Bridging the Gap: Evaluating the effectiveness of an early literacy intervention program

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Abstract

To ensure that children in Victorian schools today gain the necessary literacy skills for full participation in community life, a number of literacy intervention programs have been developed and implemented. This study evaluates the effectiveness of one such program, *Bridging the Gap*, a literacy intervention program developed by teachers to improve the literacy skills of 'at risk' students in Years 5-8 in Victorian schools. Unlike many other literacy intervention programs, this program relies on trained community volunteers, rather than teachers, to provide one to one intensive tuition in reading and writing strategies. Using a semi-structured questionnaire that was mailed to 159 schools in two educational regions in Victoria, the study found very strong evidence for the effectiveness of the *Bridging the Gap* program for improving both the participants' reading and writing skills and their self-esteem. In particular, the study seems to confirm the importance of teaching specific writing and reading strategies as a means of structuring children's literacy learning.

Introduction

Effective literacy skills are regarded as vital for success in today's world.

> *To leave school today without an appropriate level of literacy is to be impoverished indeed, for those without the capacity to go on and secure some kind of additional education or training will be competing for a rapidly diminishing pool of unskilled jobs, and in other ways effectively disempowered and prevented from participating fully in community life* (Christie, 1987: 21).

To ensure that children in Victorian schools today gain the necessary literacy skills for full participation in community life, a number of literacy intervention programs have been developed and implemented. However, many of these literacy intervention programs such as *Reading Recovery* rely heavily on one to one teacher-student contact and are thus difficult to implement in schools where teacher resources are stretched to the limit. By way of contrast, *Bridging the*

Gap (BTG) relies on trained community volunteers, rather than teachers, to provide one to one intensive tuition in literacy strategies.

After its implementation in many schools across Victoria,[1] the developers of BTG received a lot of anecdotal and informal feedback and comments about the program's success in increasing the self-esteem and the reading, writing and spelling skills of the students involved. However, no formal evaluation of the program was conducted until 1998 when Language Testing Research Centre (LTRC) of The University of Melbourne was commissioned by the program's developers to evaluate its impact. This report presents the results of the LTRC study and discusses the implications of these findings.[2]

The overall aim of this study was to evaluate the effectiveness of the *Bridging the Gap* (BTG) literacy intervention program in improving the literacy skills of 'at risk' students in Years 5-8 in Victorian schools. Four main questions were posed:

1. How have schools implemented the BTG program?

2. How effective is the program perceived to be? What are its strengths and limitations?

3. Does the program have a significant effect on the self-esteem and the reading and writing skills of the participants?

4. Does the effect differ according to year level, gender or region?

Literacy

The Australian Department of Employment, Education and Training (DEET) defines literacy as

> *the ability to read and use written information and to write appropriately in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth and to function effectively in our society. Literacy also includes the recognition of*

*numbers and basic mathematical signs and symbols within text.
Literacy involves the integration of speaking, listening and critical
thinking with reading and writing. Effective literacy is intrinsically
purposeful, flexible and dynamic and continues to develop throughout
an individual's lifetime* (DEET, 1991b: 9).

This definition clearly indicates that the term 'literacy' no longer
refers just to the domains of reading and writing and that a broader
definition is now acceptable. Davies et al. maintain that a "plausible
interpretation of the broadening to more and more domains ... is that
literacy has extended its provenance from the apparently clear
narrow sense of learning the skills of reading and writing to the more
all embracing sense of the demands of contemporary education"
(Davies, Grove, & Wilkes 1997). However, where the term is used in
this paper it will generally refer to the more restricted definition as
the primary focus of the BTG program is with the domains of reading
and writing.

Bridging the Gap was specifically designed to assist upper primary
and lower secondary students experiencing difficulty in reading and
writing. The program helps students to 'bridge the gap' between
themselves and the texts they encounter at school. Different types of
texts place different demands on readers and writers, therefore, there
is no single strategy that can be applied to either reading or writing to
assist students with these demands.

Reading entails both an understanding of the different ways that texts
are organised as well as the role of background knowledge and
interpretation that the reader brings to the context. In fact, Freebody
(1992) argues that students need to be able to draw on four roles to be
effective readers and writers: code breaker, text participant, text user
and text analyst. The act of reading or writing happens in a socio-
cultural context so students need to be able to be more than 'code-
breakers' of the written script. To be successful readers (and writers)
they need also to be 'text participants': able to draw upon and apply
their knowledge of the topic and the way the words go together to
make sense of a particular text. In addition, it is important that
students become 'text-users', drawing upon their knowledge of the
role within society of the texts they are reading and writing in order
to use them to participate in particular social activities in which texts
play a central part. It can be argued further, that students need to be
'text-analysts': aware of the written text as a 'construction' with a

particular world view, and to understand how it 'positions' the reader (Freebody, 1992: 49).

Students therefore have different demands placed on them as readers and writers and often need a 'scaffold' to structure and support their learning. A useful way of providing this structure for students is through the explicit teaching of and engagement with specific strategies in both reading and writing. Many teachers now encourage and assist their students to develop Before-reading/writing, During-reading/writing and After-reading/writing strategies. For example, a Before strategy could, for example, involve asking *Why am I reading/writing this text? What is it about? How will I go about reading/writing it?* A During reading/writing strategy could involve asking *When I come across a new word while reading I will try a few guesses and see which one makes the most sense.* After-reading/writing strategies are also important to help the students check how much they have understood and remembered. Reflection on which reading/writing strategies helped is also significant so that individuals can consciously find ways that work best for them.

It is these Before, During and After reading and writing strategies that the *Bridging The Gap* program seeks to develop in its participants and consequently assist them in becoming successful 'code-breakers' and 'text-participants' (Freebody, 1992: 49).

Clay and Cazden report that low progress readers tend to 'operate with a more limited range of strategies [than high -progress readers] - some relying too much on what they can invent from memory without paying attention to visual details, others looking so hard for words they know or guessing words from first letters that they forget what the message as a whole is about' (Clay & Cazden, 1992: 116).

As Christie notes 'programs of teacher intervention are needed to bring the features of literacy to the conscious attention of students, causing them to engage in deliberate reflection about these matters'. (Christie, 1995: 17). Although referring specifically to grammatical features of literacy in this statement, it applies equally to strategies used by students.

Literacy Assessment

Van Kraayenoord maintains that 'Literacy assessment involves the collection and use of information to make judgements about achievement and progress in literacy learning' (van Kraayenoord, 1996: 237). At the classroom level this information can, and should, come from a number of different sources as a 'combination of assessment techniques helps teachers build a more complete picture of students' achievement and progress' (van Kraayenoord, 1996: 239). The *Bridging the Gap* literacy intervention program assess the achievement and progress of students who participate in it by collecting data from four main sources:

®   Dictation (Peter's Dictation test)

®   Word Recognition (Burt Test)

®   Running Records (Reading)

®   Writing Samples.

The Burt and Peter Tests are standardised reading and dictation tests in use in many Victorian primary schools. These tests are conducted both before the program begins and at the end of the program. Running records accurately describe what happens when a child reads by providing insights about the strategies the child is using to reconstruct meaning in both familiar and unfamiliar texts. Discussing the text also provides another way of discovering how deep a child's understanding of a text is. Compiling a collection of dated writing samples, both assisted and unassisted, provides evidence of improvement in writing skills over time.

Since the mid 1980s in Australia, there has been a growing interest in assessment and reporting of literacy achievement at the State and national level. (Van Kraayennoord, 1996: 242). In Victoria for instance this has led to the development of the Learning Assessment Project (LAP) tests where standardised tests are given in English and Maths (plus one other subject) every two years to Years 3 and 5 students. These results are reported to schools and parents and the aggregated data are used to report on and compare schools. The development and recent amendment of the Victorian Curriculum Statement and Framework (CSF) has also been an outcome of this need for increased accountability of schools in the key learning areas (KLAs).

Such developments at the State and national level have produced a more complex picture of the assessment of literacy in Australia. In fact, van Kraayenoord concludes, on a somewhat sombre note, that the different purposes of each level of assessment: at the State level for accountability and the classroom level for diagnostic and instructional purposes, 'will do little to enhance the instruction of literacy or to provide valid reports of students' literacy achievement in Australia' (van Kraayenoord, 1996: 244).

Methodology

The following section outlines the methodological approach taken in this study. It includes details of the sample selection, design construction, and data collection and analysis procedures.

Sample

The seventy eight schools in the Greater North East Education Region and the eighty one schools in the Western Education Region in Victoria who had sent a staff member to the *Bridging the Gap* training program were selected as the sample for this study.[3] These schools were selected firstly, because they had the most complete and accessible student data records and secondly, because the two regions are quite distinctive in character. Greater North East region includes rural Victorian areas as well as large regional centres such as Benalla and Wangaratta while the Western region covers the outer, western, suburban Melbourne areas such as Footscray and Werribee.

Design

The final design for the evaluation of *Bridging the Gap* program consisted of a comparative process-outcome study in the two Victorian educational regions mentioned above. Although the primary focus of the study was on determining the impact of the

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[3] Schools that are interested in implementing the BTG program send a staff member to an intensive training workshop to gain an understanding of the program and to learn how to implement it. These teachers then return to their schools as the *Bridging the Gap* School Facilitators where they become responsible for establishing the program and training the community volunteers.

program, measured through test scores and facilitator ratings, an attempt was made to capture some information about how the program was being implemented across the study regions. The implementation data gathered was confined to the following aspects:

* program organisation

* staffing of the program

* number of sessions

* assessment procedures.

This data relied on 'reported use' by the facilitators. No observations of the program to study actual implementation practices were undertaken. Hall and Loucks argue that collection of 'first hand information about implementation of the innovation' is critical for interpreting outcome and consequence data.' They agree however, that in most 'evaluation studies, the presence of the innovation...is taken more on faith than on the basis of systematic documentation' (Hall & Loucks, 1977: 264).

An analysis of how a program is being implemented can help explain why, if any, change has occurred. Combining these two approaches to evaluation utilises the strengths of each. Owen for example, maintains that it is not necessary to keep outcomes and implementation separate. 'An examination of program implementation can be an integral part of an impact evaluation' (Owen, 1993: 130).

Program outcomes were measured in two ways:

* by comparing student performances on the Burt and Peter tests[4] prior to entry to the program and on completion of the program;

* by comparing facilitator ratings of student self-esteem and seventeen specific reading, writing and spelling strategies prior to entry to the program and on completion of the program. Both the pre and post program ratings were collected from the facilitators at the same time using the one questionnaire. They were thus

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[4] Although the program recommends monitoring four aspects of literacy, resource constraints for this study did not permit the fine-grained analysis required for writing samples or reading assessments.

expected to reflect on changes in students across a ten-week period.

Data Collection Procedures

The main data gathering instrument used was a semi-structured questionnaire that was mailed to the 159 schools in the two study regions. The following data were collected from the BTG school facilitator via the questionnaire:

⊛ Program implementation data

⊛ Facilitator perceptions about program's strengths, limitations and overall effectiveness

⊛ Student background information - gender, year level etc.

⊛ Pre- and post-test scores for the Burt and Peter tests

⊛ Pre- and post-ratings of individual student performance on particular reading, writing and spelling strategies (facilitator perceptions).

⊛ Pre- and post-ratings of student self esteem (facilitator perceptions).

For ease of administration, respondents were asked to rate most questions on a 5-point scale although they were also given the opportunity to add comments if they wished. The questionnaire was designed to 'filter' respondents so that only those schools that had used the Burt and Peter tests to monitor student progress completed the sections relating to individual students' test scores, reading and writing strategies and self-esteem ratings.

Semi-structured telephone interviews with tutors were also arranged. Although it was only possible to conduct two such interviews the insights gained were useful and references are made to these where relevant.

Results

The major findings of the study are presented in the following section.

1. How have schools implemented the BTG program?

An overall response rate of 50 % was obtained with 80 of the 159 schools returning the questionnaire. Table 1 indicates the extent of implementation of the program in the two study regions and reveals that only 60% (48) of schools that returned the questionnaire have actually implemented the BTG program in some form.

Region	Implementation			Total
	No	Yes but not with pre- and post- tests	Yes with pre- and post- tests	
GNE	9	19	6	34
Western	23	18	5	46
Total	32	37	11	80
%	40%	46%	14%	100%

Table 1: BTG use in schools in Greater North East region and the Western region in 1998

The forty-eight schools who were using the *Bridging the Gap* program in some form (i.e. with or without pre- and post-tests), were asked to describe *how* the BTG program was being implemented in terms of: settings (one to one, small groups etc), tutors, frequency of sessions, year levels targeted and student evaluation procedures. The results are listed below.

⊚   The majority of schools (90%) use BTG in one-to-one instructional settings.

⊚   65% of the schools use community volunteers, (parents, grandparents and others) as the sole source of tutors for the BTG program. A further 21% of schools only use teachers, student teachers teacher/integration/literacy aides or Year 10 students as tutors for the program while another 11% of the schools use a combination of community volunteers and teaching staff.

⊚   The majority of schools (88%) provide at least three sessions of between 50-60 minutes each per week for the students.

⊕   In 94% of schools, the program lasts between 10 weeks and a
     term.

⊕   Most of the schools who are using the BTG program are targeting
     students in Years 5 and 6.

⊕   Only 23%(i.e. eleven schools) of the schools who are using the
     program are using the Burt and Peter tests for monitoring student
     achievement.

Of the schools in the study that have implemented the BTG program,
the majority have done so according to the program developers'
guidelines except in regard to the use of tutors and tests. 32% of
schools either do not use trained community volunteers at all or only
use them in conjunction with teachers. In addition, less than a quarter
of the schools who were using the program (i.e. 11 out of 48) were
using the recommended tests (Burt and Peter tests) for evaluating the
change in skill levels of the students.

Only schools that used the Burt and Peters tests could be included in
the second part of the study that evaluated outcome data. Thus pre-
and post-test scores, pre- and post-ratings of self esteem and reading
and writing strategies of individual students were only available from
the eleven schools that used the Burt and Peter tests. However, these
eleven schools supplied data about 83 individual students who had
undertaken the program in 1998.

2.   **How effective is the program perceived to be? What are its
     strengths and limitations?**

Overall effectiveness of BTG Program

The program was perceived as being very effective by the school BTG
facilitators with an average rating of 4 on a five-point scale where 1
represented *not effective at all* and 5 represented *extremely effective*. The
main reason given for the program's effectiveness was the one to one
relationships established between the student and the tutor. One
respondent commented:

   *'All participants thoroughly enjoyed and looked forward to each
   session, monitoring and assessing their own progress and
   achievements. They especially valued their time and relationship with
   their volunteer.'*

This regard seemed to be mutual. One of the tutors also told the research team that she felt one of the most positive aspects of being involved with the program for her was the one on one relationships that she had established with individual students.

Program Strengths

Table 2 summarises the responses regarding the facilitators' perceptions of the main strengths of the BTG program.

Strengths	Rating (1= not a strength, 5= major strength)					
	1	2	3	4	5	Mean rating
Self esteem (*n=36*)	0	0	1	6	29	4.8
One to one Relationships(*n=33*)	0	0	2	8	23	4.6
Reading strategies(*n=34*)	0	0	1	12	21	4.6
Catering for Individual needs (*n=35*)	0	0	2	12	21	4.5
Writing strategies(*n=34*)	0	0	3	16	15	4.4
Links (*n=32*)	4	2	5	9	12	3.7

Table 2: Perceived strengths of BTG Program

As shown in Table 2, all listed attributes, except links, (that is, improving links between school and community), were perceived as strengths (with average ratings of between 4.4 and 4.8). Facilitators perceived the major strength of the program to be in the increased self-esteem of the students involved. This was further confirmed in the data on pre- and post- program ratings for self-esteem, reading and writing strategies. Table 3 below summarises the data that is discussed in more detail later in this paper under the question; *Does the program have a significant effect on the self-esteem and the reading and writing skills of the participants?*

Item	Pre program rating	Post program rating	Difference
Self Esteem	2.4	3.8	+1.4
Reading Strategies	2.3	3.6	+1.3
Writing Strategies	2.5	3.7	+1.2

(1= extremely low, 5 =extremely high)

Table 3: Summary of facilitator pre and post program ratings for self esteem, reading and writing

This improvement in self-esteem could well be due to the improved success that students are experiencing, many for the first time, in reading and writing. In turn this success could at least be due partly to the intensive one on one sessions designed to cater for the students' individual learning needs.

Program Limitations

Table 4 summarises the facilitators' responses regarding the limitations of the BTG program.

Attribute	Rating (1= no limitation, 5 =major limitation)					
	1	2	3	4	5	Mean rating
Difficulty in recruiting tutors (*n*=34)	1	5	5	8	15	3.9
Lack of teaching staff for program (*n*=33)	6	1	5	8	13	3.6
No time release (*n*=32)	7	2	5	3	15	3.5
Quality of tutors (*n*=33)	5	3	6	7	12	3.5
Difficulty in retaining tutors (*n*=30)	4	7	6	4	9	3.2
Time to train tutors (*n*=33)	6	5	7	7	8	3.2
Timetabling difficulties (*n*=33)	7	6	10	8	2	2.8
Lack of resources(*n*=31)	8	6	13	4	0	2.4
Difficulty of persuading students to enter program (*n*=35)	20	9	5	1	0	1.6

Table 4: Perceived limitations of BTG program

The major limitations of the program revolve around staffing issues. A number of respondents added comments regarding the difficulties of recruiting, training and retaining tutors.

> *'BTG enables parents and school to build a true partnership, but the supply of quality tutors is often not available. We hope to incorporate a literacy aide to have a consistent approach for students most at risk.'*

A number of facilitators also commented on the lack of time release for program facilitators. For example, one respondent estimated that the time needed to coordinate the program was *'1.5 hours per four students'* while another maintained that *'The lack of time is the main limitation of the program'*. Yet another facilitator said *'Time constraints restrict the number of students entering the program and their subsequent monitoring once they complete it'*.

3. Does the program have a significant effect on the self-esteem and the reading and writing skills of the participants?

The eleven schools who used the Burt and the Peter tests for measuring individual student performance were asked to complete a detailed summary for each student who had participated in the program in 1998. This form (included as page 5 of the questionnaire) captured the following information:

⊕ background information about each student including year level, gender, country of birth, main language spoken at home, number of years in Australia and total number of BTG sessions attended.

⊕ student scores on the Burt and Peter's tests (pre- and post-program)

⊕ facilitator ratings of student self esteem (pre- and post-program)

⊕ facilitator ratings of student performance on seventeen specific reading, writing and spelling strategies (pre- and post-program)

Each of the seventeen reading and writing strategies and the self-esteem rating listed above was analysed using a non-parametric, repeated measures Sign test. Basically this simple test revealed whether facilitators perceived that students' self esteem, reading strategies and writing strategies improved over the period of the program. The post-ratings were compared with the pre-ratings to see if they showed an increase (+), a decrease (-) or did not change (0).

Table 5 reveals that the mean ratings of all eighteen items increased: self esteem ratings increased by +1.4; reading strategies by an overall average of +1.3 and writing strategies by an overall average of +1.2.

Item	Pre Program Rating	Post Program Rating	Difference
Self esteem	2.4	3.8	+ 1.4
Reading Strategies			
Re-reads for meaning	2.4	3.7	+1.3
Self corrects	2.4	3.7	+1.3
Phrased and fluent reading	2.2	3.5	+1.3
Enjoys reading	2.3	3.5	+1.2
Uses initial letters to decode unknown words	2.6	3.8	+1.2
Uses word endings to decode unknown words	2.3	3.4	+1.1
Uses syllabification to decode unknown words	2.2	3.8	+1.6
Has bank of sight words			
Mean Ratings for all Reading Strategies	2.3	3.6	+1.3
Writing Strategies			
Commences writing promptly	2.4	3.7	+1.3
Writing makes sense	2.7	3.8	+1.1
Writes legibly	2.6	3.6	+1.0
Message can be understood by others	2.8	3.8	+1.0
Knows how to use basic punctuation	2.5	3.6	+1.1
Constructs unknown words by representing initial, middle and final sounds in words	2.4	3.6	+1.2

...continued

Item	Pre Program Rating	Post Program Rating	Difference
Constructs unknown words by adding endings to words	2.3	3.5	+1.2
Constructs unknown words by breaking word in syllables	2.2	3.7	+1.5
Writes more complex sentences	2.2	3.6	+1.4
Mean ratings for all writing strategies	2.5	3.7	+1.2

Table 5: Facilitator ratings for self-esteem and selected reading and writing strategies. (1=extremely low, 5=extremely high)

While resource constraints for the study did not allow any pre- and post- analysis of student reading or writing samples to verify these results, many of these reading and writing strategies would be employed in the Burt Word Recognition Test and the Peter's Dictation Test. For example, a student completing a Peter's Dictation test would have the opportunity to employ at least strategies 10 -14.

Burt and Peter Test Results

The results presented in Table 6 show a comparison of the pre- and post-means and standard deviations for each of the two tests used.

	Pre-test		Post-test	
	Mean	*SD*	Mean	*SD*
Burt's Test n=83	39.1	18.9	48.8	21.6
Peter's Test n=83	59.9	21.0	67.8	23.3

Table 6: Means and standard deviations of Burt and Peter's tests

These results reveal that the participants in the BTG program improved just less than 10 points on the Burt test (39.1 to 48.8) and more than seven points on the Peter test (59.9 to 67.8). A repeated - measures t-test was performed to assess the significance of these findings. This test confirmed that these improvements were significant: $t = -9.90$, df = 82, $p < 0.000$ (Burt Test) and $t = -6.09$ df = 82, $p < 0.000$ (Peters Test).

There was also a high correlation between scores on the pre- and post-tests in both cases. This, together with an inspection of the relevant scattergrams of the pre- and post-scores on each of the two tests, indicates a substantial improvement in performance across the whole cohort of the sample. In other words, both students who scored relatively low on the pre-test and students who scored relatively well on the pre-test all improved significantly on the post-test.[5]

4. Does the effect differ according to year level, gender or region?

Table 7 summarised the basic background information of the students who participated in the *Bridging the Gap* program in 1998 in the study regions. The table reveals that there were more boys than girls involved in the program (59% boys: 41% girls). Also, 94% of the students in the program were Australian born. The table also shows that the program is used for students ranging from Year 3 to Year 8. However, previous reference has been made in this report to the fact that students in Years 5 and 6 were the most frequent users of this program.

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5 A control group was not used in this study. Normally, this would mean that the results of such a study would be treated with caution as other factors such as the practice effect or maturation of the students may account for such differences. However, in this study, the size of the improvement in both tests indicates that a real effect has been established.

Region	Gender		Country of birth		Main language at home		No. of years in Aust. (if not born here)	Year levels in 1998	No. of BTG sessions (average)
	Female	Male	Australia	Other	English	Other			
GNE	25	31	56	0	56	0	N/A	Yr. 3-Yr 7	24
Western	9	18	22	5	19	8	3.5-14	Yr. 6-Yr 8	28
Total	34	49	78	5	75	8			

Demographics (header spanning middle columns)

Table 7: Demographic information of BTG participants in both regions

Three variables: region, gender and year level (Years 5 & 6 only) were used in further statistical analyses using two-way analysis of variance (ANOVA). The purpose of these analyses was to observe whether any of these variables had an effect on student performance.

Due to the low number of students who were born overseas (5) or had a main language other than English at home (8) no statistical analyses of these variables was attempted. This is not to discount the importance of these as possibly significant variables.

The results of the ANOVA analyses are shown in Table 8.

	Region		Year*		Gender	
	F	p	F	p	F	p
Burt Post Test	.087	.769	4.181	.045	.830	.366
Peter Post Test	.407	.526	.128	.721	.002	.966

* only Years 5 and 6 were analysed using ANOVA.

Table 8: Effect of Year Level, Region and Gender on Test Performance

This table indicates that none of these variables has a significant effect on the performance of either test except for perhaps Year Level on the Burt test where F is .045 and approaching significance.

Table 9 shows the mean scores for Year 5 and Year 6 boys and girls on the Burt post-test. This table clearly shows that there is an interaction effect between Year level and gender with Year 6 boys and girls performing better on this test than Year 5 boys and girls.

Year 5 Students		Year 6 Students	
Boys	Girls	Boys	Girls
32.6	31.1	51.2	53.5

Table 9: Mean scores of Year 5 and 6 students on Burt PostTest

Overall though, the results indicate that the program was effective in both regions, for both year levels and for both boys and girls.

Discussion and Conclusion

The results of this study have some implications for both the program developers and for classroom practices. Following is a summary of the key findings:

1. 40% of schools who sent a representative to the *Bridging the Gap* training program did not in fact return to their schools and implement the program.

2. Only 65% of the schools who had implemented the BTG were using trained community volunteers as the sole form of tutors. Only 23% of these schools were using the recommended battery of assessment measures including Burt and Peter tests.

3. Facilitators perceive *Bridging the Gap* to be a very effective literacy intervention program. They perceive the main strengths of the program lie in its ability to increase the self-esteem of the students through the individualised teaching of specific reading and writing strategies. Facilitators believe the program is limited by the difficulty of recruiting and retaining quality volunteers and the lack of teaching staff for the program.

4. Facilitators believe that most students' self esteem has improved and their ability to use specific reading and writing strategies has increased since undertaking the program.

5. Students performed significantly better on both the post-Burt and post-Peter's tests. This improvement was independent of the factors of region, and gender, although year level may have some effect.

Although there is considerable interest in the program as evidenced by the number of schools sending representatives to the training and information sessions, there remain considerable disincentives to implementing the program. The main disincentives are:

- Limited resources (other literacy intervention programs already operating)

- Lack of time to coordinate program given that no time release is allocated to staff who become school BTG facilitators

- Difficulty in recruiting suitable volunteers.

  This last factor - difficulty of recruiting suitable volunteers- is also a problem for schools who are implementing the program. The emphasis is on the word 'suitable'. Many respondents added comments such as

  Quality and dedication of tutors is important

  Expertise of volunteers often determines quality of experience

  BTG has been beneficial in a number of ways but we need qualified and capable people involved in the program

  The success of the program for the child is very much dependent on the quality of the tutor volunteer.

One respondent went further and questioned the wisdom of using volunteers in such a specialised teaching area at all.

  As community volunteers don't all have an 'education' background it concerns me that they are called on to make certain judgments during implementation that I think would require an education/teaching background.

Because of the difficulty of recruiting suitable volunteers, many schools are finding alternative means of staffing the program. In fact, 32% of the schools who are implementing the program are either not using trained community volunteers to run the program at all, or are supplementing the use of community volunteers with other teaching staff (particularly student teachers or teacher aides).

Given that the use of trained community volunteers is one of the program's defining characteristics, the program developers might need to explore this issue further and find ways of resourcing the program to ensure suitable volunteer staff are recruited. It might be that volunteers may require more intensive training than is presently given so that all the stakeholders have confidence in their ability to tackle such a specialised task as literacy teaching. As a comparison, *Reading Recovery* teachers in New Zealand receive a year's training and practicum while the BTG school facilitators only undergo a *two-day* program themselves before training the community volunteers who do not have any teaching experience at all.

It might also be necessary to build more of a partnership between volunteers, students, facilitators and parents to encourage them to feel part of the school community. Finally, schools might need to consider providing volunteers with a stipend for their work so that their contribution is acknowledged in a financial sense as well as in other ways.

On the other hand, the Department of Education may need to consider whether using trained community volunteers for such a vital role in preparing students for full participation in community life is adequate.

Program developers may also wish to reflect on the different means by which schools are assessing the progress of students in this program. One of the implications of the variety of measurement tools being used is that it will prove difficult to evaluate the outcomes of the program 'across the board' if a large-scale evaluation were ever undertaken. Certainly this proved to be a major limitation of this study in that only eleven of the forty-eight schools who were using the program in 1998 were using the Burt and Peter tests to assess their students. Consequently, the significant results of the post-test scores and post -strategy ratings should not be extrapolated to the whole sample.

This study, although limited in scope[6] also raises a number of issues of interest to literacy research and practice. It has shown very strong evidence for the effectiveness of the *Bridging the Gap* program for improving both the participants' reading and writing skills and their self-esteem. In particular, the study seems to confirm the importance of teaching specific writing and reading strategies as a means of structuring children's literacy learning. While alternative explanations for the results are of course always possible, these results are consistent with the results of at least one other study. A study of children who had completed a Reading Recovery (RR) program in New Zealand[7] found that

> *With the exception of 1 to 2 percent of the entire age-class cohort who need more help that the RR provides, pupils from the low end of the achievement distribution are moved into the average band of performance. In other words, a significantly different population becomes not statistically different from the average group* (Clay & Cazden, 1992: 117)

A three-year follow-up study provided evidence of continued average achievement. In reflecting on what might have contributed to the movement from the low band to the average band of performance, Clay and Cazden argue for the centrality of strategies in the teaching-learning process.

> *In order to achieve such accelerated learning, attention of teacher and child must be on* strategies *(my emphasis) or operations - mental activities initiated by the child to get messages from a text. If the teacher becomes involved in teaching items rather than strategies - particular letter-sound correspondence or sight vocabulary words, for example, rather than the strategy of checking a word that would make sense in the context against information in the print - the prospect of accelerated learning is seriously threatened... RR teachers praise*

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[6] The main source of data for this study came from school BTG facilitators, test results and from two tutors who responded to requests for interviews. It was not possible to observe the program in action and a broader base of stakeholders' views would have been desirable.

[7] Reading Recovery (RR) is a reading intervention program which selects the poorest performers in reading and writing after the first year of school and provides individual teaching sessions over 12-15 weeks.

children for generative strategies, not for items learned (Clay & Cazden, 1992: 117).

Clay and Cazden go on to identify a number of underlying pedagogical premises that they also felt contributed to the success of the Reading Recovery program.

1. The teacher/tutor starts with what the child can do either alone or with assistance.
2. The teacher/tutor interactions occur regularly (in the case of RR program they occur daily while with the BTG program they are usually between 3-5 times per week.
3. The sessions address wide range of subroutines and types of learning shown to be effective in the normal classroom.
4. Tasks are meaningful.
5. The students are encouraged to work independently.
6. The tasks increase in difficulty but the type of interactions between teacher/tutor does not change greatly. (Clay & Cazden, 1996: 131)

As far as future research is concerned, detailed case studies could help illuminate the extent to which these premises apply to the *Bridging the Gap* program as well. In addition, the role of the one on one supportive teaching/tutoring environment in fostering success could also be evaluated. Finally, such research could also help identify those specific strategies that contribute most to the success of the program. Such information would be invaluable for focusing the program so that students gain most value from participating in it.

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Appendix

Section 1:   Bridging the Gap School Facilitator/Class Teacher Questionnaire

Name   _____

Position   _____

School   _____

Region   _____

1. Is *Bridging the Gap* a program you use *in some form* at your school
    for children who need extra assistance with their reading and writing
    skills beyond what can be given in the normal classroom situation?

    ☐ Yes   ☐ No

    If **No**, please go to **Question 2.**

    If **Yes**, please go to **Question 3.**

2. Are there any specific reasons why the *Bridging the Gap* program has
    not been implemented in your school?
    Please list reasons.

    _____

    _____

    _____

    _____

3. Do you think that you will use the *Bridging the Gap* program in your
    school in 1999?

    ☐ Yes   ☐ No

    Why/Why not?

    _____

    _____

4. Have you undertaken a *Bridging the Gap* training program prior to
    becoming a facilitator?

    ☐ Yes   ☐ No

*That is all the information we require if your school is not using
Bridging the Gap. Thank you for taking the time to answer these
questions. Please return this questionnaire to the Language Testing
and Research Centre.*

5. If you use the *Bridging the Gap* program in your school can you tell us
    a little about how it is organised?

How is the program conducted?

☐ One tutor to one student

☐ Small groups (one tutor with 2-5 students)

☐ Large groups (one tutor with 6-10 students)

☐ Small classes (one tutor with 11-15 students)

☐ Other _____

6. Can you briefly explain why the program is organised in this way?

_____

_____

7. Who provides the instruction in the *Bridging the Gap* program at your school?

☐ Parents

☐ Grandparents

☐ Other community volunteers

☐ Teachers

☐ Student Teachers

☐ Other _____

8. Can you briefly explain why the program is organised in this way?

_____

9. How many *Bridging the Gap* sessions do the students usually have? *(please list number of sessions per week, length of individual sessions and number of weeks eg 3 sessions of 50 minutes for 10 weeks.)*

_____

10. At what year levels is *Bridging the Gap* used at your school? *(Circle all appropriate levels)*

   Year Level: 3   4   5   6   7   8   9   10

11. Are the students undertaking this program pre-tested and post-tested?

   ☐ Yes   ☐ No

If NO you have now completed this questionnaire. Thank you for taking the time to answer these questions. Please return this questionnaire to the Language Testing and Research Centre.

If YES, please continue.

12. Which tests are used for pre-testing and post-testing the students? *(Please tick each one used.)*

   ☐ Burt Word Recognition Test

   ☐ Peter's Dictation Test

   ☐ Running Record

   ☐ Writing Samples

   ☐ Holburn Reading Test

   ☐ Torch Test

   ☐ Other _____

If Burt and Peter's tests are NOT USED for pre and post testing, you have now completed the questionnaire. Thank you for your assistance. Please return this questionnaire to the Language Testing and Research Centre.

If Burt and Peter's tests ARE USED for pre and post testing the students in your program, please continue.

13. How many students have undergone the *Bridging the Gap* program in your school?

   1997 _____

   1998 _____

14. What do you see as the main strengths of the *Bridging the Gap* program?
    Please mark all.
    (1 = not a strength, 5 = major strength)

    ● Increases links between school and community   1 2 3 4 5

    ● Increases the self-esteem of the students   1 2 3 4 5

    ● Increases the reading strategies available to students 1 2 3 4 5

    ● Increases the writing strategies available to students 1 2 3 4 5

    ● Provides opportunity for students to develop a one-   1 2 3 4 5
      one relationship with an adult

    ● Allows tutors to cater for individual needs of students 1 2 3 4 5

    ● Other strengths

      _____   1 2 3 4 5

      _____   1 2 3 4 5

      _____   1 2 3 4 5

15. Please expand on any of your answers to the above if you wish.

    _____

    _____

16. To what extent are the following limitations of the program?
    Please mark all (1 = no limitation, 5 = major limitation)

    ● No time release for facilitator to coordinate/administer 1 2 3 4 5
      program
    ● Time required to train tutors   1 2 3 4 5

    ● Variable quality of tutors   1 2 3 4 5

    ● Difficulty in recruiting volunteer tutors for the program 1 2 3 4 5

    ● Difficulty in retaining tutors in program   1 2 3 4 5

    ● Lack of teaching staff to work in program   1 2 3 4 5

    ● Lack of specific teaching materials on strategies   1 2 3 4 5

    ● Difficulty in persuading students to enter the program   1 2 3 4 5

    ● Difficulty in timetabling tutors/students   1 2 3 4 5

    ● Other limitations

      _____   1 2 3 4 5

_____   **1 2 3 4 5**

_____   **1 2 3 4 5**

17. Please expand on any of your answers to the above if you wish.

_____

_____

18. Overall how effective do you think the *Bridging the Gap* program is in improving the reading and writing strategies of the students who take part in it?

    (1= not effective at all, 5 =extremely effective)   **1 2 3 4 5**

19. Please expand on your answer to Question 18 if you wish.

_____

20. If you have any other comments that you would like to make about the *Bridging the Gap* program, please add them here.

_____

_____

_____

_____

The next set of questions relates only to individual students who have completed the Bridging the Gap program in 1998. You may need to confer with the classroom teacher or tutor to complete these questions.

Section 2: Bridging the Gap School Facilitator/Class Teacher Questionnaire

Student Name _____

Year Level in 1998	_____	Main language spoken at home	_____
Gender	_____	No. of Years in Australia *(if known)*	_____
Country of Birth	_____	No. of BTG Sessions attended	_____

Burt Word Test		Peter's Dictation Test	
Pre Test Score	[ ]	Pre Test Score	[ ]
Post test Score	[ ]	Post Test Score	[ ]

Listed below is a series of questions relating to various aspects of the Bridging the Gap program. On the left side please indicate the emphasis you would have given this aspect when the student initially began the program. On the right side please indicate the emphasis you would have given this aspect when the student completed the program.

On Entry To Program	Question	On Exit from Program
1 2 3 4 5	1. How would you rate the self-esteem of this student? *(1=very low,5=extremely high)*	1 2 3 4 5
On the basis of *pre-testing*	*Which of the following reading strategies/ behaviours did this student appear to have under control ? (1=no control, 5 =totally under control)*	On the basis of *post-testing*
1 2 3 4 5	2. Re-reads for meaning (refer to Record of Reading Behaviour)	1 2 3 4 5
1 2 3 4 5	3. Self-Corrects (refer to Record of Reading Behaviour)	1 2 3 4 5
1 2 3 4 5	4. Phrased and fluent reading	1 2 3 4 5
1 2 3 4 5	5. Enjoys reading	1 2 3 4 5
1 2 3 4 5	6. Uses initial letters to decode unknown words	1 2 3 4 5
1 2 3 4 5	7. Uses word endings to decode unknown words	1 2 3 4 5
1 2 3 4 5	8. Uses syllabification to decode unknown words	1 2 3 4 5
0-20, 21-30, 31-40, 41+	9. Has bank of sight words in the average range of ?	0-20, 21-30, 31-40, 41+
On the basis of *pre-testing*	*Which of the following writing strategies/behaviours did this student appear to have under control? (1=no control, 5 =totally under control)*	On the basis of *post-testing*
1 2 3 4 5	10. Commences writing promptly	1 2 3 4 5
1 2 3 4 5	11. Writing makes sense	1 2 3 4 5
1 2 3 4 5	12. Writes legibly	1 2 3 4 5
1 2 3 4 5	13. Message can be understood by others	1 2 3 4 5
1 2 3 4 5	14. Knows how to use basic punctuation	1 2 3 4 5
1 2 3 4 5	15. Constructs unknown words by representing initial, middle and final sounds in words(refer to writing samples and dictation)	1 2 3 4 5
1 2 3 4 5	16. Constructs unknown words by adding endings to words	1 2 3 4 5
1 2 3 4 5	17. Constructs unknown words by breaking words into syllables	1 2 3 4 5
1 2 3 4 5	18. Writes more complex sentences	1 2 3 4 5