

**University of Southampton**

**Doctoral Programme in Educational Psychology**

**Title:** Academic Critique: Paired Reading

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Case information has been anonymised.

## **Case background, referral question and enquiry method**

Amber is a girl in Year 4 that has been known to the Educational Psychology Service (EPS) since she was in Year 1. She has been attending School X since Year 2. Consultation with school staff and parents revealed that she has had persistent literacy difficulties in spite of interventions such as precision teaching and small group reading. Amber's mother said that the class-teacher in her previous school used to 'single her out' for her poor reading. This likely accounted for Amber's anxiety around reading aloud and making mistakes, as well as her dislike of reading. The SENCo sought EP involvement as she was unsure of how best to meet Amber's needs and asked the EP to gather some further information so that an appropriate means of intervening may be determined.

The school completed a dyslexia screening test (DST) in February 2011, which had shown that Amber's reading rate and verbal fluency were poor but that phonic skills were average (she scored 0 on the nonsense passage) suggesting that she now needed to concentrate on 'whole-word' knowledge. Her reading age was assessed by the SENCo in July 2011 using the Wechsler Individual Achievement Test (WIAT II) and found to be 7 years 6 months (chronological age = 8 years 9 months). In September 2011, the EP also used the Wechsler Intelligence Scale for Children (WISC) in order to gain an accurate and current assessment of Amber's abilities. She scored below average on all of the scales administered, verbal comprehension was at the 27<sup>th</sup> centile and a relative strength in the area of perceptual reasoning (50<sup>th</sup> centile). During the assessment, Amber was keen to please and responded well to praise.

## **Intervention**

Amber appeared to be very aware of her literacy difficulties. This impacted upon her academic self-concept and it was hypothesised that paired reading would increase her confidence, enjoyment and motivation to read as well as improve her reading rate, by shifting the focus from

phonic strategies to more whole-word approaches. It was also thought that it would develop her higher order skills of inference and comprehension. The EP advised the class teacher and LSA to pair Amber with a peer tutor and provide them with a quiet place to do PR for 10-15 minutes a day. Amber's tutor, Laura, was a very enthusiastic and competent reader from Year 4.

### **Outcomes**

At the review meeting (07/12/2011), the EP and I learned that Amber and Laura got along very well and that Amber was enjoying the PR. Laura had been absent for 2 weeks due to illness during which time PR had not taken place, which was disappointing. Nonetheless, Amber's mother reported that Amber appeared to have more positive attitudes towards reading and she appeared to have understood and processed the material she had read as she was discussing it at home. Amber's class teacher had also noted that Amber was less reluctant to do reading tasks, though was still uncomfortable reading aloud in front of others. As less than six months had passed since the WISC and WIAT had been administered, it was felt more appropriate to wait until February before triangulating reports of progress with standardised scores.

### **Review and appraisal of literature related to the case**

An international survey of 9,073 schools found that students considered 'liking reading' as the most vital aspect to becoming a competent reader (Elley, 1992). But poor readers typically do not enjoy reading and this tends to result in reduced practice and print exposure, exacerbating poor reading skills ('the Matthew effect', Stanovich, 1986; Nathan and Stanovich, 1991). One way of assisting with children's delayed literacy development is through interventions such as paired reading (Morgan, 1976).

Paired reading (PR) is a technique designed for use by parents or peers to improve reading proficiency and is recommended as a suitable wave 3 literacy intervention (Brooks, 2007). It

essentially consists of both simultaneous and independent phases of reading. The tutor matches their reading rate to that of the tutee, acting as a prosodic model as they read together. The child then signals (e.g. knock on the table) to indicate that they are ready to read alone. If the tutee self-corrects when they make a mistake, they continue to read independently. If the tutee does not self-correct or if they hesitate for more than four seconds, the tutor pronounces the word correctly and the tutee repeats the word. They proceed to read simultaneously again until the tutee gives the signal to read alone. Tutor pairs are encouraged to discuss the reading material during the session. Hayden (1996) suggests that the co-construction of meaning during PR discussion may be central to its success. Indeed, Feuerstein and Feuerstein's (1991) 'Mediated Learning Experience' stresses the importance of the mediator meaningfully sharing in the learning experience and broadening learners' thought processes. Vygotskian principles would also suggest that interactions with people with more capable and advanced knowledge result in children's cognitive development being progressed (1986). Children are challenged in PR but experience little failure as four seconds is the maximum amount of time allowed before they are helped.

PR can be used with a wide range of reading abilities and initially requires frequent use so that the pair become familiar with the method (Topping, 2001). Children undergoing PR typically make three times the normal progress in reading accuracy and five times the progress in reading comprehension, with evidence to suggest that such gains are sustained over time (Topping 1987, 1995, 2001). Topping and Lindsay's meta-analysis (1992) found that PR resulted in greater reading accuracy, more fluency, more self-correction behaviours and tutees' self-esteem is thought to improve with their awareness of enhanced reading ability (Miller, Topping and Thurston, 2010). In accordance with behaviourist principles, praise is thought to reinforce learning and promote confidence (Topping and Bryce, 2004).

PR maintains the 'flow' of reading which allows for semantic access to the text, shifting the focus from word-decoding to reading for meaning (Elliot and Hewison, 1994). Cadiuex and

Boudreault (2005) suggest that in spite of the 'non-phonetic' approach, phonological awareness is improved by the tutee associating the group of letters with their corresponding sounds during simultaneous reading. Individual attention and reading practice are increased; in ten weeks, some PR pairs covered the same amount of material that would be covered in school over 86 weeks (Allington, 1984).

Topping, Miller, Thurston, McGavock, Conlin's (2011) research project sought to explore: the impact of tutoring in reading (and / or maths); the effects of cross-age or same-age tutoring and the effects of intensive (x3 a week) or light (x1 a week) intervention. Children aged 9 and 11 years old from 80 different schools were followed for 2 years and PR intervention types were randomly allocated. Training involved information regarding the underlying rationale of peer tutoring, discussion and demonstration of the technique (as recommended by Topping, 1995). The intervention lasted 15 weeks and was repeated in the second year, with the same pupils. In cross-age pairs, the most able tutor in class A was matched with the most able tutee in the younger class. In same-age pairs, the class was ranked according to ability and divided into top and bottom halves with the most able tutor paired with the most able tutee. This is a potential confound as the difference in ability between tutor and tutee in pair A may be a lot greater or smaller than that in pair B. There were five control schools and effectiveness was measured using the NFER group reading test in year 1 and the Suffolk Reading Test in year 2. Though both tests are comprehension and word-focused, comparing results from year 1 with year 2 on the basis of two different tests makes valid comparisons and accurate assessment of progress difficult. However, they suggest that significant gains in self-esteem and beliefs about reading competence were observed in both cross- and same-age pairs. Cross-age tutoring resulted in a small effect size when measured over a long period of time. As effect sizes are often inflated in small samples, the authors suggest that their large sample (n=8,847) may explain the modest effect size (0.22). I suggest that differences between tests' reliability and validity may also be responsible.

Macdonald's (2010) project examined the effectiveness of a more structured approach to PR whereby synthetic and analytical approaches to phonics were incorporated. Inclusion of such techniques raises the question of whether this was indeed 'PR'. Ten secondary-school pupils with a reading age < 9 were enrolled in PR, following screening with the Schonell reading test. However, this is a word recognition test and is not entirely relevant, as Topping (1995) remarks: "an intervention method which revolves around promoting the use of contextual clues is not likely to be relevantly evaluated by reading tests which provide no context" (p. 57). During PR sessions, any word that was not recognised by the tutee was analysed and studied phonically. Results demonstrated that all pupils improved in reading accuracy, comprehension and mechanical reading age but the lack of control group makes it difficult to draw meaningful conclusions. Interestingly, speed of reading did not improve and in some cases it deteriorated. This reinforces Elliot and Hewison's (1994) idea that 'classic' PR's advantage over phonic approaches is that it doesn't interrupt the flow, thereby improving reading rate. Researchers such as Macdonald that exclude self-esteem from effect measures may be missing important results (Van Steensel, McElvany, Kurvers & Herppich, 2011).

As above, paired reading may be used as a term to describe interventions that are not PR as such (Topping and Bryce, 2004) and "in supposedly paired reading studies there is no guarantee that participants actually *did* paired reading" (Topping and Lindsay, 1992, p. 132). Monitoring of treatment integrity was absent from many studies and Topping et al., (2011) suggest that: "to obtain an effect in outcome evaluation without evidence that the intervention was actually implemented is worthless" (p. 6-7). Winter (1988) found that pairs did not 'faithfully' adhere to the PR technique but that this made no apparent difference to outcomes. He suggested that tutoring behaviours only matter in terms of the impact that they have on content coverage, suggesting that this is an 'active' variable in PR (1996). However, Fiala and Sheridan's research (2003) highlights the dubiousness of participant-recorded treatment integrity. One child let slip

that he and his mother had missed one day of PR and then did two sessions in one night to ‘catch up’ - yet these were recorded as two separate sessions.

The intervention is designed to be flexible so while variation may not be problem in PR practice; in research, variable levels are added. Methodological and sample differences may be responsible for disparate findings and Topping, et al. (2011) suggest that “the method works in many different ways through many different pathways for different children” (p. 4). Uncertainty as to what makes PR so effective and what its outcomes are, impacts upon the measures used and conclusions made. Some measures are “more closely aligned to the skills supported in a program and some will be more distal; the latter will probably yield smaller effects than the former” (Van Steensel et al., 2011, p. 89). Inconclusive findings regarding self-esteem changes following PR (Topping and Lindsay, 1992) may be due to differences in operationalisation of self-esteem or the way it is measured (Miller, Topping and Thurston, 2010).

Much PR research has been done with small, self-selected samples, short-term interventions (8-10 weeks), with minimal follow-up and implementation-integrity data (Topping et al., 2011)). Self-selected samples may be more motivated to engage with the intervention which although educationally desirable, does not allow for scientific and rigorous assessment of intervention-specific effects and inflates effect sizes (Lipsey, 2003). Some negative results may be due to the intervention ‘intensity’ or duration not being sufficient to be a fair test of PR, these results are still useful in clarifying the parameters in which effects are found (Stoiber and Kratochwill, 2000).

To avoid ‘spurious’ conclusions, Winter (1997) asserts that one should account for all other factors under examination when linking process to outcome. Praise is likely to vary between pairs yet has not been examined or controlled for in studies. Outcomes such as self-esteem, motivation to read and confidence may be mediated by the type of praise employed by tutors

(fixed or growth mindset; Dweck, 2006). It is likely that adherence to the four-second pause varies inter- and intra-individually, yet apparently no attention has been given to this variable—another methodological oversight. The level of differential ability between tutor and tutee also merits consideration. If the ability differential is too great the tutor is likely to get bored, if it is too little; the tutor may not provide a sufficient model of competency and may miscorrect tutees (Topping, 1995). Tutees are embedded in cultural and familial contexts yet research has failed to account for distal-level processes such as parental literacy practices, thereby violating assumptions of independence of variables.

### **Appraisal of literature relating to the case process**

Amber appears to have made progress in reading comprehension and attitudes towards reading. It is encouraging that she has told her parents and class-teacher that she was enjoying it, as her subjective experience is central to the sustainability and effectiveness of the intervention. Free choice of reading material is thought to foster interest, enthusiasm and motivation (Clark, 1995) and Amber was keen to read the books she had chosen during the PR sessions. Amber enthusiastically discussed the stories with peers and her class-teacher, evidencing good grasp and comprehension of the material. Previously, she had concentrated so hard on decoding words that she had little understanding of the text. I would suggest that Amber is learning to associate reading with enjoyment and I believe that this will improve her motivation to read outside of PR sessions. The increased exposure to print is intuitively likely to improve reading skills and as Winter (1996) suggests, content coverage is likely a key component of its effectiveness.

Feedback, review and change are important in order to keep the process exciting, fun and different thereby sustaining motivation and interest (Topping, 1989). This PR intervention is scheduled to continue after Christmas and I would encourage the school to review the intervention in 6 weeks to ensure that materials are adequately challenging (Topping, 1995). Participants can



offer helpful formative insights (Topping, 1995) so I would discuss the progress of the intervention with Amber and see if she had any improvement suggestions or even opinions on how PR was helping her.

Staff and parents' expectations of PR success were initially quite poor having already tried a number of interventions. The SENCo also admitted that she believed that phonic strategies were best and I think that the school needed the 'permission' to focus on reading enjoyment and practice rather than the phonic approaches that dominate the literacy curriculum. Explaining the logical and simple rationale behind PR assuaged the SENCo's anxieties. The EP had told them that this intervention was quite different to the others that they had tried. In doing so, she may have primed them to expect different results and these higher expectations possibly contributed towards the success of the intervention or may even have positively biased their perceptions of Amber's progress.

In future, I would evaluate reading motivation and self-esteem prior to the intervention commencing, as well as gathering more detailed information about Amber's performance in different aspects of reading. This way, a more comprehensive picture of her needs and progress could be obtained. Osborne, Alfano and Winn (2011) found that: "level of progress was related to initial reading ability, such that children with reading ages considerably below their chronological age at the outset of the project revealed greater gains than those with reading ages closer to it" (p. 21). As such, the reading age at baseline may impact upon the differential effect findings in research. Given that Amber's reading age was 15 months less than her chronological age, perhaps one may expect that assessment in February will demonstrate more modest gains compared to a same-age tutee with literacy skills weaker than Amber's.

## **Reflective evaluation and implications for future practice**

Even though many of the studies are dated and not very robust, exploring the literature has been useful in enhancing my appreciation of the number of methodological aspects to consider when evaluating intervention outcomes and how these might relate to practical implementation. Practitioners should consider the clinical/educational significance of the outcomes for tutees even if statistically non-significant. Statistical (non-)significance does not necessarily equate to educational (non-)significance.

If I deliver training or advise on adjustments to PR interventions, I would be keen to recommend that praise be of the ‘growth-mindset’ nature (Dweck, 2006). That seemingly subtle difference may have a significantly positive impact on outcomes. During consultations, if teachers or parents are reporting that PR hasn’t worked, I will seek to clarify the consultee’s operationalisation of PR. It may be useful to explore their technique, the format of sessions, the pairing and the child’s underlying difficulties. Scott (1983) argued that PR is not sufficient for phonologically weak readers and that unless these gaps are addressed, weak readers will continue to struggle. I agree that phonic strategies ought to be supported alongside PR, where necessary.

I think that a particular strength of the intervention is its focus on fostering enjoyment of reading. If children experience reading as a positive event, their motivation to engage in reading practices will improve thereby increasing content coverage and opportunity for reading development. I also think that peers are arguably one of the most under-utilised resources in the school and PR has been demonstrated to have benefits for tutors as well as tutees (Topping, 1995). As charting of progress in precision teaching is thought to motivate the learner, I wondered if perhaps a drawback of PR was that progress was not recorded in a similar fashion. Yet without charting, it is less ‘instructional’, more relaxed and perhaps partly why it ‘works’.

Although I know of no published research on the matter, I hypothesise that PR would be effective for children with English as an additional language (EAL) through the increased print exposure and modelling of correct pronunciation and expression. I will be mindful that Topping (1995) advises of cultural considerations when matching pairs e.g. a younger peer tutoring an older peer or male/female mixes may be unacceptable in some cultures.

The question remains as to which, if any, of the components of paired reading is essential. Future practice as an educational psychologist may involve research into this area. Qualitative research into PR may reveal experiential components that further our understanding of its effective mechanisms.

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