Reading Recovery: Distinguishing Myth from Reality

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Reading Recovery is an early intervention program developed in New Zealand by Marie Clay (1985) to help children who are having difficulties learning to read after a year of formal reading instruction. The general aim of the program is to reduce the incidence of reading failure by accelerating to average levels of performance the progress of 6-year-old children who show early signs of reading difficulty (normally children who perform at or below the 20th percentile in reading). Children selected for Reading Recovery are provided with 30 to 40 minutes of daily one-to-one "pull-out" instruction over a period of between 12 and 20 weeks by a specially trained Reading Recovery tutor. Particular emphasis is placed on developing within these children a self-extending system of reading strategies that involves the flexible use of multiple cues (predominantly text-level cues) to detect and correct errors while constructing meaning from text (Clay, 1991).

Reading Recovery is now in use in more than 10,000 elementary schools across the United States and has been described as "phenomenally successful" (Daniels, Zemelman, & Bizar, 1999, p.35) and as "the most effective remedial intervention currently available" (Johnston & Allington, 1991, p.1006). The central question addressed in this paper is whether these claims are valid: Do they reflect reality or are they merely myths? In support of the latter view are the results of a recent meta-analysis of one-to-one tutoring programs in reading by Elbaum, Vaugn, Hughes, and Moody (2000), who concluded that:

> ***Overall, the findings of this meta-analysis do not provide support for the superiority of Reading Recovery over other one-to-one reading interventions. Typically, about 30 percent of students who begin Reading Recovery do not complete the program and do not perform significantly better than control students. As indicated in this meta-analysis, results reported for students who do complete the program may be inflated due to the selective attrition of students from some treatment groups and the use of measures that may bias the results in favour of Reading Recovery students. Thus it is particularly disturbing that sweeping endorsements of Reading Recovery still appear in the literature. (p.617)***

Because Reading Recovery involves intensive, one-to-one instruction that is in addition to the regular classroom reading program, it comes as no surprise that the program has been shown to be beneficial for many students with early reading difficulties (Pinnell, Lyons, Deford, Bryk, & Seltzer, 1994). Research has clearly demonstrated that regardless of the subject matter taught, one-to-one instruction is much more effective than classroom instruction (Bloom, 1984). Moreover, given what is known about the general developmental progression in learning to read (Ehri & McCormick, 1998; Spear-Swerling & Sternberg, 1996), it is likely that many beginning readers who have fallen behind in reading (most likely as a consequence of developmentally limiting deficiencies

in phonological awareness skills; Stanovich, 1996) may have taken longer than usual to acquire the self-improving phonological receding skills (i.e., the ability to translate letters and letter patterns into phonological forms) necessary for achieving progress in reading. The process of phonologically recoding a specific printed word a few times ultimately cements the word's orthographic representation in lexical memory (Ehri & McCormick, 1998). Phonological recoding therefore functions as a self-teaching mechanism that enables beginning readers to acquire sight word (i.e., word specific) knowledge, including knowledge of irregularly spelled words (Share, 1995).

Struggling readers who have a working knowledge of the major grapheme-phoneme correspondences (which may, or may not, have been acquired through explicit instruction; Liberman & Liberman, 1992), and possess phonemic awareness, are able to execute phonological recoding operations, but only very slowly and laboriously. Delayed readers at this phase of development are described as "gluing to print" (Ehri & McCormick, 1998, p.150). For these children the heavy emphasis on text reading in Reading Recovery lessons provides them with additional opportunities to apply their developing phonological decoding skills to identifying unfamiliar words in text. This extra practice is likely to be beneficial in helping these struggling readers to catch up with their peers.

A high percentage of struggling readers, however, operate at even lower phases of word learning, which Ehri and McCormick (1998) describe as the pre-alphabetic and partial-alphabetic phases. Children in these phases have limited, or severely limited, phonological awareness and alphabetic coding skills. Because Reading Recovery was designed to complement regular classroom literacy instruction in New Zealand, which is predominantly whole language in orientation, the specific learning needs of these children are generally not adequately addressed. Evidence in support of this claim comes from the high percentage (up to 30%) of Reading Recovery students who do not complete the program, but instead are "referred on" for further assessment and possible additional remedial assistance. This normally occurs during the first 10 lessons of the program, which are devoted to consolidating what is already known (referred to as "roaming around the known"). However, these initial lessons serve a screening, as well as a diagnostic, function. Children who seem unlikely to respond to Reading Recovery tutoring, typically the lowest of the low achievers, are removed from the program and referred on. In most Reading Recovery evaluations, these students are not included in the treatment groups, which strongly biases the results in favour of Reading Recovery. Supporting the claim that these children are more likely to have the greatest impairments in phonological processing skills, we found in a longitudinal study of Reading Recovery that students who were referred on showed the most severe deficits on all phonological processing measures (phonological awareness, invented spelling, pseudoword decoding, analogical transfer), including measures taken during the year preceding entry into the program (Chapman, Tunmer, & Prochnow, 2001).

These findings draw attention to the major shortcoming of the instructional philosophy of Reading Recovery, which is that it stresses the importance of using information from many sources in identifying unfamiliar words without recognizing that

skills and strategies involving phonological information are of primary importance in beginning literacy development (Tunmer &Chapman, 2003). This instructional emphasis reflects Clay's (1991) strong top-down theoretical orientation to fluent reading, according to which minimal word-level information is used to confirm language predictions. Clay (1991) claims that, "In efficient rapid word perception the reader relies mostly on the sentence and its meaning and some selected features of the forms of words" (p.8). From this incorrect assumption, it follows that reading acquisition is largely a matter of learning to rely increasingly on the syntactic and semantic redundancies of language to generate hypotheses about the text yet to be encountered. Children are therefore urged to use preceding passage content, sentence context cues and picture cues as the primary strategies for identifying unfamiliar words in text, with letter-sound cues being used very sparingly and mainly to confirm language predictions. Clay (1998) specifically states that beginning readers "need to use their knowledge of how the world works; the possible meanings of the text; the sentence structure; the importance of order of ideas, or words, or of letters; the size of words or letters; special features of sound, shape, and layout; and special knowledge from past literary experiences ***before*** [emphasis added] they resort to left-to-right sounding out of chunks or letter clusters or, in the last resort, single letters" (p.9).

This view of reading and the theoretical assumptions upon which it is based, has been rejected by the scientific community. Pressley (1998), for example, stated that "the scientific evidence is simply overwhelming that letter-sound cues are more important in recognizing words than either semantic or syntactic cues" (p.16). Research has shown that predicting words from context is a highly ineffective learning strategy that is preferred by poor readers, not good (Tunmer & Chapman, 2002). Children should therefore be encouraged to look for familiar spelling patterns first and to use context to confirm partial decoding attempts (Tunmer & Chapman, 998, in press).

Another major criticism of the instructional philosophy of Reading Recovery concerns the degree of explicitness and detail with which word-level skills and strategies are taught. Although Reading Recovery's literature-based approach to reading instruction (in which word analysis activities arise primarily from the child's responses during text reading) may be suitable for many children, struggling beginning readers appear to require a more highly structured, systematic approach with particular attention focused on the development of phonologically-based skills and strategies. As Adams and Bruck (1993) argued, "wherever children who cannot discover the alphabetic principle independently are denied explicit instruction on the regularities and conventions of letter strings, reading disability may well be the result" (p.131).

In support of these claims, we (Chapman et al., 2001) found in a longitudinal study of beginning literacy development in a whole language instructional context, that children independently selected by their schools for Reading Recovery showed major difficulties in detecting sound sequences in words (phonological awareness) and in relating letters to sounds (alphabetic coding) during the year preceding entry into the program. Participation in Reading Recovery did not appreciably reduce these deficiencies, and the failure to remedy these problems severely limited the immediate and

long-term effectiveness of the program. The few children who received some benefit from Reading Recovery were more advanced in phonological processing skills at the beginning of the program than children who derived little or no benefit from the program, and progress in learning to read following participation in Reading Recovery was strongly related to phonological processing skills at discontinuation from the program. Most importantly, Reading Recovery failed significantly to improve the literacy development of children considered to have succeeded in the program. These children showed no signs of accelerated reading performance, and one year after completion of the program, they were performing around one year below age-appropriate levels. The results of the study strongly suggest that it is not an effective intervention strategy to place children into a remedial reading program that uses the same methods that most likely contributed to the failure in the first place.

There are two major advantages in providing struggling readers with explicit and systematic instruction in orthography patterns and word identification strategies outside the context reading connected text rather than relying on "mini-lessons" given in response to children's oral reading errors during text reading. First, instruction in word analysis skills that deliberately separated from meaningful context allows children to pay full attention to the letter-sound patterns that are being taught. This approach helps children to learn word-decoding skills that may be useful in reading all texts, not just a specific text. Second, including isolated word study in remedial reading programs helps struggling readers to overcome their tendency to rely on ineffective ways of figuring out unknown words in text such as using picture cues and sentence context cues to identify unfamiliar words rather than using these cues to supplement word-level information. In support of this claim we (Iversen Tunmer, 1993) found that the effectiveness of Reading Recovery instruction could be improved considerably by incorporating into the program more intensive and explicit instruction in phonologic awareness and alphabetic coding skills, in combination with strategy training on how and when to use this knowledge during text reading. The arguments and evidence in support of including more explicit training in phonological processing skills in Reading Recovery draw attention to another major shortcoming of the program. The assessment battery used in Reading Recovery does not include tests that provide teachers with more comprehensive knowledge of children's control over vital aspects of the reading acquisition process; namely, phonological awareness, knowledge of spelling-to-sound patterns, and knowledge of word-based strategies for identifying unfamiliar words. In addition, the major outcome measure of Reading Recovery, reading book level, appears to be a highly unreliable measure of reading achievement that yields inflated estimates of children's progress (Tunmer & Chapman, 2003).

Another major issue addressed in the meta-analysis by Elbaum et al. (2000) concerns one-to-one versus small group instruction:

> ***One-to-one interventions place severe practical limits on the number of students that can receive supplemental instruction. Despite the popular belief that one-to-one instruction is more effective than instruction delivered to large numbers of students, there is actually little systematic evidence to support this belief.***

> ***Each additional student that can be accommodated in an instructional group represents a substantial reduction in the per-student cost of he intervention, or alternatively, substantial increase in the number of students that can be served. (p.606)***

Those who manage the delivery of Reading Recovery are strongly opposed to adapting the program to small group instruction because they maintain the program is designed to respond to the individual needs of problem readers, which are assumed to vary considerably across children. As Pinnell, Lyons, and Jones (1995) put it, changing Reading Recovery from one-to-one to small group tutoring would be "like saying to the ward nurse, 'Don't issue individual medication. Mix all the drugs together and give each patient the same dose'" (p.20).

This argument is faulty in two respects. First, we (Chapman et al., 2001) found in a longitudinal study of Reading Recovery that children selected for the program were, without exception, experiencing major difficulties in detecting sound sequences in words, in relating letters to sounds, and in identifying individual words out of context prior to entering the program. These findings are entirely consistent with the widely accepted view among reading scientists that the primary phenotypic manifestation of developmental reading problems is poor context free word recognition ability and associated phonological processing deficits (Lyon & Moats, 1997). Returning to Pinnell et al.'s (1995) medical analogy, the ward nurse wouldn't give a different drug to each patient if they all suffered from the same affliction (e.g., malaria). Second, studies cited in the meta-analysis by Elbaum et al. (2000) and a study by Iversen (1997) indicate that there is little or no advantage of one-to-one Reading Recovery instruction over small-group Reading Recovery instruction, where group size ranged from two to four students. In a carefully designed and systematic adaptation of Reading Recovery to instruction in pairs, Iversen (1997) found that the same outcomes of Reading Recovery could be achieved by children taught in pairs as those taught individually by increasing the duration of the lessons by an average of only eight minutes.

In summary, there are serious shortcomings and much needed improvements in four aspects of the Reading Recovery program:

- the theoretical underpinnings of the program,
- the assessment battery used in the program,
- the specific procedures and instructional strategies emphasized in the program, and
- the manner of program delivery (one-to-one instruction versus instruction in pairs).

Fundamental changes in all of these areas would, we believe, greatly improve the effectiveness of the program, both in respect of success rate and cost. Until such changes are made to Reading Recovery, which seems highly unlikely, we strongly recommend that schools do not adopt the program.

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References and Footnotes upon Request - Reprinted from the IDA 54th Annual Conference Commemorative Booklet "Our Mission to Literacy"