# The Scaffolding Literacy in Indigenous Schools Project 1999-2003

Scaffolding Literacy is now known as Accelerated Literacy and is based at Charles Darwin University in the Northern Territory. The program is a teaching program designed to accelerate the literacy skills of learners. While the program is suitable for all learners, it is especially appropriate for those who have failed to make the appropriate literacy gains in school and those who are in danger of falling behind.

Scaffolding Literacy was developed by Brian Gray and Wendy Cowey.

The Scaffolding Literacy in Indigenous Schools Project was a DEST-funded project operating out of the Schools and Community Centre at the University of Canberra during the period 1999 – 2003, implementing the Scaffolding Literacy approach in a number of Indigenous schools in regional and remote Australia.

The following paper provides background information about the Scaffolding Literacy in Indigenous Schools Project, the problem that inspired the intervention, and the concept of literacy that underpins this approach to literacy development. It also provides data on the projects' outcomes to December 2002. The material presented below was first published in:

Gray, B. Cowey, W. and Axford, B. 2003 *Scaffolding Literacy with Indigenous Children in School.* Final Report to the Indigenous Education Branch, DETYA. University of Canberra.

## What is the problem Scaffolding Literacy in Indigenous Schools addresses?

This project addresses issues to do with achieving and sustaining meaningful change in the literacy outcomes of Indigenous students. Educational outcomes for Indigenous students, particularly for those in rural and remote settings, have not improved over the past three decades despite government investments in this field. In addition, for teachers in the field who wish to improve programs in their school there are no models of practice available to them in the research literature that can realistically promise the level of outcome shift needed for meaningful success.
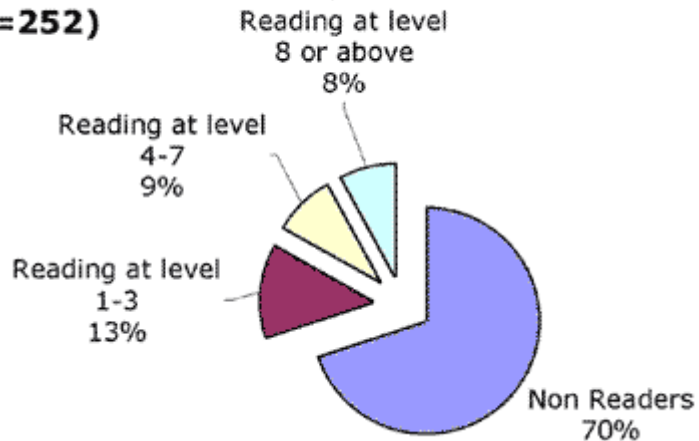
### A history of failure

In 1996 the Australian Council for Educational Research (ACER) National School English Literacy Survey found that only about 20 per cent of Indigenous students met the identified standards that had been set for Year 3 and Year 5 students in reading. This contrasted with a figure of more than 70 per cent for their non-Indigenous peers (REF).

Despite ongoing attempts to address the literacy outcomes of Australian Indigenous students over the past 30 years very little in the way of sustainable improvement has been achieved. It is still far too easy to find schools, and even districts, across the country where 80% or more of those children who do attend school are either illiterate or minimally literate (reading at a first year (Kindergarten) level or below). Of the remaining 20% it is typical to find that the majority are performing at a level no higher than Grade 3 benchmark literacy and for the remaining few it is almost certain that low comprehension skills make progression to higher education and training problematic.

Pre-program data collected at the beginning of the Scaffolding Literacy Project in Western Australian schools demonstrated that, for remote schools in particular, estimations of 20% performing at grade level is a massive exaggeration. Almost no children in remote schools demonstrated achievement at these levels. Figure 1.1 gives the combined pre-test results for Kimberleys and Pilbara schools collected before the Scaffolding Literacy program commenced. The results for these schools are provided here because they are characteristic of remote area schools across Australia. In fact, the project team has encountered areas in other states where far worse pre-test results were obtained.

**Figure 1.1**

## Combined pre-test reading accuracy results for combined Kimberleys and Pilbara schools (n=252)

Reading at level 8 or above 8%

Reading at level 4-7 9%

Reading at level 1-3 13%

Non Readers 70%

The graph indicates that 70% (or 176 of the 252 students) were unable to engage effectively with the lowest level of pre-primary text being used in their classroom programs. Across school classes covering from Year 1 to post primary grades only 17% (or 42 students) could decode classroom texts at a Year 4 grade level or above.

Reading outcomes such as those indicated in the above graph are by and large characteristic of remote area Indigenous schooling across Australia. In spite of Commonwealth funding, these outcomes have been characteristic of remote area Indigenous schools for at least the past 30 years.

### The lack of alternative models

Very little innovation of real educational significance is available for Indigenous schools. This is made clear in an analytic reading of a recent review of practical programs funded by DEETYA (Batten et al. 1998). It is a notable comment on the current availability of effective programs that this review should find it necessary to highlight 'Concentrated Encounters' as a significant contribution. This program, developed by Gray (beginning in 1980), ceased to receive funding in 1982 and was implemented at one school (Traeger Park in Alice Springs) that itself was closed in 1990 (see Gray 1998, Walton 1992). The principles embodied in that earlier program were never taken up in other contexts in any substantial manner prior to the current Scaffolding Literacy initiative.

The limited availability of viable approaches to literacy with Indigenous students presented in Batten et al. (1998) is mirrored in McRae et al. (2000) which, apart from a strong reference to Scaffolding Literacy, illustrates that very little is available that can offer substantial evidence of a claim to be an effective and comprehensive approach to literacy pedagogy with Indigenous students.

Over the 10 years prior to 1996 the Commonwealth Government invested over 1.7 billion dollars in Indigenous supplementary programs, with yearly expenditure rising to over a quarter of a billion per year in 1996. This level of expenditure makes the long history of low outcomes demonstrated by McKay et al. (2000) even more alarming. To spend so much with so little change in the overall outcomes of Indigenous education is surely an indication that a new perspective is required.

In the past, short-term projects or 'enabling projects' (McKay et al. 2000) have dominated the field. The Scaffolding Literacy Project is able to demonstrate substantial progress toward the

development of a successful and sustainable pedagogy. This development now needs on-going consolidation.

The reasons for the need for consolidation and ongoing development of successful change lie, in part, in the lack of pedagogical models available for teachers working in the Indigenous educational field. Teachers who wish to achieve academic outcomes with Indigenous students cannot turn to the research literature and locate, easily and directly, the critical information that will direct them successfully in their daily practice. This fact alone indicates that the issues are systemic in nature and well beyond the level at which individual teachers can be held responsible.

### Impact on school communities

This project places great stress on the development of both effective pedagogy and on effective school and teacher support. These twin features of the program are absolutely central to successful practice if the culture of institutionalised failure and inertia that is a feature of Indigenous education is to be overcome.

This culture of on-going failure imposes immense pressures upon school communities and these pressures have led to the construction of a field in which change is extremely difficult to both initiate and maintain. The stress faced by teachers, when they work with Indigenous students without achieving any significant impact on literacy development over time, is especially intense. Furthermore, the manner in which the field of Indigenous education has developed as a response to ongoing failure over a considerable period makes it extremely difficult for individual teachers, working alone, to generate change before they become worn down by the inertia and ongoing setbacks they encounter. School and teacher support is, therefore, essential. This support needs to be substantial and on going.

## How was the Scaffolding Literacy in Indigenous Schools Program developed?

### Conceptual development

The program currently known as Scaffolding Literacy in Indigenous Schools commenced its development in work carried out by Brian Gray with Indigenous students at Traeger Park School in the Alice Springs between 1979 and 1984 (Gray 1981, 1985). In this early form, the program was referred to as 'Concentrated Language Encounters'. Between 1984 and 1992 this work was further refined by Gray at the Northern Territory University (Gray 1986) and at the University of Canberra until 1992 (Gray 1987, 1998, 1990).

In 1992 Dr Gray assumed the Directorship of the Schools and Community Centre, an applied research and teaching centre within the University of Canberra. The centre conducts programs with ACT students who have a history of long-term literacy failure. It was as a result of an intensive development program in the Schools and Community Centre between 1992 and 1998 with a colleague, Wendy Cowey, that the structure of the program in its current form was developed.

Following a smaller scale intervention program (1998-99) the program developed by Gray and Cowey was introduced into a number of rural and remote schools across four Australian States in 2001-2. A list of participating schools is provided in Part 2 of this report.

### The pilot program

The report of the first year of the current project submitted to DEST at the end of 2001 demonstrates remarkable gains in literacy development for the students involved in the project (School and Community Centre 2001 b). By the end of the first year of the project a number of schools were only just coming to terms with the teaching changes that the project entailed. However, even at this stage of the project, significant changes were apparent.

There was a dramatic fall in the number of students who were classified as non-readers. For the most part 'non-readers' were students who were gaining very little from their school experience and they typically could not engage effectively in any academic or other literacy related activity. In all the schools in the program the numbers of students in this category was reduced substantially after just one year in the program. For example, in Western Australian schools, the number of 'non readers' fell from 80% to 44% for Pilbara, from 65% to 29% for Kimberleys and from 29% to 16% for Southern Western Australian schools. These results for reading accuracy on texts that were part of the teaching program demonstrated that these students were, at this early stage, engaging productively in the teaching-learning process.

Another significant change also occurred in the number of students reading between Year levels 4-7. To use the example of the Western Australian schools again: the E number of students operating in the Year 4-7 levels increased from 6% of the total in the Pilbara to 27%, from 10% to 33% in the Kimberleys and from 8% to 31% in the Southern Western Australian schools.

Further assessment in 2002 indicated that increased gains were being achieved in both quantitative and qualitative dimensions of reading development (School and Community Centre 2002 b). A detailed account of results for 2002 is set out in Part 2 of this report. These results demonstrate that substantial further development has continued in the schools participating in the project.

### The Scaffolding Literacy model

The Scaffolding Literacy model has been able to be successful where conventional practice has failed because it embodies fundamentally different presumptions concerning how students learn to control literate discourse. The teaching goals are shaped in ways very different to those of conventional reading programs. So too are the teacher-student negotiating practices that support and 'stage' the learning process.

As a result, the scope of the program, as well as the implementation process that accompanies it, is far broader and potentially more significant educationally than is implied by the traditional notions of 'method'. Traditionally, 'method' is seen as a set of teaching strategies that for the most part can be unproblematically added to existing practice and easily accommodated within the existing competencies of teachers. This notion of differing 'methods' brings with it the all too commonly held assumption that change can be brought about by merely finding new methods and strategies.

The implementation model employed in the Scaffolding Literacy Project has involved direct and ongoing contact between the schools involved and the research team located at the University of Canberra. The strong link that has been established between pedagogic theory and classroom practice has been critical to the success of the project. The model has involved the following processes:

- Ongoing formal professional development sessions at central sites
- Regular support visits to schools by members of the research team to provide further professional development and practical classroom support to teachers

- A developing level of indirect support by means of telephone and email as well as feedback on lesson videotapes collected by teachers at their schools and forwarded to Canberra for review
- A strong focus on the production of measurable outcomes and attention to the collection of assessment and other relevant data

The maintenance of an ongoing support structure of this sort is critical to the development of successful intervention in the field of Indigenous education generally. The significance of this aspect of the project is explored more fully in the paper Key Elements of Accelerated Literacy: Pedagogy and teacher support, also available on this website.

## How are the outcomes measured?

The ongoing assessment of outcomes has been a major focus of the Scaffolding Literacy Project. Some forms of assessment used have been diagnostic and qualitative in nature. The project has produced, for example, an extensive library of videoed lessons using the Scaffolding Literacy approach. These videos have been used by the project team for purposes of analysis and further program development. In addition, the videos have been used as teaching materials for regional coordinators and in-school professional development as well as parent and community information nights.

Quantitative assessment procedures have been developed that use as their baseline the National Literacy Benchmarks developed for the Commonwealth Government by the Australian Council for Educational Research (ACER). Reading benchmarks for all students entering the Scaffolding Literacy program have been established in pre-program tests.

Testing during the program has distinguished between learners' '**independent working level**' and '**individual reading level**'. In brief, these two types of assessment of reading employ two developmental indicators. A student's 'independent working level' represents a student's ability to read and comprehend, without assistance, texts taught previously in the classroom program. Each student is also mapped in terms of his or her ability to read previously unseen text at various benchmark levels. This latter indicator is referred to as the child's 'individual reading level' (for a longer description of these two types of indicators see Schools and Community Centre 2001 (b) pp17- 21).
The outcomes reported below use these two types of indicators. Using these indicators the project can demonstrate dramatic improvements in literacy competence (reading and comprehension) across all participating schools. These improvements have occurred at all year levels, including with one group of young adult learners (see outcomes for Wongutha School set out below).

In addition, an independent, largely qualitative, evaluation of the project, conducted by the Australian Council for Educational Research (ACER) provides a valuable supplement to the quantitative data presented in this report. This evaluation concluded that:

The changes in observable levels are not uniform – the populations of these schools are too diverse socially and geographically for such to be the case, and the circumstances of the students and their schools vary widely as well. But the changes are always solid, always upward, and often spectacular' (Cresswell, 2002, p27).

## Which schools participated in the pilot program?

In 2002 the Scaffolding Literacy project was carried out at the following school sites:

### Queensland

- Shalom Christian College – Primary and Secondary

### South Australia

- Fregon, Amata and Mimili Anangu Schools
- Wiltja Secondary Program, Woodville High School

### Western Australia

**Kimberley Schools**

- Kulkarriya, Ngikina Mangala, Yakanarra, Yiyili, Wulungara

**Pilbara Schools**

- Parnngurr, Rawa, Strelley, Warralong, Woodstock

**South Western Australian Schools**

- Wongutha, Kurrawang, Coolgardie, Culunga, Karalundi

Two striking features of the locations of these schools are that they highlight the project's reach (over three Australian states) and the isolation of many of the participating schools.

## How many students participated in the program

This section of the report details how the project has progressed across all participating schools. The revised proposal for this project (April 2001) gave the estimated number of students to be included in the program as 1,601 (see Table 3.1). These figures were taken from the official census data, supplied to DEST, of the total numbers of students registered on the school rolls at the time they were collected.

However, as indicated in Table 3.1, the number of students listed on school rolls for 2002 was less than the official census data (1,197 students). This is because the figures quoted as 'officially on the roll' at any particular time conceal a degree of volatility in the number of students moving through a particular school. That is, a significant proportion of any class is changing as new children enter the class and others leave. For example, a class with a nominal number of 25 could have as many as 65 entering and 40 leaving during the year. Although the level of volatility in the movement through classes varies from class to class and school to school, it is a general feature of most schools in this project.

Furthermore, many who are registered on school rolls have highly infrequent attendance patterns. For example, in one instance the average daily attendance was approximately a quarter of the number listed on the roll. Because of this volatility in the movement of these students the number who completed both the pre- and post-assessment tasks is only half the number listed on school rolls. The right hand column of Table 3.1 gives the number of students who were able to be included in the assessment data for each site by the end of 2002.

**Table 3.1: Students in the program**

| Schools | Numbers of children | | |
|---|---|---|---|
| | Proposed in revised contract (April 2001) | Listed on school rolls for 2002 | Completing assessment |
| Shalom Christian College | 320 | 261 | 147 |
| Kimberleys and Pilbara | 425 | 374 | 189 |
| Amata, Fregon, Mimili | 300 | 224 | 113 |
| Wiltja/CAPS Schools/Culunga/Karalundi | 556 | 338 | 98 |
| TOTALS | 1601 | 1197 | 547 |

*Many more than 547 were assessed during the year but these were not included in the final assessment results reported here because of the above factors or because they had enrolled towards the conclusion of the project.*

A further point of note in respect of the data analysed in this report is that students were pre tested as soon as possible following their entry to school. Thus, two students can have different pre-test dates depending on their date of entry into the program. Consequently, the period of exposure to the program differs for each. For example, a student who commenced in a grade at the start of the project could have spent far less time. In this report, to simplify reporting, only those who have spent 10 or more months in the program have been included. Thus, the number in the program is understated but this method ensures comparable results across schools. At the same time, including students who had spent less than the full two years in the program understates the potential developmental gains.

For similar reasons the outcome data does not make any adjustment for attendance except in a very few of the most extreme cases. Thus, for example, a student attending 30% - 40% of the time is treated the same as one attending 90% - 100% of the time (that is, in the data presented in this report all students are treated as if they attended 100% of the time). This factor underestimates the potential effect of the program. That major gains in outcomes were achieved despite these constraints demonstrates the robust nature of the pedagogy employed.
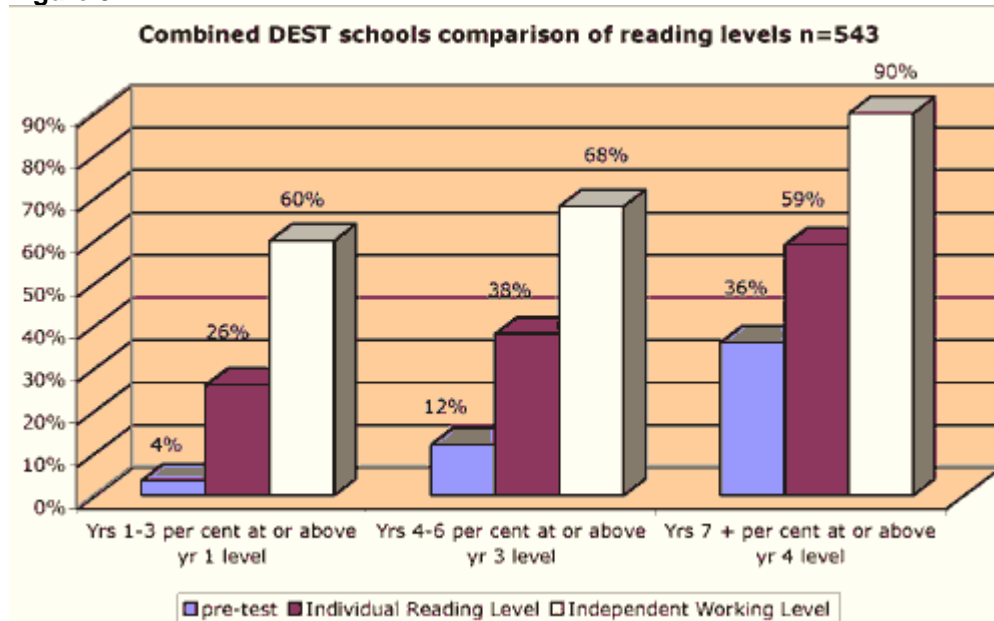
## What were the outcomes of the project

Outcomes data in this report are presented in three separate modes. First, the aggregated outcomes of all participating schools are shown. Second, outcomes by individual school/clusters are presented. Finally, data for one sample class is shown (although the identity of this class has been withheld). This third form of data analysis is included here to demonstrate the kinds of diagnostic information able to be generated for schools from the assessment model developed in the Scaffolding Literacy Project.

### Outcomes across all participating schools

Figure 3.1 shows the combined reading accuracy results for all schools included in the project. The students' results are combined for 3 grade clusters, Years 1-3, Years 4-6, and Years 7 and above (Yrs 7+). Each column shows the percentage of students in each cluster that achieved at or above a set benchmark level of performance.

**Figure 3.1**



Combined DEST schools comparison of reading levels n=543

**Outcomes for Years 1-3 students**

The blue column for each cluster shows the percentage of students that were achieving the benchmark on entry to the project (pre-test). Thus, on entry to the project only 4% in the grade cluster Years 1-3 were able to read independently, either unseen texts or texts used in their classroom program at or above a Year 1 level. As benchmark texts at this Year 1 level represent the first steps beyond basic phrase level or single simple sentence to a page books, this performance means that virtually no progress was being achieved with 96% of these students prior to intervention.

In contrast, the yellow column shows that 60% were able to achieve what has been termed an 'independent working level' at or beyond a Year 1 level by the end of the program. This measure is an important one in the context of a Scaffolding Literacy program because it marks the extent to which students are able to read without assistance the texts they are working on in the classroom program. What it tells us is that 60% are able to engage in a highly autonomous manner with the teaching process that is occurring in the classroom. There is really no equivalent of this measure within the scope of most other commonly employed approaches to literacy pedagogy. For those in individualised programs, for example, there are no texts beyond their current limited ability that they can perform on independently. This is well illustrated by our fieldwork: we found at Shalom, Kulkarriya, and Amata, that students tested prior to the Scaffolding Literacy program typically did just as badly on both classroom program texts and unseen texts at the same level of complexity.

The initial effect of the pedagogy employed in the Scaffolding Literacy program is to engage students in reading well beyond the scope of their initial unassisted performance. As this goal is achieved, development of high level automatic decoding can be traced through three clearly defined stages. There is a first stage in the developmental process where students require constant teacher support to engage in such relatively advanced and challenging texts. However, if the level of engagement with those advanced texts is maintained at a productive level, the students will soon shift to a second stage of competence as they learn to read the program text completely independent of support. Significant progress in achieving this second stage is tapped by the assessment of 'independent working level'. What successful 'independent working level' benchmark performance shows is that the students are demonstrating a significant level of

independence in their movement into the process of reducing the gap that exists between themselves and their normally achieving peers.

Thus, reference to the difference between the blue and yellow columns in Figure 3.1 (above) shows that virtually no students in the 1-3 grade cluster (4%) could read texts at a Year 1 level. However, by the end of the program, 60% were able to read Year 1 texts that they had encountered in their classroom program. What this means in the reality of day-to-day classroom activity is that there has been a radical change in the context for productive literacy teaching in the classroom. Whereas previously most students (96%) had little chance of taking part in lessons now most (60%) are able to engage with a significant degree of independent competence.

As the second stage of independence (independent working level) is reached, it becomes possible for the teacher to engage the students far more analytically and deeply in the various comprehension and decoding processes that operate within the program text. It is this ability to deconstruct reading strategy 'secrets' in an already independently accessible text that allows the teacher and students to break free of a fundamental dilemma facing low achieving students. This dilemma is that progress under conventional methodology is so slow that, even in the unlikely event that the Indigenous students do manage to make progress, that 'progress' is below the ongoing rate of development achieved by their normally achieving grade peers. It is a key strength of the Scaffolding Literacy Project that it can provide this developmental step from which generalisation of competence can occur at high levels of text complexity.

The third measure of outcomes shown in Figure 3.1 is represented by the red column. This measure has been termed 'individual reading level'. Individual reading level measures the extent to which the children can read unseen text independently at specific benchmark levels. For the Year 1-3 grade cluster the graph shows that 26% (as opposed to 4% originally) can now generalise their reading competence to competent performance with unseen text at Year 1 level or above.

### Outcomes for Years 4-6 students

Figure 3.1 (above) shows highly significant outcomes for the Year 4-6 students. Independent working level outcomes for benchmark texts at a Year 3 level has risen from 12% (blue column) to 68% (yellow column). Consequently, from the perspective confronting a classroom teacher, the initial group of 12% the per cent of students able to engage at a participation level of Year 3 competence or higher had now been extended to 68%. As was the case with students in the 1-3 Years cluster, this indicates a monumental shift in the lesson engagement capacity of the students concerned.

Consideration of the results for individual reading level (red column) shows that the number of students able to generalise their competence to unseen texts at a Year 3 level has risen from 12% (blue column) to 38% (red column).

### Outcomes for Years 7+ students

The percentage of students in the Year 7+ cluster that could achieve a benchmark performance at or above a Year 4 level are shown in Figure 3.1. From an initial participation rate of 36% at a Year 4 level the post program outcomes for independent working level shows that the participation rate rose to 90% of students who were capable of engaging with a high degree of autonomy at or above a Year 4 benchmark level.

Individual reading level outcomes show that 59% (red column) as opposed to a pre-test performance of 36% (blue column) of students were capable of generalising their decoding competence effectively to unseen text at or above a Year 4 level.

### Outcomes by individual school

The participating schools or clusters of schools span three States. Each school or school cluster is unique in terms of its geographical and demographic characteristics. In this section of the report we report on some of the specific outcomes for each school. Benchmarked literacy outcomes for participating students in each school/school cluster are shown in Figures 3.2 – 3.6. To provide ease of comparison, the same data set ('pre-test', 'individual reading level' and 'independent working level' at the end of one year) has been used as for all participating schools.

## Queensland

### Shalom Christian College Townsville

A notable event for Shalom Christian College during semester two was their winning of a $10 000 National Literacy Award. The teachers and students took great pride in this achievement as it represented the great improvement in literacy outcomes for the school since they embarked on the Scaffolding Literacy Project.

The Scaffolding Literacy Coordinator in the primary school has continued to develop expertise in supporting teachers with their lesson preparation, program planning and implementation as well as literacy evaluation. The reduced mobility of most staff in 2002 (with minimal changes in all but one class) was beneficial to the literacy progress of children at the school.

The Scaffolding Literacy Coordinator in the secondary school resigned (for family reasons) at the end of term two and this presented some difficulties for the school. Fortunately the three teachers delivering the program in the secondary school were sufficiently competent in teaching the program to continue with some support from the Primary School Coordinator. There was one other teacher in the secondary school with minimal teaching skills whose efforts at teaching Scaffolding Literacy were weak and there were no resources available within the school for directing extra resources towards supporting him to the extent that he could improve his effectiveness.

The school has continued to receive regular visits from the University of Canberra team who have provided professional development and additional support for classroom teachers.

**Figure 3.2**

## South Australia

### 1. Wiltja program at Woodville High School, Adelaide

The teachers working on the program at Wiltja have continued to deliver the program with increasing confidence and capability.  There are four staff members with at least two year's experience teaching Scaffolding Literacy. These teachers have continued to organise their timetable to provide individual literacy tutoring for every student attending the school. Results obtained at this school are good despite difficulties arising from the attendance patterns of children in this region.

At the end of 2002 the in-school coordinator will leave the school. Three of the remaining teachers have worked in the program for either two or three years and will continue to teach Scaffolding Literacy in the school although the position of coordinator has not been filled as yet.

Members of the University of Canberra project team have continued to provide support for teachers at the school and three teachers from the school attended a three-day professional development session at the University of Canberra in 2002.

### 2. Anangu schools cluster (Fregon, Mimili and Amata Anangu schools)

Teachers at the three schools located in the Pitjantjatjara Lands in the north of South Australia have maintained their commitment to the Scaffolding Literacy Project and this is reflected in the program results (see Figure 3.3).
**Figure 3.3**

Where the school principal has been wholeheartedly behind the project the in-school Scaffolding Literacy Coordinators have been most successful in obtaining the cooperation of all teachers in the school. This situation exists at Mimili and Fregon schools, although some difficulties have occurred at Amata. Support from the principal is essential for the success of the program as timetabling regular Scaffolding Literacy sessions, timetabling literacy early in the day when the children are still fresh and most likely to be at school, making literacy the core business of the school, not allowing extraneous excursions or other program to interfere with literacy teaching and ensuring that new teachers to the school understand that they are expected to teach Scaffolding Literacy are all issues that contribute to the success of a program in a school. Members of the University of Canberra project team have continued to provide professional development support for teachers at the three schools and two teachers from Fregon attended a three-day professional development session at the University of Canberra with the teachers from Wiltja. The professional development was offered to teachers from the other two Anangu schools but they were unable to attend.

## Western Australian schools

Figure 3.4 sets out the outcomes for all participating school in Western Australia. It can be seen that there has been significant improvements in both 'individual reading levels' and 'independent working levels' across all grade levels.

**Figure 3.4**

Implementation of the program in Western Australian schools has been supported by a full time coordinator based in Perth. During the period covered by this report the coordinator has been supported by the Education Consultant – Literacy (0.4 time allocation) from the Association of Independent Schools of Western Australia (AISWA). As well, the project team from the University of Canberra has provided support in the form of professional development and additional coordinators to travel with the Perth Coordinator to all the schools in the Pilbara and Kimberley areas.

Teachers across the Western Australian schools are highly supportive of the program as the literacy outcomes they have been able to achieve with their students are far better than anything they have ever known. Teachers, students and parents in the remote communities are all highly positive about the program and its excellent outcomes for children's literacy. Additional regional professional development has also been provided by the University of Canberra project team in Perth and Broome.

## 1. Kimberley schools cluster

Overall outcomes for the schools Kulkarriya, Ngikina Mangala, Yakanarra, Yiyili, Wulungara are set out in Figure 3.5. The result of 94% of Year 7+ students working at an 'independent working level' at or above Year 4 level is a remarkable achievement for these schools.

**Figure 3.5**

## 2. Pilbara schools cluster

Figure 3. 6 (below) sets out the results for the 51 students available to undertake the pre- and post- assessment in the schools of Parnngurr, Rawa, Strelley, Warralong, and Woodstock. Strong gains were made by the Year 7+ group.

## 3. South Western Australian schools

Wongutha, Kurrawang, Coolgardie, Culunga, and Karalundi make up the Southern schools cluster in Western Australia. Figure 3.7 (below) shows the combined results for these schools. Outcomes for Wongutha alone are also provided (Figure 3.8). This is because Wongutha is a TAFE institution catering to older trade-oriented students. It is highly significant, therefore, that of the 16 students available for pre- and post-testing no student was able to achieve a pre-test reading level at the Year 6 benchmark. By the time of the post-test, 66% had reached an 'individual reading level' of Year 6 or above, and 100% of the group had reached an independent working level' at Year 6 or above. This suggests that the 'Scaffolding Literacy' approach is equally effective for adult learners as it is for younger learners.

**Figure 3.6**

**Figure 3.7**

**Figure 3.8**

## Outcomes by individual class

For reasons of privacy, data on individual students and classrooms cannot be made public. However, the assessment tools developed as part of the Scaffolding Literacy Project can be used to track individual students and class groups. In addition, the assessment program used in the project draws on standard tests already in use in Australian schools.

To give an illustration of the way individuals can be tracked over time we provide one case study drawn from the data library developed during the life of the project. The school is in a regional centre and illustrates the way individual students (here given numbers rather than names) can be individually tracked in the program.

### A Year 8 class case study

This case study of a Year 8 class provides an example of the way assessment is integrated into the program as a whole. In this example, 17 students had been pre-tested and their results are shown in blue on Figure 3.9. By June 2002 these students had again been assessed for individual reading levels on an unseen text benchmarked at a Year 8 level. The sample includes four of the lowest performing students whose pre-test in 2001 indicated a reading accuracy benchmark level of Year 5 or below (subject numbers 1-4).

As indicated in Figure 3.9 all 17 of the students tested were able to read the unseen Year 8 text at greater than 90% accuracy. What was especially remarkable is that the initial reading levels (at pre-test) were widely variable (blue line) while at post-test (pink line) there was a uniform level of success achieved by the students.

**Figure 3.9**

Figure 3.9 indicates that automatic decoding amongst the students concerned has developed well. With the increase in automaticity of the decoding process less cognitive engagement is required to accomplish effective decoding. This, in turn, allows the student to direct more cognitive effort to mastering comprehension, providing that a suitable teaching program is in place. In fact, comprehension development for this class has been quite rapid.

The comprehension pre-testing for this class was completed at the end of 2001 after two teaching terms with the program. Post testing was only two terms later. Of the 41 students on the roll for this class, 8 students were not present for the post-testing. There is, however, no reason to presume that these students were any different from those present for testing. Comprehension pre-tests for this absent group averaged at a higher level than those students included in the highest performing group discussed below (that is, average pre-test TORCH, scores of 41 compared to 38 for those present for the testing).

Two thirds of those available for post-testing (that is, 22) were able to complete the TORCH test on a text ('The Accident'), benchmarked as highly appropriate for assessing the reading competence of Year 7/8 students. This in itself is a significant outcome as no students over the whole class were able to complete a level of assessment above mid primary at the time of pre-testing. At the post-test, the remaining one third (that is, 11) could not complete an assessment at this level and need to be assessed using a lower Year level text from the test. The testing of this latter group was not available at the time this case study was prepared. Consequently, this discussion concentrates on the performance of the students completing 'The Accident'. The key point of significance, for the field of Indigenous education, is that from a situation of dysfunctionally low comprehension competence for secondary students, two thirds of the class were now very close to, or above, mainstream levels on an exacting measure of comprehension performance after a teaching interval of 6 months.

All 22 students were able to read and work on the comprehension activities with this text unaided. Figure 3.10 shows the development in comprehension achieved over 2 terms by these students.

**Figure 3.10**

The magnitude of the gain in TORCH test scores for the 22 students able to complete 'The Accident' test activity is significant. It should be noted that a small group entered the class after the pre-test was conducted and did not have a pre-test score (these are represented as students 18, 19, 20, 21 and 22). Post-test results for this group of 5 are shown and are comparable with those for whom a pre-test exists. Overall the gains from pre-test to post-test average 18 TORCH test scores, with two students making gains of 32, and 6 making gains of over 20.

To investigate the impact of the gains made by the students with respect to outcomes for non-Indigenous mainstream students it is possible to locate both pre-test and post-test performance on percentile rank distributions for each age level. This is shown on Table 3.2 (below).

Table 3.2 shows the percentile rank equivalents at each Year level from 3 to 10 across the top of the figure. The TORCH scores are listed in the column on the left hand side of the figure. The equivalent percentile rank ranges at each year level are set out in the bars within the centre section of the table. Thus, a TORCH score of 50 is equivalent to a percentile rank of 92 for a Year 3 child but only equivalent to a percentile rank of seven for a Year 10 child.

**Table 3.1: High School Year 8 class TORCH comprehension test average scores: pre-test/post-test comparison of estimated percentile ranks for each Year level**

The percentile rank for a particular TORCH score shows the percentage of students in the normative population who score either above or below that score.  For example, a student who has a score equivalent to a percentile rank of 60 has a score that is equal to or higher than 60% of the normative population. Alternatively, the score is lower than the top 40% of the population in the normative group.

Figure 3.11 shows that the average TORCH score at pre-test at the end of 2001 was 38. If this score is followed through tables of percentile ranks for each grade level it can be seen that it only approaches average performance for main-stream students in Years 3 and 4. Students working at this level of comprehension would find the work at upper primary and early secondary to be beyond their reach.

If we look at the average score obtained on the post-test just two terms later a dramatic difference has occurred. The average range within which the students are functioning is above average for Year 7 and still within the average range for Year 8. A result of this magnitude over so short a time illustrates the potential that resides within the Scaffolding Literacy pedagogy. It places this project at the very cutting edge of the field. Furthermore, the fact that the kind of transfer from decoding development to comprehension performance in contexts where the students did start from a higher pre-test base in decoding illustrates the potential for continuing the development of the remote area students with lower pre-test performance provided the program is consistently continued in the future.

## Summation

Consideration of the outcomes achieved across all participating schools shows that this program has been able to achieve quite unprecedented literacy gains in some of the most challenging educational contexts in Australia. Moreover, the gains have been achieved over the extremely short period of two years.

While the gains achieved have been considerable it is clear that there is still room for further development in the schools concerned. This should not be surprising. The issues involved in turning around an educational context that has, for the past 30 years remained largely stagnant with respect to outcomes, are substantial. It is also important to note that the students concerned are, in most instances, developing from what can only be called horrifically low levels of initial literacy competence.

What is highly significant is that the rate of development achieved has well exceeded that which would normally be expected in year-by-year progression through schooling. This means that the students involved in this project are in the process of achieving a major shift in their developmental progression. From students who were continually falling further behind their mainstream peers they are now in the process of a rapid catch up. This kind of developmental shift is unprecedented in the field of Indigenous education.

Consideration of project outcomes by individual schools highlights the significant results arising from the project across a range of schools and across a range of State education systems. The results also highlight the strong gains made across all year levels.

Of particular significance are the results from Wongutha School, in Western Australia, because the students in this sample were all young adult learners. The pre-test results indicate that none of the sixteen students in the sample at this Year11/12 TAFE institution were able to read at a benchmarked Year 6 level when they joined the program. By the time of the post-test all sixteen students had an 'independent working level' at or above the Year 6 benchmark (that is, all sixteen were able to read, without assistance, texts that had been taught previously in the classroom). At the same time, two-thirds of the group had obtained an 'individual reading level' of Year 6 or above (that is, they were able to read and previously unseen text benchmarked at Year 6 level or above). These results suggest that the approach to literacy developed in this project is highly relevant for older non-reading students and adults. This finding opens up major new avenues for further research and program development in the area of adult and community education.

The case study drawn from one high school illustrates the way the assessment model developed in the project can be used to monitor the progress of individual class groups. The case study also illustrates the way the assessment practices developed in the project utilise standard benchmarked assessments used nationally. It also demonstrates the potential for extending the literacy development of students involved in this project well beyond the gains already achieved to a true parity of literate outcomes with their mainstream peers.

## Notes

TORCH Comprehension Tests are developed for use in Australian schools by the Australian Council for Research in Education (ACER). See Mossenson, L., Hill, P., and Masters, G., 1987, *Torch Tests of Reading Comprehension,* ACER: Camberwell, Victoria.

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