

ASSISTING PARENTS TO HELP THEIR CHILDREN WITH READING AT HOME

Jeanne Biddulph¹ and Bryan Tuck²

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¹ Department of Education, Christchurch, N.Z.

² Education Department, University of Auckland, N.Z.

INTRODUCTION

There has been continuing concern that as many as ten percent of New Zealand children experience such difficulty with learning to read that they remain functionally illiterate or semi-literate (Clay, 1979; McIlroy, 1976; Nicholson, 1980). Efforts to improve reading education, and the achievement of the bottom ten percent in particular, have taken three main forms, namely the revision of texts, new forms of teacher education to try to increase the effectiveness of reading instruction, and what might be described as the provision of 'extra hands' both within and beyond the school. Most of these efforts have been relatively expensive to implement. One form of the provision of 'extra hands' has been the training of parents as reading tutors to their own children. Varying degrees of success have been reported with children's reading achievement using this approach both in New Zealand (Fry, 1977; McIlroy, 1976; McNaughton, Glynn & Robinson, 1981; Penketh, 1980; Robinson, Glynn, McNaughton & Quinn, 1979; Scott, 1982; Wall, 1982) and in countries such as Australia (Richardson & Brown, 1978), England (Tizzard, Schofield & Hewison, 1982) and the United States of America (Heimberger, 1981; Sartain, 1981). Typically the programmes training parents have involved one to one contact between trainers and parents. The present paper reports on the effectiveness of a low-cost group programme designed to be conducted by school personnel with minimal specialist intervention.

METHOD

The Parent Training Programme

The programme was developed from the following premises:

1. Reading instruction is best conceived of as a process in which the learner is encouraged to develop behaviours which allow him to attempt novel responses. The child is best regarded as an active constructor of theory and processor of information (Clay, 1983) and not merely as a passive recipient of instruction. The procedures developed by Glynn, McNaughton, Robinson and Quinn (1979, p.10) are consistent with such a premise as they reinforce strategies which result in the active processing of information and the construction of meaning.
2. Fluency is rarely studied, but Clay (1983) suggests that every time a word or sentence is read it moves from somewhere on the continuum from novel learning towards use by minimal cues. The reading of relatively easy textual material is thus likely to lead to an increase in fluency. Parents need to be taught how to assess the difficulty of reading material for their child to ensure that a significant proportion of it is relatively easy to read. In the context of this study material on which the child made more than five mistakes in 50 words was judged to be too difficult and material in which the child made two or three mistakes in 50 words was judged as suitable, providing it was of interest to the child.
3. Reading is a general skill and instruction should utilise a variety of reading materials. If students are instructed on a graded set of readers there is the danger that they will learn a set of vocabulary and phrases which is specific to those texts. Parents, thus, need to be taught how to select material, in conjunction with their child, from the libraries in their community and the school. This will ensure that the child is exposed to a variety of material, which is both personally interesting and at a suitable level. Such a procedure will enhance the development of a general skill.
4. Parents will bring a range of competencies and attitudes to the programme. Listening to their child failing to read fluently is likely to be a source of stress and frustration for a parent, and it is important that the training programme occurs within an atmosphere of respect, trust, and concern. If the tutoring is to be maintained independently of the trainer then it must be a rewarding activity for the parents, and this needs to be kept in mind when designing the programme.

The training programme is described in detail in Biddulph (1983) and consisted of four evening workshops, of one and a quarter hours each, spread over seven weeks from the third week in June to the beginning of August, 1982. The first workshop attempted to create a supportive environment and began with the parents discussing and sharing their feelings and experiences with their child's reading. They were then provided with a list of general suggestions for helping with reading at home. These procedures were discussed and demonstrated and the use of school and library resources was recommended. Parents were told that the librarians were expecting parents to contact them and that they would help the parents to select suitable material for their children.

In the second workshop the parents came with their child. Parents and children listened to an audio tape of a low-progress reader reading material at an appropriate and at a difficult level. Parents and children then discussed the problems which occurred when the material became difficult. A period of 30 minutes was

spent selecting books from a wide range available, assessing difficulty levels, and reading the material together using the procedures outlined in the first workshop. The trainer moved around the pairs reinforcing appropriate strategies and providing a positive model when it was necessary. Workshop three began with a discussion on problems that were occurring and the successes that had been achieved. The group was encouraged to generate their own solutions, e.g. they shared titles of books and series and listed resources which they had found useful. The majority of the time in this workshop was allotted to a detailed consideration of the 'Home Tutoring Procedure' of Glynn, McNaughton, Robinson and Quinn (1979 p.10). Role play was used with the trainer acting as the child to demonstrate the procedures. The fourth workshop began with parents reviewing their progress in tutoring their children and sharing materials and techniques with each other. The leader stressed the importance of encouragement, positive reinforcement and the maintenance of the programme. At the end of this workshop parents completed an open-ended questionnaire seeking their attitudes to the programme.

The children were administered the GAP Reading Comprehension Test (McLeod, 1967) as a pretest in May 1982, as a delayed post-test in September 1982, and as a long term follow-up test in September 1983. In May 1982 and September 1982 half of the children were administered an informal prose inventory consisting of 10 sequentially graded passages.

The Samples

A sample of 48 standard three children, aged 9½ to 10½ years, was drawn from seven Christchurch primary schools. Three of these schools contributed to one intermediate school (Intermediate A) and four contributed to another intermediate school (Intermediate B).

To obtain the sample, the standard three children in these primary schools who scored at or below level three on the Reading Comprehension Progressive Achievement Test (PAT) (Elley and Reid, 1969) in 1982 were tested on the GAP Reading Comprehension test (McLeod, 1967), both Form B and Form R, in May 1982. The sample in the study consisted of those children with PAT scores at or below level three who also had a reading age of less than 8½ years on the New Zealand norms for the GAP test. It must be stressed that the GAP norms are tentative as they are not based on representative samples of New Zealand children.

Sample A was drawn from the three schools which contribute to Intermediate A. In this sample, matched pairs of standard three children reading below an 8½-year-level were formed within the three schools. The matching was based on reading attainment, age, sex, and school attended. Eleven pairs were obtained and one child in each pair was then randomly assigned to the treatment group, while his or her matched pair became a member of the control group. The parents of the treatment group children were contacted and 3 out of the 11 were not able to attend the workshops, for various reasons. In these three cases, the parents of the matched pair child were invited and all three accepted the invitation. Thus 3 of the 11 were not strictly randomly assigned to the treatment, but it is unlikely that this deviation from strict random assignment seriously biased the results. In this sample, 14 parents who represented 11 children attended the workshops.

In sample B, which was drawn from the four schools which contributed to Intermediate B, two schools were randomly assigned to the treatment group and two to the control group; matching was thus across schools. Each standard three child in the treatment schools (schools one and two) who was reading below an 8½-year-level was matched as closely as possible with a child from one of the control schools (schools three and four). Twenty pairs were matched and the parents of the 20 treatment children were invited to participate in a series of four evening workshops. Of the 20 parents contacted, 14 parents who represented 13 children indicated that they were able and willing to attend. These 13 children formed the treatment sample in sample B and their matched pairs in the other two schools formed the control group.

Various authors (Cronbach, 1973, 1982; La Belle, Moll & Weiner, 1979; Parlett & Hamilton, 1976) argue that the experiment yields inadequate information about causal relationships in a natural setting. In this study, the processes were considered to be important and therefore 12 treatment children and their matched pairs (that is, six treatment and six control children in each of the two samples just described) were selected at random for more detailed study. Information was gathered from these children to enable judgments to be made on changes in accuracy levels, comprehension levels and self-correction rates on graded passages. Information was also gathered through pre- and post-programme interviews on changes in attitude toward reading at school and at home, on the amount of reading done at home and on the amount and type of help with reading received at home. The parents of the 12 case study treatment children were also interviewed before and after the programme, to ascertain their beliefs about their child's progress in reading and the nature, extent and effect of any help which they had been providing at home.

The Instruments

Standardised group test of reading comprehension

The total score on Forms Band R of the GAP Reading Comprehension Test (McLeod, 1967) was used for the pre-testing, delayed post-testing and follow-up testing of all the children in the treatment and control groups. The total score on both forms was used to increase the reliability of the measurement. Neville and Pugh (1982) point out that a standardised cloze test, such as the GAP, is suitable for testing fairly large numbers and for multiple retesting. It involves reader and text in interaction in non-oral reading and was considered to be an appropriate measure for this study. The pre-testing was carried out in each of the seven schools two weeks prior to Workshop One, the delayed post-test approximately six weeks after the training workshops ended, and the follow-up approximately one year later.

Informal prose inventory

Individual assessments using running records were made of the oral reading and reading comprehension of 24 children (12 treatment children selected at random with their matched pair in the control group). The administrations were carried out in each child's school approximately one week before the parent training programme began and approximately seven weeks after it ended.

A selection of 10 sequentially graded passages was made from the Junior School Informal Prose Reading Test (Dunedin Teachers College, 1972) and an Informal Prose Reading Test (Department of Education, undated). The ordering of the passages was determined by the information on their difficulty supplied by the developers of the tests. However an additional check on whether or not the passages represented increasing levels of difficulty was undertaken using the Elley noun count method (Elley, 1975). As some of the passages were relatively short it was decided, following the suggestion of Elley (1982), to consider both the verbs and the nouns in the count. The modified procedure raised doubts about the ordering of three passages with difficulty levels of less than 8 years. However given the problems in establishing the difficulty of short passages of prose at that level it was decided to stay with the order used in the original test as it had been derived from trials with children. Reading inventories cannot with justification claim that the intervals between levels are equal, but they can still provide information on the reading process and the level of attainment. Running records were taken of each child's oral reading of the passages to establish the following:

- a. the most difficult passage which could be read with at least 90 percent accuracy using the criteria developed by Clay (1979a)
- b. the most difficult passage in which the child correctly answered at least 75 percent of the related comprehension questions
- c. the first passage on which the accuracy level dropped below 90 percent and/or the comprehension level was less than 75 percent.
- d. the self-correction rate.

In the post-test the child reread the passages which had been administered in the pretest and then attempted further passages.

Questionnaire

An open-ended questionnaire (Biddulph, 1983) was administered to the parents at the end of Workshop Four to obtain their comments and judgments on the training programme, on their experiences as reading tutors of their child, and their subjective assessment of any changes in their child's reading behaviour. This was an anonymous questionnaire, completed by 22 of the 28 parents involved in the programme.

Interviews

Parent interviews: The parents of the 12 case study children in the programme were interviewed by the researcher prior to the programme and again approximately one week after the final workshop. The parents were asked about such aspects as their child's reading at home, and the type and effect of any help which they had given their child. The structured interview is set out in Biddulph (1983).

Child interviews: Each of the 24 case study children (12 treatment, 12 control) was interviewed individually, at school, preprogramme and again approximately seven weeks after the final workshop. (The case study children in Sample A were interviewed by an independent researcher). Information was sought regarding the children's attitudes towards reading, the amount of reading done and any help with reading at home. The structured interview is set out in Biddulph (1983).

Statistical Analyses

A three way analysis of variance was undertaken on the GAP scores with repeated measures over time (Winer, 1971, p.559). An unweighted means analysis was deemed to be the appropriate model for handling the unequal numbers of cases as the inequalities were due to random events and did not reflect population distributions. The factors were treatment, type of matching (either within or across schools), and occasions (pre- post- and follow up test). As mentioned in the beginning of this section the measures were repeated over the occasions.

A Sign test (Siegel, 1956) was run on the change in status of the treatment and control case study children on the graded passages of the prose inventory from pretest to post-test. The levels gained from preprogramme to postprogramme, were determined by calculating the number of levels, as represented by the graded passages, through which each child had moved, that is, levels at which s/he could read with 90 percent or greater accuracy and at least 75 percent comprehension. The number of levels moved by each case study treatment child was then compared with the number moved by his/her matched pair in the control group to determine which child of the pair had made the greater gain.

RESULTS

The GAP Reading Comprehension Tests

Table 1 sets out the means and standard deviations for the tutored and non-tutored children over the three occasions. The numbers are made up of only those pairs for which complete data was obtained. The analysis of variance is set out in Table 2. As expected there is a significant main effect for occasions, which indicates that the scores of both the tutored and non-tutored children increased significantly over the sixteen months. There is no significant treatment effect but this is not unexpected as the groups were matched on the pretest. The type of matching, either within or across the schools, does not account for a significant proportion of variance, and it can be concluded that the integrity of the experiment was maintained irrespective of whether the comparisons were between children within the same or different schools. The most important finding is the significant interaction between the treatment and the occasions. This interaction is ordinal and indicates that the tutored group made significantly greater gains over time than the control group. The greatest difference between their rates of gain occurs from May 1982 to September 1982, but a comparison of raw score gains from September 1982 to September 1983 still favours the tutored group (a mean gain of 10.6 compared to a mean gain of 8.8 GAP raw score points). The magnitude of the difference is increased when GAP reading age becomes the criterion. The rate of gain of the tutored group during the follow-up year is one month gain in reading age for every month of chronological age, whereas for the non-tutored group it is about two thirds that rate. The reason for this apparent increase in the difference is that at the level of attainment of the tutored group one GAP raw score point is equivalent to two months of reading age on the GAP norms, while at the level of attainment of the control group it is equivalent to one month of reading age. Irrespective of how the trend is analysed, the tutored group has consistently progressed at a more rapid rate than the control group since the parent training was instituted.

It is disappointing that the striking gains made by the tutored group during the period the parents were being trained were not maintained. However at the time of the follow-up the tutored group was at least making the same gains as average readers of their age and these gains were occurring independently of any specialist assistance. Their counterparts in the control group were by comparison falling further behind the average reader, despite the fact that over half of them were receiving special help from their classroom teachers either in the form of individualised programmes or placement in 'special' remedial groups (Biddulph, 1983).

Prior to the study none of the children had passed Neville and Pugh's (1982) critical point of a reading level of approximately eight years six months. At the follow-up (September 1983) the majority (16 out of 21) of the tutored children had a GAP reading age greater than nine years six months. Only two of the non-tutored children had reached this level. An examination of PAT Reading Comprehension level scores administered by the teachers during March 1983, suggests that the GAP norms underestimate the reading levels. The PAT levels identified eight of the tutored children as having equivalent reading ages of at least 10 years at March 1983.

Running records

Table 3 sets out the number of levels gained by case study children on the graded passages over the period May - September, 1982, as revealed by a running records analysis. A sign test (Siegel, 1956) yielded a significant effect ($p < .006$) in favour of the treatment group, indicating that the 12 children in this group gained significantly more levels than the 12 children in the control group.

DISCUSSION

The children tutored by their parents made significantly greater gains on the GAP Reading Comprehension Test during the period of parent training than the children in the contrast group. Their rate of gain over the following year was similar to that of the average reader whereas for the contrast group it was about two thirds that rate. The data from the running records confirmed the significant gains made by the tutored children during the period in which their parents attended the training programme.

It could be argued that the significant gains made by the parent tutored children were merely a function of the extra time spent on reading, rather than a function of the nature of the tutoring provided by the parents. The interview data (Biddulph, 1983) suggest that this was not the case with this study. For example, prior to the training programme eight of the twelve parents interviewed reported that they had been helping their children with reading at home. The other four had apparently not given home help. During the seven weeks in which the eight parents were being trained, their eight children made gains in reading age ranging from six months to two years. Prior to the training these eight children had made less than average gains despite the help of their parents. It seems reasonable to assume therefore that, while the reported increase in the time spent reading by the treatment children may have been a contributing factor to the gains made, the factor which contributed most significantly to their improvement was the different type of tutoring provided by their parents, as a result of the parent training programme. Both the questionnaire and interview data reveal that the parents themselves attributed their child's improvement to the fact that they, the parents, had been able to help their child more constructively and effectively, as a result of their participation in the training programme. The parents of the treatment children also believed that their children's reading had improved. For example, 10 of the 12 parents interviewed specifically mentioned that their child's reading had improved. Some of the children also had such beliefs. John (Case study 3), for instance, said "I understand books much easier now." It is also significant to note that the parents, when citing improvements in their child's reading, invariably described this improvement in terms of the basic concepts presented at the workshops, such as understanding of material read, or self-correction of errors (Biddulph, 1983).

The development by the children of positive attitudes towards reading and towards help with reading at home was also seen to be an important outcome of the programme, for two reasons: firstly it was thought that the children were more likely to become competent, independent readers if they enjoyed reading, if they wanted to read and if they responded positively to help; and secondly, the development of a habit of reading for pleasure was seen as important in itself. Over 70% of the parents who completed the questionnaire stated that their child's attitude towards reading had improved; that is, s/he was now enjoying reading, was more confident and was becoming more interested in choosing and reading library material. Furthermore, over 80% of the parents interviewed after the programme reported that their children were now more interested in reading. The children's interviews also provided similar evidence of the children's increased interest in reading.

To summarise then, the results suggest that the purposes of the study were realised. As with a number of other studies (Crosset, quoted by Sartain, 1981; Fry, 1977; McNaughton, Glynn and Robinson, 1981; Penketh, 1980; Scott, 1982; Tizzard, Schofield and Hewison, 1982) the parents welcomed the opportunity to participate in the present study. This high level of motivation and commitment was perhaps an important factor in the parents achieving competence in the tutoring techniques. Another factor, as McNaughton, Glynn and Robinson (1981) and Scott (1982) found in their studies, is likely to have been the practical guidelines provided by the programme itself. The parents' tutoring resulted in their children making significantly greater gains than their matched counterparts. These findings regarding the gains made are similar to those reported by Fry (1977), Richardson and Brown (1978), Penketh (1980), McNaughton, Glynn and Robinson (1981), Scott (1982) and Tizzard, Schofield and Hewison (1982). An improvement in relationships between parents and children, mentioned by Richardson and Brown (1978) and Penketh (1980) was also evident in the present study. Although teachers were not directly involved in this study it nevertheless generated a certain amount of interest among a number of them who had some contact with it. Three, for example, asked if they could attend some of the workshops, another (a teacher of contrast children) made a special effort to assist her children with reading, and others consulted the researcher on aspects of reading about which they felt

concern. Similar teacher interest was reported by Fry, (1977), Penketh (1980) and Tizzard, Schofield and Hewison (1982), but in this study teacher interest did not reach the level of that reported by Richardson and Brown (1978) where it had a contaminating effect on the study. With one exception only, teacher interest in the present study was largely confined to the parent training programme itself.

One issue which is specifically answered by the present study is the matter of long-term reading gain by the children. Although Fry (1977) found that children returned to baseline gain in the reversal phase of her study of parents teaching their children basic sight words, and concluded that when professional support is withdrawn the tutoring programme is no longer implemented in the home, the findings of Richardson and Brown (1978) and Scott (1982) suggest that many parents do maintain a programme tutoring their children in meaningful reading beyond the professional support period, and that their children continued to make gains above those normally expected. The present study was designed to enhance the likelihood of long-term reading gains and the follow-up testing, carried out approximately fourteen months after the professional support ended found that the tutored children were still making better progress than their matched counterparts, e.g. prior to the programme none of the children had reached what is regarded by Neville and Pugh (1982) as the critical reading level of eight years six months. At the follow-up 16 out of the 21 tutored children had a GAP reading age of at least one year above this level. By contrast, at this stage only two of the non-tutored children had a GAP reading age of nine years six months or greater. This information, in conjunction with the greater gains made by the tutored children over the follow-up period, suggests that their relatively rapid progress was being maintained independently of professional support.

Unlike some tutoring programmes in which the parents were supplied with material to use at home with their children, the competence of the parents in this study extended to the selection of suitable material for their children, which usually involved borrowing appropriate books from local libraries. They had become competent and independent in this respect. In one case, where the school had assisted in the provision of some material for the child to read at home, the parent's task was easier but this parent, like the others, used the local library so that she could maintain an adequate supply of books for her son. It is possible that the gains made by the children in this study would have been greater if the researcher had provided the parents and children with material for home tutoring, but although such assistance would have made the parents' task easier initially, it may well have inhibited the development of the parents' independence in the important area of obtaining suitable material, and interfered with the maintenance of the tutoring on a long term basis.

Another question which arises in studies of home tutoring programmes is the extent to which the gains made at home transfer to the school situation. McNaughton, Glynn and Robinson (1981), for example, found that the gains made at home did not automatically transfer to the school situation. The present study does not have teacher assessments of the children's level and amount of reading in school, so it is not possible to comment on behaviour within the classroom. But the assessments used are general measures of reading, so clearly the gains are not specific to reading at home.

It is probably reasonable to claim that the long-term purpose of the study, the development of a low-cost tutoring programme, was achieved. No expensive materials or equipment were required. Nor were extra time commitments required of teachers. The programme was kept relatively simple and yet proved effective.

A possible weakness of the present study is that there are no direct observations of the frequency and nature of the tutoring at home, but the questionnaire and interview responses of both parents and children do provide some information about what was occurring. However more direct data would be a valuable addition.

The major issue remaining unexplored is whether the programme could be implemented at a different level, for example the standard one level. Parent comment suggests that the standard one level may be a desirable level at which to operate the programme, in that children at that level have not usually developed the very negative attitudes towards reading shown by some of the standard three children involved in this study. It could be offered to children at the standard one or two level, but it must be kept in mind that the children in the present study were not beginning readers.

In conclusion the wider implementation of such programmes requires the active support of teachers, resource teachers of reading and reading advisers. It is possible that some 'professionals' may see the training of parents as a tacit admission of their failure and as a deskilling of teaching. Certainly it has been observed that some teachers feel threatened by parents (Nicholson, 1979). Any attempt to involve parents in programmes such as the one described in this study needs to take account of such feelings and beliefs among teachers and administrators.

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TABLE 1**Means and Standard Deviations of GAP Scores for Parent-tutored and Contrast Groups over Time**

	Pretest		Post-test		Follow-up Test	
	\bar{x}	s	\bar{x}	s	\bar{x}	s
Matching Within Schools						
Parent-tutored	25.7	10.8	33.6	10.7	43.9	9.9
Contrast	24.2	11.9	26.5	13.8	34.9	13.3
Matching Across Schools						
Parent-tutored	25.9	9.4	34.4	13.2	45.2	13.4
Contrast	26.5	7.3	30.8	8.0	40.1	6.8

Note: N = 10 for matched pairs within schools and N = 11 for matched pairs across schools.

TABLE 2**ANOVA for GAP Scores by Treatment, Type of Matching, and Occasions**

Source	df	Ms	F
Between Subjects			
Treatment	1	596.14	1.74
Type of Matching	1	177.27	.52
Treatment x Type	1	79.05	.23
Subjects within groups	38	342.62	
Within Subjects			
Occasions	2	2556.69	96.04***
Treatment x Occasions	2	121.44	4.56*
Matching x Occasions	2	10.94	.41
Treatment x Matching x Occasions	2	2.50	.09
Occasions x Subjects within groups	76	26.62	

*** p <.001

* p <.05

TABLE 3

Levels Gained by Tutored and Non-Tutored Case Study Children from Pre- to Post- Test

Levels Gained	
Parent Tutored	Non-tutored
1	0
2	1
2	0
3	0
3	1
2	0
2	0
4	2
4	1
3	0
2	0
1	1

$p < .006$ when $N = 11$ and $x = 0$