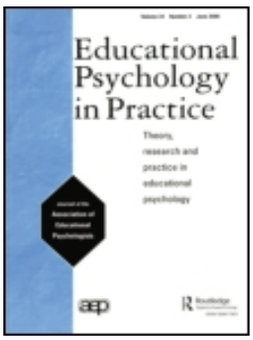

Routledge
Taylor & Francis Group

Educational Psychology in Practice

theory, research and practice in educational psychology

ISSN: 0266-7363 (Print) 1469-5839 (Online) Journal homepage: https://www.tandfonline.com/loi/cepp20

# Paired Reading

## Three questions

Sam Winter

**To cite this article:** Sam Winter (1996) Paired Reading, Educational Psychology in Practice, 12:3, 182-190, DOI: 10.1080/0266736960120308

**To link to this article:** https://doi.org/10.1080/0266736960120308

# Paired Reading

## *Three questions*

**Sam Winter**

**Summary**

*Previous research in paired reading (PR) suggests that while many tutors do not use the technique as trained, they nevertheless prove to be as successful in tutoring as those who do.*

*The implication in that where PR works, it is because of factors other than the tutoring procedures that are being applied. New research is reported that reveals an important role for content coverage in determining PR reading outcomes, with tutoring procedures only important insofar as they impact on the amount covered, and with compliant tutors actually doing a disservice to their tutees. Beyond these factors, student characteristics at pre-test and post-test appear to influence reading outcomes.*

## Introduction

Several years ago this writer posed two questions in this journal regarding paired reading (Winter, 1990). They were '*Do paired reading tutors use the technique as they have been trained to?*' and '*Does it matter anyway?*'. Evidence was reviewed indicating that the answer to both these questions was 'No'.

The research discussed in that paper and reported in full in Winter (1988) involved a peer-tutored PR project. The findings were that many tutors deviated from proper use of the technique. Most importantly, praise was offered infrequently to tutees, errors were often left uncorrected and, where correction was offered, it was sometimes offered too quickly, without sufficient time for the tutee to correct him or herself. Nevertheless, the degree of compliance with PR had no effect upon tutee reading gains. The only behavioural variable to have any impact at all was a tutee behaviour, *error rate*, with lower values predicting higher reading gains. These findings imply that tutors' behaviour during PR is largely irrelevant to outcome.

The research reported in the 1990 paper displayed several defects. It was small in scale (involving only 300 minutes of tutoring over six weeks) and provided a limited analysis of tutoring behaviours (representing around 1 per cent of the tutoring that actually took place during the project). It focused on tutee rather than tutor outcomes, and was exclusively concerned with reading ability, to the exclusion of the motivational and affective outcomes reported, albeit often anecdotally, for PR. Finally, it failed to examine possible *indirect* effects of tutoring behaviours upon outcome, as well as the effects of other factors (such as, for example, the individual characteristics with which participants entered the project).

The research reported here aimed to avoid these defects, allowing a more detailed examination of: (a) tutoring behaviours in PR; (b) tutoring outcomes (learning and affective, for tutors and tutees); and (c) the factors (tutoring and personal) which might account for outcomes. The study was designed to address once again the two questions posed earlier ('Do tutors do what they have been trained to do?' and 'Does it matter in terms of impact on outcome?'), adding a third question – '*What other factors appear to matter?*'.

This paper assumes the reader is acquainted with PR, a tutoring technique which emphasises *reinforcement* for correct reading, *delayed modelling* as a form of error correction, and repeated shifts between *independent reading* (whenever the tutee feels confident enough to read alone) and *simultaneous reading* (immediately after any error has been corrected). For fuller details regarding the nature of PR see, for example, papers by Topping and Lindsay (1992a; 1992b).

## The research design

A PR project was conducted in three English-medium primary schools in Hong Kong, each

catering to a range of national and ethnic groups. Within each school one class engaged in a peer-tutored PR project (PT/PR), while another acted as control group and engaged in private reading. In total there were 86 PT/PR students (mean age 10.37 years) and a corresponding number of control students (mean age 10.32 years). Mean reading ages as measured by the Cloze reading test (Young, 1982) were 12.06 for PT/PR students and 11.34 for controls.

At pre-test all students were given a number of instruments assessing reading ability, attitudes to reading, approaches to learning, self-concept and locus of control. The instruments used were the Cloze and Widespan reading tests (Young, 1982; Brimer, 1972), a reading attitude inventory composed of the Estes and Dulin-Chester scales (Estes, 1971; Dulin and Chester, 1980), the learning process questionnaire (LPQ) (Biggs, 1987), incorporating a locus-of-control scale, and an abbreviated version of the self-description questionnaire (SDQ) (Marsh, 1988).

Taken together, they allowed us to study not only how well students could read, but also how they felt about reading and more generally about learning, as well as how they felt about themselves as people and about the degree to which they felt able to influence their own lives. All these were important, not only as potential factors influencing the effectiveness of PR, but also as areas in which PR is often reported to have an effect. For that reason the same instruments would be used at post-test.

The next steps in the project involved the PT/PR students only. First, students in the PT/PR group were allocated roles of tutor and tutee based on their scores on the two reading tests. The more able half of the class acted as tutors to the less able. Tutors were matched with tutees according to a 'cascade' method, in which the most able tutor worked with the most able tutee, the next most able tutor worked with the next most able tutee, and so on until the least able tutor was allocated to the least able tutee. This was an attempt to ensure that ability differentials were kept relatively uniform.

Second, tutors were divided into three sub-groups according to the sort of supervision they would receive during the project. 'Performance feedback' (PF) tutors were to be observed once a week by their teacher who would then offer constructive feedback on how well they were using the PR technique. Similarly, tutors in the 'attention' (A) sub-group were to be observed by their teacher. However, they were *not* to be offered corrective feedback. Instead, the teacher was to express interest in and ask the tutor questions about what was being read. Finally, tutors in the 'no supervision' (NS) sub-group were to be left entirely alone after having been trained.

It was thought likely that supervision might have an impact on outcome, whether or not it had an effect upon what happened during tutoring sessions.

Third, tutors were taught to use PR by way of an established training procedure involving oral and written instruction, in vivo demonstration, discussion and practice with feedback. Particular emphasis was placed on the importance of praising the tutee for reading correctly, reading independently and self-correction. Stress was also laid on the need, where a tutee was in difficulty, for the tutor to pause before supplying a word. This was to allow the tutee sufficient time either to attempt a word or engage in self-correction.

Finally, tutors and tutees completed a 'pupils' expectations questionnaire' (PEQ1), an instrument developed by the author to examine what students thought would happen during and as a result of the project. This information was considered important as a possible factor influencing project outcomes.

It was at this point that the project properly began. It lasted 10 weeks. Throughout the project, students in the control classes engaged in private reading for 15 minutes of class time each day. The PT/PR classes engaged in peer-tutored PR, again for 15 minutes of class time daily. Control group students chose their own reading material. Tutees chose the material to be read in the PT/PR group.

Tutors received supervision according to the subgroup into which they had earlier been placed: PF, A, or NS.

During the project tutors were required on a rota basis to tape record their sessions with tutees. For each tape recording a photocopy was made of the material being read. The rota ensured that data were collected on both tutor and tutee behaviour on up to three occasions (at the start, towards the middle, and at the end of the project). Tutoring was subsequently analysed to yield for each tutoring pair, and for each occasion, a total of 15 tutoring variables.

At the end of the project students completed the instruments as for pre-test, with the following exceptions. First, PT/PR students completed a questionnaire (PEQ2) designed to assess their experiences regarding what happened during and as a result of the project. Items matched those used in the PEQ1 questionnaire. Second, students in the

control group completed the 'pupils' contamination questionnaire' (PCQ), designed to assess the degree to which control students knew about or practised what was happening in the PT/PR classes. There was little evidence that they did either.

In passing, it should be noted that pre- and post-test data were also collected from PT/PR and control teachers in the areas of project expectations and experiences (through instruments respectively named the TEQ1 and TEQ2, each of which were developed by the author), as well as in attitudes to the teaching of reading (through an instrument called the TRAQ, based on an instrument originally used by Vaughan, 1977). For reasons of brevity, there data are not discussed further. The interested reader is referred to Winter (1994).

## Results and discussion

### *Tutoring outcomes*

Analysis of covariance (ANCOVA) was employed to examine post-test scores in a way that took into account pre-test differences. Initial findings were that PT/PR students (tutors and tutees) made gains generally larger than those of the control group students who engaged in private reading (see Figures 1 and 2, showing raw scores for each of the reading tests). Indeed, gains were around 1.2 years on the Cloze test, compared with the control group's 0.4 years.

In addition, tutors and tutees showed higher general intrinsic motivation to learn than did control students (see Figure 3, showing raw scores for the deep-motive variable from the LPQ).

Beyond this, there was evidence that, for girls, PT/PR acted to enhance self-concept for peer relationships, as well as general feelings of self-worth (see Figures 4 and 5, showing raw scores for relevant variables from the SDQ).

PT/PR appeared to have no other significant effects on outcome variables as compared with the control group. However, within the PT/PR group itself there were indications of other effects. For example, on the positive side, tutors seemed to end the project feeling a little more in control of their lives. Their locus-of-control scores from the LPQ were 11.85 at post-test compared to 13.07 at pre-test (with lower scores indicating higher levels of perceived control).

On the negative side, tutees ended the project somewhat less interested in reading. Their scores

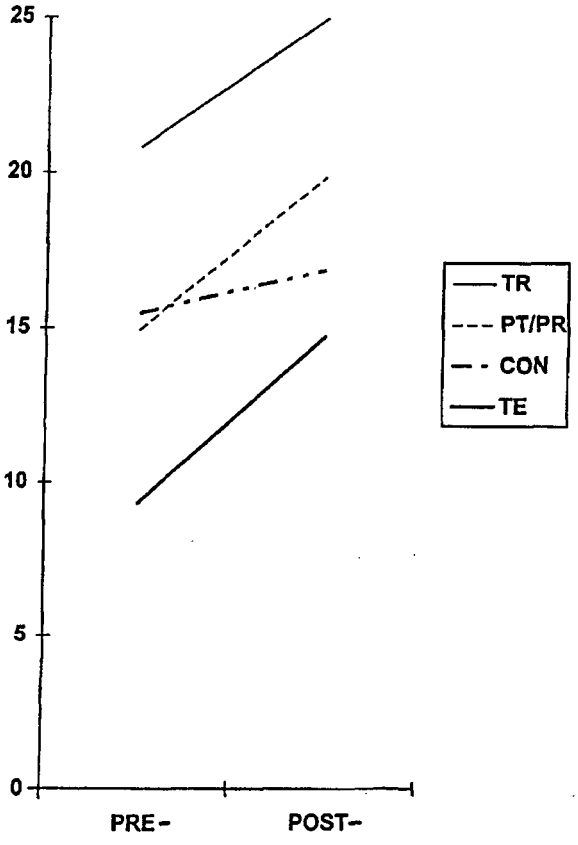


**Figure 1. Pre- and post-test raw scores for the Widespan reading test**

on the Estes reading attitude scale dropped from a pre-test 74.86 to a post-test 73.51.

Finally, while tutors and tutees showed enhanced intrinsic motivation to study (discussed earlier), they showed somewhat decreased levels of surface and achieving motivation, as measured by the LPQ. Overall scores for surface motivation (indicating a desire to get by with the minimum effort) fell from a pre-test 19.77 to a post-test 18.10. Overall scores for achieving motivation (indicating a desire to compete against others when learning) fell from a pre-test 21.19 to a post-test 18.79. These last findings may be interpreted either positively or negatively depending on one's viewpoint of the role of these types of motivation in learning.

### *Tutoring behaviours*

This study provided a much more detailed examination of tutoring behaviours than had been

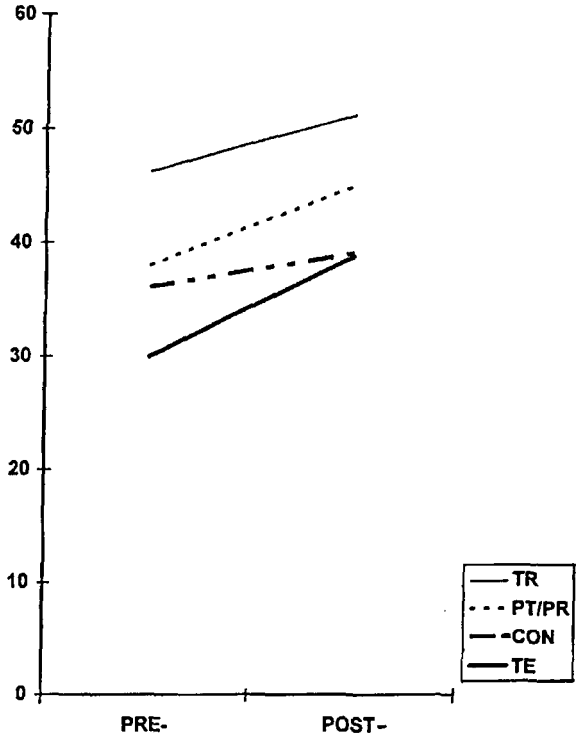


**Figure 2. Pre- and post-test raw scores for the Cloze reading test**

the case in earlier research reported in Winter (1990). Around 520 minutes of tutoring were analysed, representing all tutoring pairs. This represented an analysis of around three times more tutoring, and over twice as many students, as was the case in the 1990 study. Moreover, several variables were examined that were not in the 1990 study.

This more detailed examination of tutoring yielded very similar results to the earlier study. First, tutees appeared to choose quite easy reading material. The result was that they were able to read quickly (around 1.93 words per second) and with few errors (error rate around 5 per cent of words read). During the 10 weeks of the project tutees covered an estimated average of 71,000 to 82,000 words (with some covering as much as 103,000 to 118,000).

Second, tutors appeared to display low levels of praise and error correction. They praised an average one in every 166 words read by the tutee and corrected only 14 per cent of errors. Moreover, despite having been trained to pause for four seconds, before giving help to tutees, they used 'short-pause modelling' (paused for less than two seconds) in 88 per cent of cases in which help was provided.

These results should be qualified in several ways. First, tutors who received regular performance feedback ('PF' tutors) tended to comply a little more than did tutors who received no such feedback. Second, the effect of such feedback seemed to accumulate during the 10 weeks of the project. The result was that toward project end, 'PF' tutors (a) were praising around one in every 100 words read by the tutee (around double the rate for other tutors); (b) were pausing substantially on around half of the occasions in which they provided help (compared to around zero for other tutors); and (c) were leaving errors uncorrected about half as frequently as other tutors. The perceptive reader will note from these figures that while supervision may

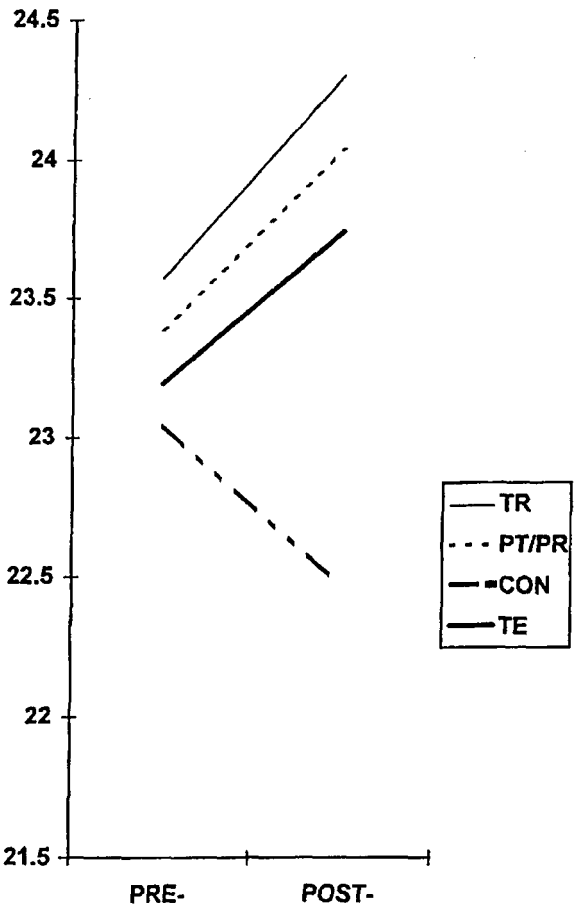


**Figure 3. Pre- and post-test raw scores for the LPQ deep motive scale**

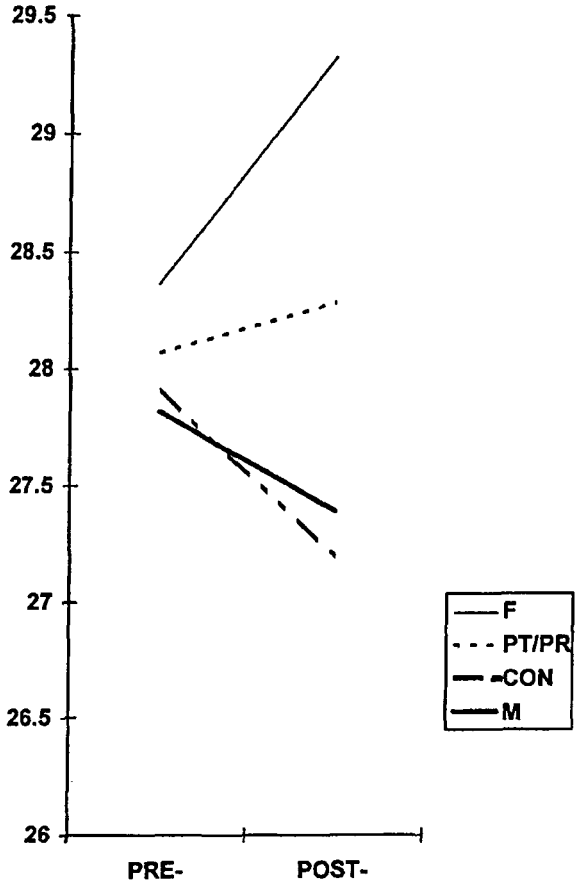


**Figure 4. Pre- and post-test raw scores for the SDQ peer self-concept scale**

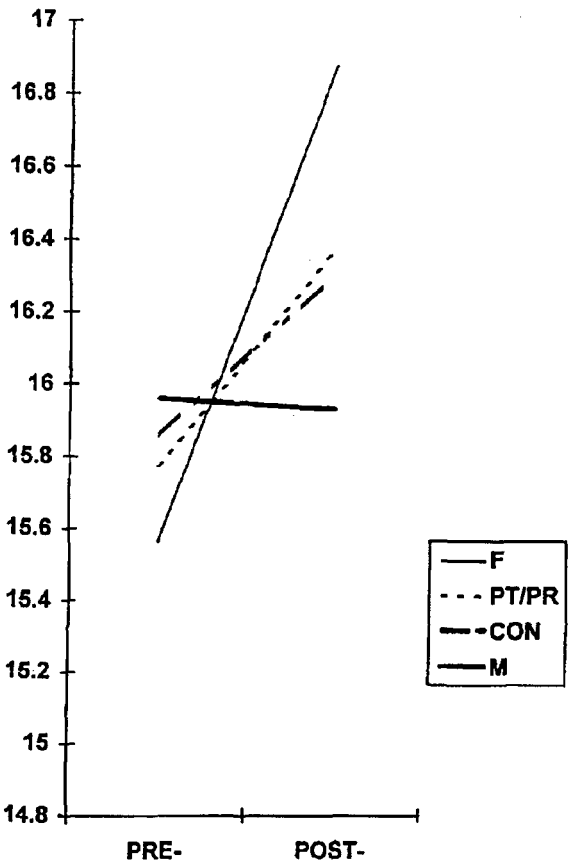


**Figure 5. Pre- and post-test raw scores for the SDQ general self-concept scale**

have an effect on tutors' behaviour, that effect is very limited and slow acting.

Interestingly, tutees of 'PF' tutoring pairs appeared to engage in more simultaneous reading than other tutees (around 30 per cent of the time overall, compared to 23 per cent for 'A' pairs and 13 per cent for 'N' pairs). This might be partly because, as we have seen, their tutors were correcting more errors, and were therefore initiating the shift from independent reading to simultaneous reading more frequently than did other tutors.

Finally, there was some intriguing evidence that behaviours of tutors and tutees during tutoring sessions were influenced by their individual characteristics at pre-test, with the characteristics of tutors becoming less important as the project wore on, and those of tutees becoming progressively more important. Space permits mention of only one such effect; that students with high scores for surface and achieving motives (ie whose study motives were either to get by with minimum effort or to compete and excel against others) tended to jump in quickly when helping tutees, failing to pause for the four seconds required by PR.

## *Factors determining project outcome*

This study provided a more comprehensive examination of this question than had been the case in the 1990 study. It was longer than the previous study (around double the tutoring contact time), incorporated much more data on tutoring (around three times more) and examined outcomes for tutors. In addition, the use of multiple regression and path analysis made it possible to take account of: (a) pretest values; (b) around 45 other variables (such as sex, tutoring role and type of supervision offered to the tutor, as well as initial student attitudes to

reading, approaches to learning, self-concept, locus of control and expectations towards the project); and (c) indirect tutoring effects.

The following sections focus exclusively on the factors that determine post-test reading ability. Factors for other outcome variables are not examined in this paper.

## *Factors determining tutee reading outcomes*

*Reading rate* was the most important predictor of tutees' post-test reading ability, surpassing even the effect of pre-test reading ability upon post-test. Tutees who read quickly in tutoring sessions were the ones who came out of the project with the highest reading ability.

Insofar as reading rate indicates how much is read per unit time, it also acts as a fairly good proxy measure for 'amount read during the project' (content coverage). Those students who read more material were those who gained most out of the project.

Tutors' behaviours had no direct effect on tutee reading outcomes. However, there was an indirect effect for '*long-pause-modelling*' – the practice of pausing substantially (ie more than two seconds) before supplying a word to tutees in difficulty. Tutors who frequently employed long-pause modelling appeared to slow down their tutees' reading rate and therefore impaired their post-test reading ability.

Interestingly enough, even short-pause models (models supplied after a pause of under two seconds) appeared to slow reading down, but to a much smaller extent than was the case for long-pause models.

It is easy to see how delayed error correction may slow reading down. First, it eats up valuable time that might otherwise be used by the tutee for reading. Second, it may interrupt the flow of the text, making it more difficult for the tutee to make subsequent use of sentence cues. Regardless of the mechanism by which it has its effect, this long-pause modelling effect is an important finding, suggesting that tutors who pause for several seconds before giving help (and who therefore comply with the requirements of PR) are actually doing a disservice to their tutees.

The reader might argue that it is not the correction of errors that slows reading down, rather it is the making of errors; that reading rate decreases when the tutee is reading difficult material. However, the data fail to support this idea. The simple correlations between reading rate and error variables were far lower than for reading rate and long-pause models. In addition, as we have seen, it was long-pause models (*not* error frequency or error rate) that acted as a regression predictor for reading rate.

Other findings were that *post-test intrinsic motivation* impacted on reading ability, so that students who ended the project with high curiosity for study were also those who gained most in terms of reading. Tutor behaviour once again exerted an indirect effect on reading ability (this time through post-test intrinsic motivation) with tutors who offered frequent correction (particularly through use of *short-pause modelling*) serving to increase tutees' curiosity for learning, and thereby enhancing their reading ability. Once again, it appears that delayed error correction (albeit an integral PR component) may be counter-productive.

Finally, *pre-test self-concept for peer relationships* had a strong (and direct) effect on reading outcome, with tutees who were confident in peer relationships getting the most out of PT/PR in terms of enhanced reading ability. At the risk of over-simplification, it seemed that tutees who entered the project confident in peer relationships were able subsequently to gain more from the PT/PR experience.

## *Factors determining tutor reading outcomes*

Only one variable appeared to have an effect on tutor reading outcomes. This was *locus of control*, with 'internal' tutors (those who believed themselves to be in control of events in their lives) getting the most out of the project in terms of reading ability. Again, at the risk of over-simplification, it seemed that those tutors gained most who had entered the project comfortable about being put in a position of leadership and control.

Interestingly enough, it was these 'internal' tutors who tended to delay least in supplying help to their tutees, and thereby enhanced their tutees' reading rate/content coverage, and their intrinsic motivation to learn.

## *Factors found not to be determinants of outcome*

The reader will recall that 45 potential determinants of outcome were examined in this research. Evidently, many were found to be

unimportant. Among those worthy of note from this point of view were reinforcement and expectations.

1. *Reinforcement.* This appeared to have no impact upon reading ability at all. The reader may argue that this was because reinforcement rates were so low and that if higher rates had been achieved, then this tutoring variable might have had a powerful impact upon reading outcomes. This is a plausible argument, but misses the point. The plain fact is that under training and supervision conditions found in this study (and typical of many projects elsewhere), tutors find it very hard to praise. It is only under the most artificial and labour-intensive conditions that tutors (adult or peer) engage in high rates.

   The early PR study of Morgan and Lyon (1979) proves the point nicely. They reported that a small group of parent tutors, once trained in PR, succeeded in praising a mean 32 to 63 per cent of words read by their children. Individual sessions displayed rates as high as 75 per cent. Such frequent use of praise is reported nowhere else in the PR literature.

   Why then did Morgan and Lyon observe such unusually high rates of reinforcement? Several possibilities exist. First, they took the unusual step of telling parents to praise at a rate so high as to make them feel uncomfortable. Second, training consisted of up to two hours for each parent, provided either individually or in groups of two (the article does not make clear which). This rendered it a particularly labour-intensive study, far beyond what would be possible in, say, a class-wide project run by a mainstream class teacher. Fourth, and most significantly, data on reinforcement rates was collected by way of direct observation during weekly visits made by the parents to the 'project centre' for supervision; visits in which they were receiving 'continuous encouragement' to praise. This writer suggests that the reinforcement rates displayed by parents who have journeyed to a suite of offices for purposes of supervision, and who are being observed by project organisers who repeatedly extol the value of praise, may not reflect the rates displayed in the privacy of their own homes.

   In passing, it should be noted that even at the low rates observed in the present study, reinforcement *did* have an impact on post-test reading attitude outcomes. Worryingly, it appeared that more frequent use of reinforcement was associated with impaired attitudes, both for the tutor giving the reinforcement and the tutee receiving it. In a way that echoes the effects for error correction discussed earlier, this finding seems to undermine the emphasis usually placed on reinforcement in PR.

2. *Expectations.* There was little evidence that students' expectations towards the project (either regarding events during the project or regarding outcomes) determined reading outcomes. Expectations instead affected one other outcome: project experiences. No other variable appeared to impact on project experiences.

   The literature on instructional innovation is replete with reports of participants' experiences. Students' (and teachers') experiences are rightly seen as a major determinant of 'carry-through' (future participation in the innovation). The overwhelming effect that expectations had upon experiences in this study suggests that we should interpret all such experiences in the context of the initial expectations that were expressed. This is seldom done. Indeed, expectations data are seldom collected. This is a matter which is discussed at fuller length in another paper (Winter, unpublished).

   One final point about the expectations–experiences relationship. There was a tendency for all project participants to report experiences which, though positive, were less so than their initial expectations. This tendency was particularly strong for tutors. While tutors and tutees shared similar expectations, tutors ended the project reporting less positive experiences than their partners.

   This tendency towards 'disillusionment' may have been due to the nature of the project (intensive daily tutoring) and the nature of the tutors' role (highly structured, with little freedom to make decisions). These are conditions which Gerber and Kauffman (1981) described as leading to tutor 'burn-out'. The findings on disillusionment therefore provide another reason for project organisers to collect information on both expectations and experiences.

## Concluding remarks

This study's findings confirm those of Winter and Low (1984) and others that PT/PR enhances reading abilities for both tutors and tutees. In addition, the

findings suggest that students make gains in intrinsic motivation to learn, and that girls make substantial gains in peer self-concept and general self-worth.

Beyond these outcome findings, the data confirms the findings of an earlier study (Winter, 1988; 1990) that tutors display generally low compliance when using PR, and that variations in tutoring appear to have little *direct* impact on tutees' reading outcomes. This study further indicates that tutees gain most in reading ability when they read a lot of material, and when their involvement in the project has increased their overall curiosity for study. Both content coverage and curiosity for study are enhanced when tutors avoid long-pause modelling.

The study therefore suggests, in contrast to the earlier study reported in Winter (1990), that one PR tutoring component has an impact, albeit indirect, on reading outcome. However, the effect is contrary in nature, implying that tutors who comply with PR error correction procedures actually do a disservice to their students.

Beyond this, tutees gain most who enter the project most confident in their relationships with peers.

For tutors, gains appear greatest for 'internal' students: those who enter the project with feelings of being in control over events in their life (and therefore perhaps comfortable with being in the controlling role of tutor). Interestingly, it is these tutors who pause least before giving help, and therefore help their tutees read more in the allotted time and gain more from the project.

The findings on reading rate and content coverage suggest that PR is effective in so far as it ensures that a large amount of material gets read. This writer suggests that several aspects of the technique may serve to ensure high content coverage.

First, it is novel and enjoyable, leading to high academic-engagement rates whether the child is being tutored by his teacher, a parent or a peer.

Second, it allows the tutee free choice of his own reading material. On one hand this serves to enhance interest (and therefore academic engagement). On another, free choice almost invariably means the material being read is 'easy', generating a low error rate (averaging 5 per cent in this study). In an essentially self-paced task such as oral reading, a high success rate will generally ensure high content coverage. Note in this connection the finding from the 1990 study that error rate was negatively correlated with reading gain.

Third, it ensures that whenever the tutee does encounter a difficulty, help is on hand and is delivered reasonably quickly (within several seconds), and in a time-efficient form (the correct word is supplied). Prompt and efficient error correction ensures that the tutee spends his or her time reading rather than laying siege to difficult words.

Notwithstanding the above, the findings from this study indicate that even PR error-correction procedures serve to slow reading down, with *immediately* supplied models having the smallest impact.

In the study described, PR, an instructional technique, was delivered by way of an instructional vehicle, peer tutoring (PT). While the instructional technique may have increased content coverage in the ways suggested above, it is also possible that the instructional vehicle played a part. Whereas PT is well known for generating particularly high academic engagement across all sorts of domains and tutoring formats, whatever the form of tutoring that is provided, it appears that children find it very difficult to delay giving help to tutees in difficulty. This was evident in both the 1990 study and the present research. As this article has shown, it appears particularly strong in tutors with high surface and achieving motives (ie whose studies are motivated by a desire for minimum effort or by competition), and is quite resistant to training and supervision. PR project organisers may console themselves with the thought that this behaviour may actually be quite effective from an instructional point of view.

## References


Biggs, J. B. (1987) *The Learning Process Questionnaire (LPQ) Manual.* Hawthorn, Victoria: Australian Council for Educational Research.

Brimer, A. (1972) *Widespan Reading Test Manual.* Nelson.

Dulin, K. and Chester, R. (1980) 'The Dulin-Chester reading attitude scale, Form II'. In Monson, D. and McClenathan, D. (eds) *Developing Active Readers: Ideas for Parents, Teachers and Librarians.* Delaware: International Reading Association. Newark.

Estes, T. (1971). 'A scale to measure attitudes towards reading', *Journal of Reading*, 15, 135–138.

Gerber, M. and Kauffman, J. (1981) 'Peer tutoring in academic settings'. In Strain, P. (ed) *The Utilisation of Classroom Peers as Behavior Change Agents.* Plenum Press.

Marsh, H. W. (1988). *Manual to the Self-Description Questionnaire One.* Psychological Corporation.

Morgan, R. and Lyon, E. (1979). 'Paired reading: a preliminary report on a technique for parental tuition of reading retarded children'. *Journal of Child Psychology and Psychiatry*, 20, 151–160.

Topping, K. and Lindsay, G. (1992a) 'The structure and development of the paired reading technique, *Journal of Research in Reading* 15, 2, 120–136.
Topping, K. and Lindsay, G. (1992b). 'Paired reading: a review of the literature', *Research Papers in Education*, 5, 2, 199–247.
Vaughan, J. (1977). 'A scale to measure attitudes towards teaching reading in content classrooms', *Journal of Reading*, 20, (7), 605–607.
Winter, S. (1988) 'Paired Reading: a study of process and outcome', *Educational Psychology*, 5 (3) 135–151.
Winter, S. (1990) 'Paired reading: two questions', *Educational Psychology in Practice*, 6 (2), 96–99.
Winter, S. (1994) 'Tutor supervision, tutoring behaviours and outcomes in peer tutored paired reading', PhD Thesis, University of Hong Kong.
Winter, S. (unpublished) 'Expectations and experiences in instructional innovation', submitted to *Educational Psychology*.
Winter, S. and Low, A. (1984) 'The Rossmere peer tutor project', *Behavioural Approaches with Children*, 8 (2), 62–65.
Young, D. (1982). *Cloze reading tests: manual of instructions*. London: Hodder and Stoughton.

*Sam Winter used to work as an educational psychologist in Hartlepool, Cleveland. He is now an assistant professor in education at the University of Hong Kong. Contact address: Department of Education, University of Hong Kong, Pokfulam Road, Hong Kong.*

*This article was accepted for publication in February 1996.*

# LETTERS TO THE EDITOR

## *Dear Editor*

We have read with much interest Chris Ashton's and Jonathan Solity's manuscripts published in this issue of the journal. While Ashton defends discrepancy definitions of specific learning difficulties, Solity challenges his arguments. Both make frequent reference to our previous article in this journal and both interpret Stanovich's work in a way that supports their particular viewpoints. It would seem to us, therefore, that Stanovich himself would be the best adjudicator of this debate.

Our own understanding is that the 'phonological core variable' remains Stanovich's primary focus as illustrated in a recent and very comprehensive review article consisting of some 57 pages and some 230 references (Share and Stanovich, 1995). Those of us involved in the development of the Phonological Assessment Battery (PhAB) have indeed attempted to draw on this extensive body of research in order to apply it in educational practice. We believe that PhAB can be an important assessment tool if used appropriately in combination with other relevant information reflecting a comprehensive model of literacy learning.

A reply to Whittaker in this journal (Frederickson and Reason, 1996) considered these issues in some detail and included a discussion of the difference between PhAB and criterion-referenced measures. When preparing his manuscript it seems that Solity did not have an opportunity to read our response. If he had, he would not have drawn parallels between 1960s tests, involving training in skills represented by particular sub-tests, and the rationale of PhAB. He would have realised that their assumptions about intervention are quite different.

We get the impression that Solity has set up PhAB as something of an Aunt Sally in order to knock it down in favour of an assessment-through-teaching perspective. Surely there is no need to choose between the two. Of course, children's learning should be assessed over time in response to the teaching that they have received. Of course, skilled teaching pinpoints strengths and needs, and plans accordingly. But there is also a place for supporting these educational judgements with normative and comparative data reflecting psychological processes known to contribute to our understanding of how children learn to read and spell.

We would, therefore, entirely concur with Solity's view that the purpose of assessment is, 'to identify how perceived difficulties can be identified and overcome from a psychological perspective. That is, how can psychological theory, research and practice inform the teaching and learning process ...' Psychology is a broad church and we have argued (Frederickson and Reason, 1996) that one of our strengths as educational psychologists is to draw on this breadth and to work at and across the behavioural, cognitive and environmental levels of analysis.