PARENT SCHOOL PARTNERSHIPS INITIATIVE PROGRAM

Department of Education and Training Head office (New England Region)

Receipt Number: AA100B9B

OuickSmart - New England Regional Schools 2008

An Evaluation of Achievements

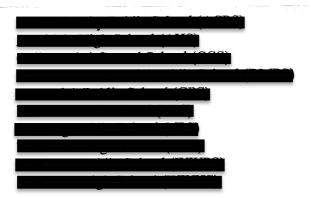
Preamble

The following report on the implementation and achievements of the QuickSmart (hereafter 'QS') numeracy program in ten schools in New South Wales has been prepared by Mr Laurie Murphy, School Development Officer, NSW Department of Education and Training, and Professor Ross Thomas, Visiting Professorial Fellow, Faculty of Education University of Wollongong

At the outset it must be acknowledged that the following evaluation has not been conducted under optimum conditions. It was intended that this particular QS project would commence in April 2008, but because of the late provision of funding, the program effectively did not commence in all but one school until either late third or early fourth school term in 2008. In anticipation of funding the exceptional school commenced its QS program in April 2008. The school conducted its program over a period of 19 weeks (instead of 30) with students receiving four (rather than three) lessons weekly. The QS program is designed as a 30-week intervention conducted within a single academic year and, as such, the most valid evaluation of its effectiveness should be conducted at the completion of this period. Thus, reported herein is an evaluation that, for nine of the schools, might more correctly be considered a progressive report. The evaluation at this early, premature stage is therefore particularly unfortunate as far as the consideration of students' academic achievements is concerned.

Because of the delayed funding for the project a difficulty for primary schools was soon identified. Year 6 students, at the end of the 2008 school year, would be only "half way" through their QS program: Would QS be offered in the high schools to which they would move in 2009? And if QS were in use in such high schools would the incoming students have access to and be able to complete the program? At the time this report was compiled progress had been made in ensuring some students completed the QS program (e.g. GHS) but it remained a distinct (and most unfortunate) likelihood that some would not be able to do so. The QS team at University of New England had arranged a meeting of local coordinators in early December to discuss this difficulty and to endeavour to facilitate the smooth transition of QS students from primary to secondary schools.

Ten public schools participated in this QS program, all in country New South Wales, and all with enrolled Indigenous students. Listed alphabetically, the schools are as follows:



The numbers of students participating in the QS program are tabled below.

Both evaluators visited initially and together and in order to standardise their procedures and, thereafter, Murphy visited and Thomas visited and Thomas visited and In total there were 15 school visits.

Method

The matters addressed by the assessors were, in large part, dictated by the terms of the original submission seeking support for this QS project. Accordingly, evidence was sought that would provide answers to the following:

- 1. What apparent effect has QS had on students' specific educational outcomes (i.e. their achievements in numeracy)?
- 2. In what other respects have students been affected by their exposure to the QS program?
- 3. Have linkages and partnerships been improved among participating schools and their respective broader communities?
- 4. Have Indigenous parents, families and community members been involved in a significant way in the implementation of QS?

In seeking answers to these questions the assessors also pursued other matters raised by the QS team at the University of New England. Included were:

- 5. How well are the participating schools catering for and adapting to the requirements of the QS program?
- 6. How flexible are coordinators and tutors in their approach to QS?
- 7. Is there evidence that QS can be sustained in the schools after the completion of this particular program?

Summary Data: DEEWR-Funded QS Schools (2008)

School	QS	Щ	2	2	NESB	Comp	Total	Z 3			9	7	8×	%
	16	10	9	15	_	2	23	0	5		3	0	0	0
	31	16	15	17	2	9	37	0		_	0	14		0
X	19	10	6	18	0	2	21	0	0	<u>_</u>	က	7	8	0
	26	12	14	13	0	7	33	0			17	0	0	0
	17	ဝ	8	12	0	8	25	0			11	0	0	0
	15	5	10	15	0	2	20	0			0	0	0	0
	14	10	4	8	0	10	24	0			8	0	0	0
	14	9	8	7	0	5	19	0			0	14	0	0
	13	8	5	4	0	12	25	0	0		7	0	0	0
	21	10	11	16	0	5	26	0			0	10	11	0
TOTAL	186	96	06	125	3	29	253	0	14	47	43	45	36	0

- Number of QuickSmart participants in the Numeracy Program

- Number of female students

- Number of male students

- Number of Indigenous students participating in the QS Program R

NESB - Number of students from a non-English speaking background participating in the QS program

Comp - Number of Comparison students

- Number of all students participating in the research (QS + Comparison) Total

- Number of Year 3 QS students - Number of Year 4 QS students

- Number of Year 5 QS students

- Number of Year 6 QS students - Number of Year 7 QS students

- Number of Year 8 QS students - Number of Year 9 QS students The quantitative data relevant to the first question above were collected via standardised tests completed by students prior to commencing their respective QS programs and again (for those in eight schools) when approximately half way through their programs in late November, 2008. The detailed analysis of these data was completed at the University of New England (UNE) and is the subject of a separate report by the QS team there.

Information relevant to Questions 2-7 – the qualitative phase of the study – was collected during the evaluators' visits to the participating schools throughout the period September – November, 2008. Five of the schools were visited twice.

The duration of the visits to the schools ranged from two hours to a half day dependent essentially on the availability of personnel connected with the QS program. The prime intention of the evaluators was to interview Principals, QS coordinators and tutors. The constraints of travel time, school timetables and teacher/tutor commitments meant that during two visits the Principals were unavailable (the Acting Principal substituted in one case) but all coordinators and at least one tutor from each school were interviewed. For similar reasons it was not possible to consult parents of children enrolled in the respective school programs.

In all but one school QS lessons were observed. Lessons were conducted by tutors who were in most cases teacher's aides. Most of these were employed on a part-time basis and their commitment to QS was but part of their overall responsibilities. Some were employed only to conduct QS lessons, however. Six coordinators (who were teachers) also acted as tutors and conducted QS lessons. In one school (HPS) three QS-trained, experienced teachers conduct the lessons. The principal of the school expressed a strong belief:

"I am firmly convinced that it is better to use (teaching) staff rather than teacher's aides."

Thus data for this evaluation comprise notes from interviews, documental references, observations and notes on lessons. The specific structure of visits varied, largely in accord with school arrangements and commitments. All the questions listed above were addressed but in random order – appropriate to the convenience of the relevant school personnel. Notes taken by each assessor were combined and located in appropriate categories and later subjected to content analysis. The evaluators met on several occasions throughout the data-gathering phase and during the compilation of this report. Where uncertainty emerged relevant to aspects of schools' QS programs (e.g. exact enrolment figures) phone or email contacts were initiated to clarify details.

Findings

1. What apparent effect has QS had on students' specific educational outcomes (i.e. their achievements in numeracy)?

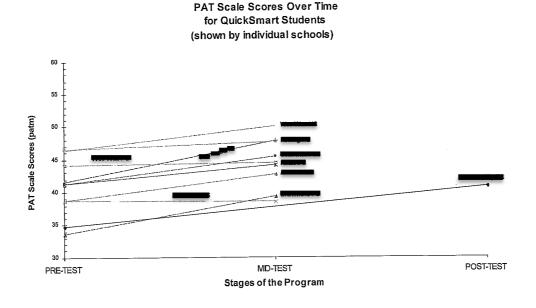
As indicated in the opening section of this report, a detailed analysis of QS students' scores (including CAAS scores, statistics such as effect size, for example) is presented in a separate report prepared by the QS team at University of New England. Although all of these data have been made available, in the interest of brevity and to avoid unnecessary duplication, the evaluators have chosen to present a selection of these

findings in broad, general terms. They are confident that such information, reflected in the three figures below, is representative of the QS project in detail and also indicative of the success of the intervention in improving students' numeracy.

Usually participating students complete the (standardised) PAT Scale prior to commencement and again at the completion of their QS program. Thus, standardised scores reveal individually and collectively the advances in standards of numeracy. As indicated in the Preamble, for purposes of this report students in all but one school had to complete their second PAT Scale approximately midway through the QS program. Accordingly, in the following figures PAT scores are reported as "Pre-test" and "Mid-test". For the exceptional school "Post-test" scores are reported.

The PAT Scale scores for individual schools are shown in Figure 1, plotted in accord with the applications of the test. In all but two schools improvement is clearly evident and, as reflected in the scores of the school that completed the program, this improvement is likely to be sustained.

Figure 1



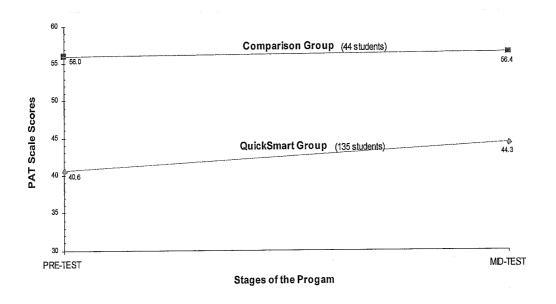
That two schools display no improvement is surprising and cause for closer investigation by the QS team. The evaluators can posit an explanation for only one of these cases in which, for example, the PAT score may be attributed to the selection of participating students. QuickSmart is designed as an intervention for students with learning difficulties — not for the students with intellectual disabilities that may have been selected in this particular school. Other factors, however, such as actual weeks of operation of the program and regularity of students' attendance may be more responsible for this apparent aberration.

A comparison group (not enrolled in the QS program) was assembled in each of the ten schools – selected randomly from each school's average achieving students. They too completed the PAT Scale in conjunction with the QS students. PAT scores for the

two student groups (QS 135 students; Comparison 44 students) were aggregated and these are presented in Figure 2.

Figure 2

Comparison of the Two Groups at Pre-test and Mid-test Stages using PAT Scale Scores

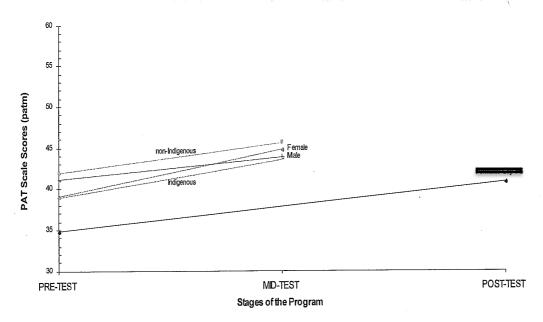


Whereas the scores of the comparison group of students increase only marginally from pre-test to mid-test, the corresponding scores for the QS students display considerable improvement. Furthermore (and supported by the continued improvement of QS students in ATT scores for at least seven of the QS schools will be maintained. Thus, at the completion of the program in 2009, QS students are likely to have reduced even further the gap between their and the Comparison group's PAT scores.

PAT Scale scores for QS students were also differentiated according to ethnicity and gender. Improvements were similar for both Indigenous and non-Indigenous students (although the latter's pre-test scores were three points higher). Noteworthy improvements in scores for male and female Indigenous students were recorded with the rate of improvement among female students overtaking that of their male counterparts. These details are shown in Figure 3.

Figure 3

PAT Scale Scores Over Time for QuickSmart Students (by ethnicity and gender)



Thus, by way of summary, this first question deserves a positive and optimistic reply. QuickSmart students' numeracy has responded to the structure and presentation of the intervention. At the "half-way" mark of the program PAT scores have increased, reducing the difference in numeracy between QS and Comparison groups. Furthermore, the effect of QS on Indigenous students has been noticeable and noteworthy. Of particular significance is the improvement in Indigenous girls participating in the QS program.

2. In what other respects have students been affected by their exposure to the QS program?

The evaluators are aware that an answer to this question runs the risk of assuming a causal relationship between QS and other factors such as changed behaviour by a student elsewhere in his/her school. The logistical and methodological limitations of this evaluation allow for no such certainty. Nevertheless, it is clear that to many in or associated with these QS schools (e.g. other teachers, parents) changes (in addition to improved confidence and achievements in numeracy) are being noticed and these are coincident with students' participation in their respective school programs.

Interviews, especially with coordinators and tutors, revealed that QS is almost universally popular with students. Observations of QS lessons, without exception, revealed students who were involved and enthusiastic. The presence of visitors appeared to have little if any adverse effect on students' concentration and determination to improve accuracy and speed in the four arithmetic functions. In two

schools (ACPS and WWHS) background noise did not appear to distract students but in another (THS) movements of other students was at times an impediment to lessons.

Only five exceptions to the students' enthusiastic participation were reported by tutors – two disruptive students had been suspended from one program (WWPS), one from another (NPS) for a similar reason, one for poor attendance (and replaced in the program promptly by another student)(GPS) and an Indigenous student had been withdrawn by his parents without explanation from another (ACPS). Irregular school attendance by some Indigenous students (e.g. AHS) has hampered their progress in OS, however.

Numerous examples of students' enthusiasm were provided during interviews. For example, two students became so involved and were so keen to improve their performances that the QS coordinator takes them for longer ("stretching out") lessons before school. (WWHS)

In most schools student-teacher/tutor relationships were seen to have improved – especially for Indigenous students for whom school has hitherto seldom provided "one-on-one" instruction. Pleasant, respectful relationships were noted in all classes observed by the evaluators.

In seven schools it was reported that "feedback" on QS students had come from other teachers. One Principal (WWHS) reported, for example:

"The whole school is committed to QS. Some teachers are also observing a good 'carry-over' effect."

A coordinator (CCS) stated:

"Some teachers have commented very favourably, especially on our Year 8 students doing QS."

Another coordinator provided two very informative case studies of Indigenous students:

"'Kirby's' attendance has been poor but his all-round achievement has improved noticeably."

Similarly, "'Malcolm' has extreme difficulties yet his mother is noticing improvements."

Another tutor reported:

"I have received congratulations from a teacher on general improvement of a particular student since he embarked on QS. Another commented on a student's increased confidence in class, quick to put his hand up, etc."

A coordinator in another school (NPS) reported:

"The teachers are telling us about the QS students' improvement. They have added confidence and this flows through to other areas. They'll talk to you and they can live with their mistakes."

Better self-esteem among QS students was also identified by class teachers in most schools. A coordinator in one of these schools addressed this outcome very specifically:

"This is a great program to build self-esteem. Teachers are telling me how the self-esteem of QS students has improved." (DMPS)

Understandably, the amount of feedback from parents has not matched that of teachers. Nevertheless, interviews revealed several examples (and in one school these were seen to be increasing in frequency). Although most parental contact is with coordinators and tutors Principals are sometimes sought out by parents. For example, one (WWHS) remarked:

"I have had very good feedback from one parent about her child's all-round improvement since starting QS lessons."

A tutor stated:

"A parent has thanked me personally for what I have done for her daughter."

In addition to the foregoing, both evaluators noticed, in all of the lessons observed, the expertise the students had developed in using their personal folders, entering data, completing graphs and tables, etc. In one school (DMPS) a coordinator commented on the pride with which students were attending to their personal documentation. It was not unusual to hear:

"Please, Miss, can you come down and see my folder."

Also on display was their familiarity with computer operations during relevant parts of their lessons.

The consideration of a variety of evidence from the ten schools readily indicates that QS is widely perceived as favourably influencing students' attitudes, behaviour, and self esteem and these extend beyond the boundaries of QS lessons.

- 3. Have linkages and partnerships been improved among participating schools and their respective broader communities?

 and
- 4. Have Indigenous parents, families and community members been involved in a significant way in the implementation of QS?

Responses to both questions are reported in the following section. Overall, limited evidence emerged to enable definitive answers. This is in part an outcome of the "division" of schools – for six schools QS is not a new program and thus much of the foundational work involved in introducing an innovation such as QS was completed

prior to 2008. During this time these particular schools made numerous efforts to publicise QS – in the school community at large and among Indigenous families in particular. Accordingly, the evidence presented below has been derived mainly from the interviews and observations in the schools new to QS (i.e. CCS, DMPS, GPS and WWHS).

Remarks by the Principal of one of the continuing schools (NPS) serves as a summary of pre-2008 procedures for introducing QS:

"We have not done very much specifically for the Aboriginal community this year — we did that last year when introducing QS. There was much more promotion in 2007. We have sent a questionnaire to QS parents this year but there haven't been many returned. We also arranged a lunch for parents but hardly anybody came. But I do have meetings with the Aboriginal community and at a recent meeting I had the mother of a QS student speak about her child's improvement."

The Principal of another continuing school (WWPS) made similar comment:

"I have heard little from parents about QS. Teachers meet the parents pretty regularly and so they would be better placed to comment."

One of the schools that introduced QS in late 2008 (WWHS) has followed a very determined and detailed path in order to gain understanding and acceptance of QS. The Principal reported:

"When we started up we advertised the QS program and got some good local publicity. We talk about QS in our newsletter to parents and also, especially, in the Aboriginal news ('Murri News') that is stapled to the school's newsletter."

Also observed during the visit to this school was evidence of quite wide exposure of QS to the whole community and to visitors to the school. In addition to the quotation above also noted were the support of the Regional Director, a photo display in the school's foyer, and the inclusion of QS information in the school's annual report. QS had also recently been mentioned at the New England Aboriginal Conference and had been the focus of discussion at Indigenous Community dinners.

The coordinator in another school (CCS) (with substantial Indigenous enrolment) that introduced QS in 2008 commented:

"Parent contact is difficult – very difficult, but we keep trying. We have been bringing in parents to sit in on their kids' lessons. There's also a group called 'Yarn Up' – it's an Indigenous group – that meets weekly to discuss school and community issues. QuickSmart gets mentioned there."

Of significant importance for Indigenous QS students was that most of their tutors were Aboriginal. The example set by these tutors is worthy of commendation and in most examples observed the relationships established were proving to be very supportive, encouraging and respectful. In all cases these tutors were members of their local communities and thus were likely to have close associations with QS students'

families. This often enabled communication between school and home to proceed in a manner more open and revealing than might otherwise have been the case. The coordinator (in a primary school) (DMPS) revealed:

"'D' (an Indigenous tutor) has been a lifeline for this school. When kids are being frequently absent she will go to their homes and bring them to school to do QS and other activities."

Any summary of the foregoing evidence must be restrained. For continuing schools the "public relations" involved in establishing QS have largely been expended and, in general, the program is perceived as established and on-going. Attempts by the four schools new to the program to secure Indigenous involvement and approbation appear to have been relatively modest although the efforts of two of the more remote schools (WWHS and CCS) have been quite vigorous and certainly commendable. It should also be noted that an outline of the QS program and objectives was provided to all parents when the schools sought permission for their children's participation.

Of importance and significance also has been the contribution by Regional Office of the Department of Education and Training. QuickSmart is frequently mentioned in regional newsletters wherein are offered advice and support. The allocation of a consultant (part-time) to assist QS schools has been an especially valuable contribution.

Specific examples of linkages between participating schools are given below in the final section on tutors.

5. How well are the participating schools catering for and adapting to the requirements of the QS program?

QuickSmart has been an instructional innovation for the ten schools in this project. As such, its introduction and adoption were destined, unavoidably, to confront resistances of some kind or other. The successful adoption of any innovation is contingent on several factors including characteristics of the innovation itself and also those of the adopting community. The strategy used to introduce an innovation such as QS is also of vital importance in securing its "institutionalisation" or permanent position in the long term, day-by-day operation of the school. Much effort was expended by the QS team at University of New England in developing its strategy to implement QS (aspects of this such as tutor training, for example, will be referred to in a later section). Similarly, deliberate strategies were employed by each of the schools.

The overall impression gained by the evaluators is that the strategies employed by both the QS team and schools have been successful. As an innovation, QS does not appear to have encountered any significant resistance in the schools. Evidence in support of such comes from at least two sources.

Since lessons require the withdrawal (for 30 minutes) of QS students, classroom teachers may find this practice inconvenient and even disruptive. It may well be argued by teachers that, in order to "catch up" in a withdrawal or remedial class, a student must "fall behind" in the subject from which he or she departs. The evaluators would not have been surprised to witness examples of such. This, however, was not

the case. In only one school (THS) were there any reports of "negative reactions" to withdrawal from classroom teachers. (This was in a high school where such a reaction is more likely.)

Coordinators especially, and tutors to a lesser extent, had worked assiduously to ensure that the effects on a QS student's withdrawal were minimised. Via "staggering" or "shuffling" (as described in various schools), timetables for QS lessons had been constructed so that a student in a primary school was withdrawn at different times on each of the three days. In the secondary schools students were withdrawn from three different subject classes.

Arrangements were generally made to promote speedy movements between classrooms and QS rooms. "Leave passes" – certificates signed by teachers attesting to students' QS attendance – were often employed.

A second measure of the extent to which schools had "accepted" QS may be identified in the nature and quality of the physical accommodation provided for lessons and QS activities. There were, of course, variations in the standard of accommodation provided due, fundamentally, to the availability of rooms. In schools that have experienced declines in enrolment in recent years at least one vacant or unused classroom was generally available and allocated to the QS program. Conversely, where enrolments were sustained and all rooms were in use, QS found locations in other areas such as annexes to libraries, converted storerooms, sections of special purpose rooms and so on.

Accommodation in some schools was, in fact, quite generous. For example in a high school (WWHS) one half of a demountable building was assigned to QS (and the other half to the "SWANS" – students with additional needs). Furthermore, especially for these occupants, the building had been repainted and refurbished.

The QS coordinator (who was part-time teacher learning support) in a primary school (DMPS) commented on the importance of the QS room there and the desire of the students to identify with it:

"The rooms are important for the kids. They feel as though they own them. If time allowed I'd like to be able to do more with them, like putting up wall charts and so on."

Although, as mentioned earlier, two rooms were subject to occasional background noise, teachers and tutors in only one school (THS) reported that the current room was unsuitable for QS activities because of the frequent movements of other students nearby. Fortunately, the use of better accommodation has been assured for 2009.

To both evaluators the foregoing provides strong evidence of schools – including those new to the program – adapting systematically and successfully to the requirements of an innovation in general and QS in particular. Absent was any obvious, firmly-held resistance to QS; present was much support, goodwill, and confident expectation.

6. How flexible are coordinators and tutors in their approach to QS?

During discussion with a coordinator (CCS) (whose allocation of responsibilities was STLA .5, Reading Recovery .2 and QS .1) mention was made of the numerous perceived strengths and advantages of QS when compared with other specific interventions. The coordinator, a strong "supporter" of QS, argued that much of its strength lay in its consistency:

"A key factor in the success of QS is consistency – in times, with personnel, and with lesson procedures."

Consistency should not be confused with rigidity, however: notwithstanding this perception, flexibility was evident in the presentation of QS lessons in her school – as indeed it was elsewhere.

Flexible approaches to the conduct of QS lessons were in evidence in most of the schools visited. Placement of lessons within the respective school timetables provided several examples. For example, the 30-minute lesson was not sacrosanct. The coordinator in a primary school (ACPS) stated:

"We commenced our QS program in April before the funds for this project became available. We also structured the program into 19 weeks with each student attending four 30-minute classes per week."

In another primary school (NPS) the coordinator stated:

"We run the QS lessons on three mornings when the school is having physical education from 9.30 to 10.00 and so there's never a clash with class lessons and withdrawal is not an issue."

The coordinator in a high school (AHS) pointed out:

"To accommodate the teaching schedule of the school QS sessions are conducted over 40 minutes."

Also noted in several high schools was a willingness to cater for individual students who did not want to miss any lessons in a particular subject: QS lessons were scheduled to accommodate these requests.

Observations of QS lessons, although relatively limited by the logistics of the study, revealed some variations in tutors' approaches and, indeed, their interpretation of some of the QS procedures. One tutor (WWPS), for example, was emphatic:

"I find it best to have mixed groups - a boy and a girl."

Another, also in a primary school (ACPS), whilst describing a lesson, said:

"I don't offer an end-of-lesson game every time I meet the kids. I like to plough on with the formal parts of the lesson."

It also emerged that in some schools QS materials and procedures were not being confined to QS classes. The Principal of a high school (WWHS) revealed:

"I would like many more to do QS if only resources permitted. We are, however, using some QS resources throughout the school."

The Principal of a primary school (GPS) stated:

"IM students are being included in the program. Teachers are not sure if their inclusion is what the QS team at UNE expected."

Undoubtedly, improvement in numeracy in students is dependent largely on the quality of the personnel who conduct QS lessons. In most cases the tutors are teacher's aides and for some of these the role of tutor is most challenging. It has been encouraging, therefore, to observe these people conducting classes and to notice the fluency and adaptability of many. They are key to QS success and a later section in this report addresses their preparation and training.

7. Is there evidence that QS can be sustained in the schools after the completion of this particular program?

Responses given to this question, particularly by Principals, focused essentially on the future provision of resources sufficient to sustain the QS program. "Resources" in these conversations referred almost exclusively to the cost of employing teacher's aides to act as QS tutors although the "opportunity cost" of using the teacher/coordinator's time was also of concern. Expressions along these lines were frequent. For example, the Principal of a primary school (WWPS) stated:

"The future of QS here will depend on the money available – but we want it to continue"

When asked if the imprimatur of the Department of Education and Training would be important in sustaining QS, the same Principal responded quite vehemently:

"The Department of Education can support QS for all it's worth, but unless we are resourced appropriately, it won't continue."

The Principal of another primary school (HPS) was adamant:

"If QS is to continue into future years it will require funding."

Not all Principals saw funding as the "make or break" of QS. For example, the Principal of a high school (WWHS) stated:

"QS will continue here but the cost of the program is a real worry for us. For example, we have no knowledge of funding for 2009 – not even for our Indigenous kids."

Another, Principal of a primary school (GPS), was more constructive in his response:

"The Priority Schools Program funds could take over QS after the funding ceases. The QS ethos fits well with PSP thinking."

The coordinator in a primary school (ACPS) that has had QS operating for three years alluded to difficulties QS may confront because of a change in priorities:

"We can't be certain about the future of QS. This is the end of the third year in (ACPS) but we have a new Principal who has suggested a different allocation of Aboriginal money next year – QS may be left out. The QS team here want it to continue and so too do several staff members."

Elsewhere, the Principal of a primary school was forthright:

"QuickSmart is here to stay. Regardless of funding it is part of this school's activities."

There is, however, another factor that will influence the sustainability of QS in these schools — and it has been mentioned incidentally in preceding sections — and that is whether there is support for the program's continuation among the schools' teachers. Collectively there is a great deal of goodwill towards QS reflected, not just by the respective school QS teams, but also among the ranks of Principals and teachers.

Expressions of support were frequently encountered in the continuing QS schools wherein the improvements in students' numeracy have been documented in 2006 and/or 2007 and associated improvements in attitude and confidence have been observed by teachers. In one high school (AHS) all observations suggest that QS is becoming institutionalised as part of the school program with strong all-round support from teachers (and school executive). Reservations about QS were identified in only one continuing school (THS) where teachers stated it was too early to say whether the current students are displaying lasting benefits. The same teachers, somewhat paradoxically perhaps, conceded that the students who completed QS in 2007 "seem to be holding their improved positions".

During his second visit to a continuing primary school (HPS) an evaluator was told that it was recognised that there was a significant number of non-QS students very much in need of assistance with basic numeracy (it was suggested this figure could be as high as 40%). Teachers were quite distressed about the apparent inability to expose these students to QS.

Support for QS in the four schools new to the program was, understandably, more restrained because of limited experience with the program (8-10 weeks) and also (as at late November) the analysis of data from the students' testing program had not been completed. Nevertheless, in each of these schools, there was a noticeable enthusiasm for QS and optimism that test results would confirm teachers' expectation of improvement.

One characteristic of country schools in general, but remote schools in particular, is the relatively higher levels of Principal and teacher turnover that are experienced. This characteristic brings with it the possibility of a (teacher) coordinator transferring from a school thus leaving the QS program leaderless. One can only hope that all Principals and the Regional Office will acknowledge the importance of such and move promptly to appoint replacement teachers/coordinators.

Thus, evidence of sustainability is somewhat ambiguous. There is widespread acceptance that the program has been of noteworthy benefit for students in continuing schools; there is extensive optimism in the schools new to the program that QS will assist students significantly in their numeracy. These portents can only be regarded as optimistic. On the other hand, however, there is uncertainty, some confusion – as well as disagreement – especially among Principals, as to whether QS can be sustained financially.

Tutors

Crucial to the success of the QS program is the quality of instruction provided by its tutors. Tutors must be expert with QS and also capable of establishing professional and supportive relationships with their students. Most of the tutors in the ten schools were teacher's aides (and the majority of these were Indigenous). In only one school were all (three) tutors teachers. As indicated earlier, six of the teacher coordinators acted as tutors and conducted QS lessons. Notwithstanding the teachers' contribution in the ten schools participating in this project, QS was very much dependent on the level of expertise achieved by this select group of teacher's aides.

The QS team at University of New England is indeed sensitive to this imperative. Included in its strategy to introduce QS is a three-stage training program for tutors. The first of three two-day workshops was held in Tamworth in June 2008, prior to the commencement of this QS program, and attended for part of the time by one of the evaluators. The second (mid-project) workshop has been scheduled for early February 2009 and the final workshop will be conducted at the conclusion of the project.

During the evaluators' visits to the QS schools the training/preparation workshops for tutors were frequently mentioned. Overall, tutors appreciated and valued their initial training workshop. Several voiced support. For example, a new tutor at a continuing high school (THS) expressed both support and appreciation for the program; the coordinator in the central school new to QS said:

"I'm satisfied with the training and there's a two-day follow-up workshop planned for February. That will be valuable." (CCS)

Another coordinator, in a continuing high school (AHS), remarked:

"I was particularly happy with the training that preceded this particular QS program but it was, of course, my second training program."

Nevertheless, there were some (constructively) critical comments and suggestions. For example, tutors in two of the primary schools introducing QS remarked:

"I was disappointed in some aspects of the two-day training program. It was OK but I wanted more 'hands on' experience. The video [filmed at Shown to us was more about kids' attitudes to QS rather than kids 'in action'." (DMPS)

"I would have liked to have seen an actual lesson during the training program." (GPS)

The evaluators were heartened to note the initiatives taken by two of the schools in order to facilitate and/or improve their QS tutors' skills. The Principal of a primary school new to QS (GPS) pointed out that it had "lost" one tutor soon after the initial training workshop and a replacement was found. Arrangements were then made for the new tutor to attend the nearby high school (GHS) to be introduced there to the operation of QS. The coordinator in another primary school new to QS (DMPS) took her two tutors to see 'K', experienced tutor in a continuing primary school (ACPS), "in action":

"It was really very valuable for them to see him working with QS kids so soon after they finished their training in Tamworth."

It is appropriate to include mention here that, as part of its considered strategy to introduce QS to schools, the team from University of New England also held an introductory one-day workshop for Principals in June 2008 — Principals are, unavoidably, crucial to the adoption of innovations in their schools. This experience was appreciated by all who participated although a suggestion, similar to that mentioned above, was offered by three — their disappointment at not being shown QS "in action". As one Principal (of a continuing high school) suggested:

"The training session would benefit by the inclusion of a model lesson or a school visit to watch an actual lesson."

The foregoing comments serve to emphasise the importance of the QS training program and also to reveal that most participants had weighed up the strengths and weaknesses of what they had encountered. In a continued spirit of constructive commentary many offered suggestions that the evaluators undertook to communicate to the QS team at the University.

Concurrent with an evaluator's visit to the three most remote schools a consultant from the University QS team was also present to observe lessons and to offer advice to coordinators and tutors. Clearly, such a visit to these relatively distant schools (two of which were new to QS) was greatly appreciated. The Principal of the continuing primary school applauded the consultant's visit and emphasised:

"We must try to maintain ongoing training for people in QS, especially the tutors."

She then offered further suggestions:

Also suggested by Principals and/or coordinators in each of these three distant schools was the desirability of a "professional learning certificate of some kind" (CCS) for those who complete QS training.

Conclusion

The evaluators have been impressed with the outcome of the QS intervention program at its "half-way" mark. In spite of the late commencement of QS activities in nine of the ten participating schools, pre-test and mid-test standardised scores (as assessed via the PAT Scale) reflect improvements in Indigenous students' numeracy, particularly among female students. This success must obviously be attributed to the structure and delivery of QS — its theoretical and practical underpinnings are substantial and impressive — and also to its inherent attractiveness to students. In the nine schools in which the evaluators observed lessons being conducted students' enthusiasm was obvious and elements of both competition and cooperation spurred them on to further achievement.

In general, schools have endeavoured to familiarise parents with the QS program and to advise them of their children's achievements. To accomplish such has proved challenging in some cases where parental contact is difficult to initiate and to sustain. Nevertheless, progress in this regard has been made. Within the schools teachers in general have displayed both acceptance of the value of QS and support for its operation and continuation.

The sustainability of QS is seemingly assured in some schools, regardless of the challenge this poses with regard to employment of tutors. Elsewhere, although there is enthusiasm and support, the "resource problem" has led to uncertainty about continuation – cause for considerable disappointment and even some anxiety among coordinators and tutors.

Most noticeable to the evaluators is the importance of the tutors in the QS program. The QS team at University of New England has devoted and continues to devote attention to the elevation of tutors' standards. Of particular satisfaction to the evaluators has been the observation of so many Indigenous tutors conducting QS lessons. These tutors are enthusiastic and devoted and with few, if any, exceptions, keen to expand their knowledge of QS in future professional development workshops.

Laurie Murphy

A. Ross Thomas