students sought information about their memory of the programme, their perceptions of how it helped them at the time, lasting effects and any changes in their approach to learning. The parent questionnaire focused on effects they had noticed on their children’s learning and attitudes following their participation in QuickSmart.

Common themes from interviews

- All students could identify positive aspects of their current learning, and some had achieved exceptional improvement e.g., “I am now the smartest in my maths class” (Yr 6 student - numeracy), “I’m in the advanced English class” (Yr 8 student – Literacy). Two students were still struggling in the area they had participated in, but accepted it as a fact of life and had post-school goals.
- All parts of the QuickSmart lesson structure were mentioned by different students as standing out for them and being helpful e.g., speed sheets, computer, flashcards, games, problem solving, spelling, the teacher, lessons not boring – interactive.
- Most students remembered feeling varying degrees of negativity about learning in their focus areas before QuickSmart, and resistance to participating in those lessons. Nineteen had noted a positive change in their attitude after QuickSmart e.g., “I understand things more”, More confident”, “Now I have a go”, “I actually want to work now because I can do most of the subjects.” Two students had already been positive about school, and two were still ambivalent depending on the subject.
- Twenty-one students said QuickSmart helped with their schoolwork after the programme finished and continued to do so e.g., in remembering tables and strategies for problem solving, in doing maths tests, in reading and comprehending better, in progressing in spelling or maths groups.
• Twenty-one students reported that their achievements in *QuickSmart* resulted in them being able to work more independently, and they had not required any extra assistance with their learning. Several added that they felt comfortable asking for help from their class teacher if necessary.

• In regard to their current learning and aspirations, most students expressed a high degree of confidence in themselves as learners, and most of the secondary students either intended to continue to Year 12 or had vocational goals. It is important to note that seven of ten students from the 2001 intervention group were not included in the interviews as they had already completed year 12 studies and were doing their HSC at the time of this follow up.

**Parent responses**

All parents were positive about their child’s involvement with the programme, and all acknowledged gains in confidence and academic success. Most were able to see changes at home, in more independence and confidence in doing homework, enjoyment of reading, and competence with calculations involving money.

**Conclusions**

As stated above, the consistent theme expressed by students, parents and teachers during and immediately following the QS program is the increase in confidence that these students display in approaching academic tasks. Up to five years later, these same comments are being made, and students and their parents can see this confidence demonstrated in willingness to take risks, by behaviours such as ‘having a go’, and in asking for help when it is needed.

Importantly these effects have not been limited to the *QuickSmart* focus areas – as students begin to experience success in a curriculum area they have struggled in, they also become more confident participants in other learning tasks. Success in this context can be seen as a “protective factor” – which once achieved, leads to a chain or sequence of positive experiences (Fuller, 2001).

The students interviewed also indicated that they had developed a realistic sense of themselves as learners, acknowledging and accepting their strengths and weaknesses, being comfortable with their progress and planning for the future. They were also able to identify areas of knowledge that they had mastered, and explain how this had helped them in the classroom e.g., knowing their tables, being able to comprehend text, knowing they have enough skills to competently attempt high stakes tests.

Based on this data, both of measurable learning and personal responses from participants, *QuickSmart* can be seen as one effective way of enhancing the teaching and maintenance of basic academic skills. This approach has been important in developing students’ strategies and understandings, enhancing their confidence and personal attitudes to learning and has continue to enhance their school success for up to five years following the original intervention.

**Source:** unpublished research – Graham, L., Pegg, J. and Raymond, N., Improving the Achievement of Middle-Years Students with Learning Difficulties in Literacy and Numeracy: Maintenance of Intervention Effects over Time, National Centre of Science, Information and Communication Technology and Mathematics Education for Rural and Regional Australia