Learning Letter-Sound Relationships in Reading Recovery: Evidence and Practice

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In this article, we explore recent research about phonics teaching, the interdependent skills needed to access phonics teaching, and consider synergies between the findings from these studies and Reading Recovery® teaching procedures. First, we set the scene by discussing definitions and raise some issues regarding the efficacy of different ways of teaching phonics, particularly in relation to Reading Recovery. Next, we review some recent research about the role of phonics in learning to read and how it fits with Reading Recovery teaching procedures. Two of these studies were conducted in the context of Reading Recovery. Finally, given that it has been established that successful integration of Reading Recovery in a school (May, Sirinides, Gray, & Goldsworthy, 2016) demands a collective understanding of the pedagogy of Reading Recovery, we consider some of the current challenges in aligning classroom teaching of phonics and Reading Recovery. We hope that providing a broad overview of the issues will facilitate better professional conversations about the principles and practices of Reading Recovery and build collective understanding of the role of phonics in learning to read.

Defining Phonics and its Role in Reading Recovery

In every Reading Recovery lesson, teachers aim to support children to develop expertise in linking "what his eyes are attending to and what he is saying" (Clay, 2016, p. 142). That being said, searching for, deciding, and linking visual information to sounds in an efficient manner that makes sense and fits with the author's message involves complex processes of self-monitoring (Schwartz, 1997). So, while we focus on supporting children to link letters (*graphemes*) and the

sounds (*phonemes*) that they represent in this article, we acknowledge that this process is but one facet of an incredibly complex process.

Stahl, Duffy-Hester, and Stahl (2006) in an article titled “Everything You Wanted to Know About Phonics (But Were Afraid to Ask”) suggested that one of the key issues is that "a lot of people are talking about phonics but in different ways" (p. 338). The lack of clarity identified is further confounded by the fact that beliefs about how phonics should be taught depends very much on how one defines and understands the process of learning to read. Indeed, it will come as no surprise to readers that the beliefs held about how children learn to read, and subsequently how best to support reading development has historically been the topic of "vociferous argument" (Castles, Rastle, & Nation, 2018, p. 5).

In order to demonstrate the divided opinions about what constitutes phonics, we provide four contrasting definitions (see Table 1). We chose these definitions as they highlight the disparities in the field.

Table 1. *Definitions of phonics*.

Authors	Definition
Mesmer and Griffith (2005)	A **system** for encoding speech **sounds** into written **symbols** and **an educational practice** for teaching learners the **relationships** between **letters and sounds** and how to use this **system** to recognize words (p. 367)
Castles, Rastle, and Nation (2018)	Systematic phonics refers to reading **instruction** programmes that teach children the **relationship** between **graphemes and phonemes** in an alphabetic writing **system** (p. 12)
Bowers and Bowers (2017)	A **method of teaching** reading that focuses on **sub-lexical *grapheme–phoneme*** correspondences with little or no reference to other constraints on spelling (p. 125)
Treiman (2018)	Phonics **instruction** teaches that the spellings of words encode the **phonemes** within them by virtue of **systematic links** between **letters** or groups of **letters and phonemes** (p. 2)

There are three tenets common to all four definitions:

1. Phonics is a method or element of the teaching of reading.
2. Phonics should teach children the relationships between letters and sounds to support reading.
3. That there should a systematicity to phonics teaching.

However, whilst all using the terms "phonics" and "system(atic)," the authors do not use them in a consistent way. Mesmer and Griffith (2005) consider phonics as both a linguistic system and a method of instruction. Bowers and Bowers (2017) appear to suggest that phonics operates at the level of letter-sound correspondence but not spelling patterns whereas Treiman (2018) suggests that it can be used to teach spelling. Both Mesmer and Griffith and Treiman refer to the phoneme or sound first and yet phonics is print dependent. For Treiman, systematic refers to the level of the systematicity of the spelling system, whereas others (e.g. Castles, Rastle, & Nation, 2018) refer to the standardized order for exposing all young learners to grapheme-phoneme correspondences. For the purpose of this article, we suggest that part of Mesmer and Griffith's definition is helpful: "an educational practice for teaching learners the relationships between letters and sounds" (p. 367).

"Systematic" means following a well-ordered plan, methodical in procedure and marked by thoroughness (Merriam-Webster, 2020). Although systematic phonics instruction is generally reported as more effective than non-systematics phonics instruction (Wyse & Goswami, 2008), it would seem that the evidence for this is inconclusive (Bowers, 2020). There is also some disagreement on how to be systematic (Wyse & Goswami) and exactly what that means. Most commonly, systematic approaches to teaching phonics are synthetic (where teaching focuses on articulating the individual sounds associated with the grapheme and blending, or synthesizing

them together) or analytic (where teaching starts with whole words and focuses on strategies to segment those words into chunks as well as the individual phonemes associated with a grapheme and includes attention to rime patterns and word parts as well as individual letter-sound relationships) (Lewis & Ellis, 2006). Both analytic and synthetic approaches are referred to as systematic because they imply a consistently followed order of instruction and that early reading instruction should focus exclusively on letter-sound relationships. It is often claimed that synthetic is more effective than analytic phonics (Rose, 2006) but evidence for superiority of synthetic phonics over any other approach has not been empirically proven (Torgerson, Brooks, Gascoine, & Higgins, 2019).

How teaching should differ for children who have received systematic phonics teaching in the first year of school but, despite this, have failed to make progress in literacy learning is even less clear. Di Stasio, Savage, and Abrami (2010) found that an analytic phonics approach provided superior results for children from low socio-economic status (SES) backgrounds. In contrast, Machin, McNally, and Viarengo (2018) found that the long-term effects of synthetic phonics washed out for most children but that they persisted for children from low-SES backgrounds and who spoke English as an additional language. However, they were not comparing the method to any other approach. Bowers (2020), when appraising systematic reviews that considered the efficacy of various phonics approaches with different groups of at-risk readers, argued that there simply is not enough evidence to support any one particular teaching method. In summary, it seems that the lack of clarity about how phonics is defined extends to how it should be taught (Stahl, Duffey-Hester, & Stahl, 1998).

It is clear there is a lack of evidence for the superiority of any phonics approach and, in particular, there is a lack of evidence to support the primacy of a particular approach for children

who have not responded to classroom teaching. In many countries where Reading Recovery is implemented, however, policy dictates a specific approach to the teaching of phonics. In England, for example, Reading Recovery teachers are frequently called upon to advocate for the theoretical base for Reading Recovery and how it aligns with national curriculum guidance stipulating a classroom focus on synthetic approaches using decodable texts. Indeed, Chapman and Tunmer (2019) have argued that that Reading Recovery teaching is not aligned with "contemporary approaches to literacy instruction" (p. 266). In the next section, we challenge this assertion and consider the alignment of and synergies between Reading Recovery and "contemporary" approaches to phonics teaching.

Reading Recovery and Contemporary Approaches to Phonics Teaching: A Complex Perspective

Does Reading Recovery teach or emphasize the importance of letter-sound relationships and are teaching procedures in line with contemporary approaches to phonics teaching? When looking at *Literacy Lessons Designed for Individuals* (Clay, 2016), the term "phonics" doesn't appear in the table of contents or the appendix. Might this be why some conclude that phonics is not taught or emphasized in Reading Recovery lessons? It's important to reflect on why Clay might have avoided using the term. She argued that the act of "linking sound sequences to letter sequences is NOT a simple problem of what theorists, researchers and teachers call 'phonics'" (Clay, p. 143) but a more complex interaction between brain and eye, gathering information contained in letter-sound relationships to activate both phonemic and phonological processing.

In Reading Recovery, a population of children experiencing difficulties in literacy development (who have perhaps not yet experienced success in organizing their perception of and attention to print) have to learn

- to distinguish arbitrary symbols like letters,
- to hear and distinguish different sounds,
- to link the visual symbols they see with sounds that they hear,
- and to do this from left to right (a visual task) and from beginning to end (an auditory task). (Clay, 2016 pp. 143–145)

In line with her complex cognitive literacy processing theory, Clay is clear that what one might think is a simple act—using letter-sound information—is in fact, a complex process. Children identified for Reading Recovery have unique perceptual (both auditory and visual) understandings of directional rules of print, and are familiar with different words and letters and have different conceptual awareness for print. To profit from phonics teaching, they need to learn (a) how to look at print, (b) what to look for in print, (c) how to link what they hear and see, and (d) to do this during the act of reading and writing

Developing speed and automaticity in these processes allows children to actively begin to monitor initial attempts; cross-check sources of partial information; and increase "his awareness of the different kinds of information in print and leads to better quality responses" (Clay, 2016, p. 130). In other words, teaching phonics in Reading Recovery involves personalizing teaching for every child by considering what he already knows and what he can perceive and attend to; this supports the child to act in order to develop awareness.

In the next section, we review key findings from research in the four areas listed above and consider how they align with Reading Recovery teaching procedures. We chose empirical studies, syntheses, and practice guide to provide readers with a synopsis of the research evidence available. We use a table (see Table 2) to summarize key points and draw on *Literacy Lessons Designed for Individuals* (Clay, 2016) to describe the Reading Recovery teaching procedures

(with prompts in italics). We also refer to the recent practice guide, *Foundational Skills to Support Reading for Understanding in Kindergarten through 3rd Grade* (Foorman et al., 2016). This practice guide was authored by experts in literacy research and commissioned by the Institute for Educational Sciences. It contains recommendations based on a comprehensive review of contemporary approaches to literacy teaching that have been empirically proven to support development of foundational skills in reading.

Synergies Between Recent Research and Reading Recovery Teaching Procedures

How to look at print

According to the simpler definitions we described in the previous section, phonics involves teaching the relationship between symbols and sounds. However, in order to identify the symbols, a child has to look at print in such a way that allows access to the visual information that they have perceived. As Clay (2016) wrote "reading begins with looking and ends when you stop looking" (p. 48). It has been well established that print knowledge or print skills predicts later reading success (Anthony & Lonigan, 2004; Hammill, 2004; National Early Literacy Panel, 2008). In fact, Piasta, Justice, McGinty, and Kaderavek (2012) have established that there is a causal relationship between print knowledge and later literacy skills. In other words, knowledge about how print works contributes to later literacy development.

This recent body of research supports the attention paid to conceptual awareness of print concepts in the Reading Recovery series of lessons. This begins with establishing conceptual awareness of print (Clay, 2013) at the beginning of the series of lessons, leading to learning about direction and further support for the child to locate what to attend to (Clay, 2016). Also supportive of these teaching procedures, Justice and Ezell (2004) determined that print referencing can support emergent literacy skills. Print referencing refers to

- noticing and naming print concepts,
- actively working to develop children's concept of word,
- ability to track across print,
- knowledge about the functions and conventions of print,
- part-to-whole relationships in words, and
- engaging in meta-linguistic conversations about print.

This fits well with Reading Recovery teaching procedures and how the language of prompts is used to support children to build conceptual awareness of print.

When a child begins Reading Recovery lessons, his teacher ensures that he works with the few words or letters that he knows, creating successful active encounters with print knowledge. The key thing to note here is "active;" this is essential if interaction between eye and brain is to be forged. As letters and words are systematically introduced and learned through encounters with new texts, both read and written, the child is supported to develop increasingly skilled ways of using print information

What to look for in print: Letters

Supporting children to learn to recognize letters is essential. Indeed, alphabet knowledge is the best predictor of later reading ability (National Early Literacy Panel, 2008; Piasta & Wagner, 2010). In England, the majority of children entering Reading Recovery will have been taught to identify letters by sound, whereas in the United States children will probably have been taught to identify by alphabet name. Ellefson, Treiman, and Kessler (2009) found, in a comparative study of both educational contexts, that neither approach provided an advantage in terms of later literacy development. In an experimental study, Piasta and Wagner (2010) found that learning letter names and sounds at the same time had more favorable results in terms of

letter learning and recommended that teachers needed "to vary their alphabet instructional practices according to the skills with which children enter their classrooms" (p. 340).

Teaching identification using both sound and letter name fits with the teaching procedures in Reading Recovery to work for flexibility in that children will (a) "learn to discriminate all of the letter shapes" (Clay, 2016, p. 62), (b) know all letters rapidly, and yet (c) "learn (in English) that sometimes a letter has a one sound and in other contexts in can have a different sound" (Clay, p. 69). Instructional practices to support this learning involve use of a personal alphabet book, sorting magnetic letters in every lesson, and writing.

What to look for in print: words

Whilst knowledge of letter-sound relationships is crucial, knowledge of words is also helpful when reading unknown words (Ehri, 2007). Knowing many words and how they work enables children to use and apply their knowledge of letter-sound relationships and develop the flexibility that is demanded when reading or writing in English. This is supported by the recent recommendations of Foorman et al. (2016) who recommended that when children have knowledge of a few letters, they should be supported to apply this knowledge in texts and that increasing word recognition would better facilitate recognition of further words and parts of words in new and novel contexts.

As well as knowing words, children also need to know how to analyse words, know how words work, and be able to construct and take words apart while writing and reading (Clay, 2016, p. 155). It is clear that early decoding difficulties predict later literacy difficulties (Snowling, 2014). Again, the teaching procedures to extend word knowledge, take words apart while reading, and attend to words in isolation align with the evidence of Foorman et al. (2016).

Linking seeing to hearing: Phonological awareness

The development of phonological awareness is, without doubt, related to later reading ability (Snow, Burns, & Griffin, 1998). Phonological awareness is both precursor and consequence of reading (Snowling & Hulme, 1994). The evidence in this regard is unequivocal and it is well-established that many children who are experiencing persistent specific learning difficulties in reading have an underlying phonological processing difficulty (Snowling, 2014). So, what teaching can support this aspect of literacy development? Snowling, in a recent review of interventions for dyslexia, stated that early interventions need to include instruction in "linking letters and phonemes through writing and reading from texts" (p. 10).

In Reading Recovery lessons, there is focused attention to the development of phonological awareness and Clay (2016) clearly stated that "*all Reading Recovery children should begin at the beginning*" (p. 95) of a set of sequenced procedures that include hearing syllables, slow articulation, oral segmentation of sounds in words, and use of Elkonin boxes in writing to further support children's linking of sounds to symbols from simple (sound boxes) to complex (spelling boxes) spelling patterns (see Table 2). These procedures mirror exactly the recommendations of Foorman et al. (2016). In addition to this, the use of writing as a vehicle to support the development of spelling ability has reciprocal gains in reading (Graham & Hebert, 2012).

Using knowledge during reading and writing

There is ample evidence that literacy interventions need to include reading and writing of connected, or continuous, texts due to the established efficacy of interventions like these:

- Reading Recovery (Burroughs-Lange & Douetil, 2007, 2008; Hurry & Fridkin, 2018; Schwartz, 2005; D'Agostino & Harmey, 2016; Sirinides, Gray, & May, 2018),

- The Interactive Strategies Approach (Gelzheiser, Scanlon, Vellutino, Hallgren-Flynn, & Schatschneider, 2011; Vellutino & Scanlon, 2002), and
- Responsive Reading Instruction (Mathes et al., 2005).

Common to all of these interventions is the presence of using and applying knowledge from phonics teaching in the reading and writing of connected text. The conclusion that children should "read connected texts daily both with and without constructive feedback" (Foorman et al., 2016, p. 32) fits well with the teaching procedures in Reading Recovery. This conclusion was, in fact, informed in part by the empirical evidence provided by studies conducted in the context of Reading Recovery. In Table 2 below, we provide a summary of key research findings and recommendations, aligning them with Reading Recovery procedures.

Table 2. *Key Findings/Recommendations from Research: Alignment with Reading Recovery Teaching Procedures*

Area	Key Finding/ Recommendation	Reading Recovery Teaching Procedures (Clay, 2016)
How to look at print	**Findings:** - Print knowledge predicts early reading success (Anthony & Lonigan, 2004; National Early Literacy Panel, 2008). - Print skill is a robust predictor of later reading ability (Hammill, 2004). - There is a causal relationship between print knowledge and later literacy skills (Piasta et al., 2012). - Print referencing by teachers supports emergent literacy (Justice & Ezell, 2004). **Recommendations** - Engage in meta-linguistic conversations about print. (Justice & Ezell, 2004)	- Learning about direction (p. 50) - Locating what to attend to (p. 55) - Learning how letters make up words (p. 71) - Engage in talk about letters and words. (p. 73)
What to look for in print: Letters	**Finding** - Alphabet knowledge is the best predictor of later reading ability (Piasta & Wagner, 2010). - Six variables correlate and predict later literacy achievement, including; alphabet knowledge and rapid automatic naming of letters and objects (National Early Literacy Panel, 2008). - Writing supports letter learning (Hindman, Wasik, & Erhart, 2012). **Recommendations** - Use magnetic letters to support letter learning (Foorman et al., 2016). - Use alphabet books focusing on upper and lower case letters (name and sound) (Piasta, Purpura, & Wagner, 2010).	- Foster fast/rapid visual access to print through language. (p. 61) - Involve several modes of learning. (p. 176). - Use writing to support letter learning. (p. 175) - Engage in letter sorts using magnetic letters. (p. 63) - Provide a personal alphabet book with various forms of the letter. (p. 65)
What to look for in print: Words	**Findings** - The ability to read words from memory frees attention and expands readers' knowledge of spelling-sound regularities (Ehri & Rosenthal, 2007) - Decoding difficulties predict later reading difficulties (Snowling & Hulme, 2012).	- Extend word knowledge. (p. 69) - Continue to build a reading vocabulary. (p. 153) - Develop a reading vocabulary. (p. 133) - Develop a writing vocabulary. (p. 89) - Attend to words in isolation. (p. 157)

	Recommendations - Teach regular and irregular high-frequency words so that students can recognize them efficiently (Foorman et al., 2016, p. 28) - Work in isolation and in context of text (Foorman et al., 2016) or in combination (Suggate, 2016)	- Engage in systematic analysis of words in isolation—known, spoken, learning in reading and writing. (p. 156) - Take words apart while reading. (p. 147)
Linking what is seen and heard	**Findings** - Phonological awareness is both a precursor and consequence of reading. (Snowling & Hulme, 1994 - Teaching spelling improves reading (Graham & Hebert, 2010). **Recommendations** - Teach student to manipulate segments of sound in speech starting with syllables and move to phonemes using Elkonin boxes to support instruction. (Foorman et al., 2016).	- Hearing syllables (p. 95) Introduce the phonemic awareness tasks. (p. 96) - Ways of solving words for writing (p. 88) - Use phonemic analysis during story writing (Elkonin boxes) (pp. 98–98) - Attend to spelling boxes using boxes for letters (p. 100)
Apply knowledge gained from phonics teaching in the context of reading and writing continuous texts.	**Findings** - Teaching that contains the reading and writing of connected text is effective. (Burroughs-Lange & Douëtil, 2007, 2008); Hurry & Fridkin, 2018; Schwartz, 2005; D'Agostino & Harmey, 2016; Sirinides, Gray, & May, 2018) **Recommendations** - 'Children should read connected text daily both with and without constructive feedback' (Foorman et al., 2016, p. 31).	- Familiar reading (p. 111) - Running records (Clay, 2013) - Writing messages (p. 82) - New book (p. 112)

In the next section, we highlight two recent studies that have been conducted in the context of Reading Recovery in order to provide evidence of effectiveness. We focus on studies that measure cognitive skills which, theoretically, should be improved by phonics teaching (phonological awareness, decoding, and letter identification). We chose these articles as they provide specific evidence about the areas of learning discussed in this article and are co-authored by the first author of this article.

D'Agostino and Harmey (2016). This is the only meta-analysis of research on Reading Recovery internationally (the previous meta-analysis by D'Agostino and Murphy (2004) considered U.S. studies only). A meta-analysis is a systematic review of the literature in a certain domain that combines all the results from a number of studies, deemed as high-quality, into one result: an effect size. An effect size allows a researcher to provide an estimate of the size of the impact of an intervention or the relative importance of the findings (Fritz, Morris & Richler, 2012). A useful way to interpret effect size is to consider whether the effect is small, medium or large. Furthermore, Coe (2002) suggested that effect size is a helpful statistic to consider what percentage of a comparison group whose results would lie below an average person in the treatment group.

This study (D'Agostino & Harmey, 2016) includes results from all experimental studies of Reading Recovery and any quasi-experiment where baseline equivalence (similarity) across groups (treatment or control) was documented. They found that the overall effect for Reading Recovery was $g = .59$, which is a medium effect. Further analysis, which is of particular relevance to the examination of the efficacy of Reading Recovery, is that the authors separated the results by literacy domain tested (e.g., print knowledge, decoding, phonological awareness) (see Table 3).

Table 3. *Effects of Reading Recovery on Literacy Domains (D'Agostino & Harmey, 2016, p. 37)*

Domain	Effect Size	Interpretation	Percentage of control group who would be below an average person in treatment (Reading Recovery) group (Coe, 2002)
Overall effect	.59*	Medium	73%
Phonological Encoding	.70*	Medium	76%
Phonological Awareness	.58*	Medium	73%
Word Reading	.45*	Small	66%
Decoding	.45*	Small	66%
Letter Identification	.33*	Small	62%

** from D'Agostino & Harmey, 2016, p. 37*

Given that Reading Recovery is provided to the lowest 20% in terms of literacy learning, this analysis demonstrates that, following a series of lessons, children who had received Reading Recovery scored higher than approximately 60% of the control or comparison groups on measures of phonological encoding (hearing and recording sounds in words), phonological awareness, word reading, decoding, and letter identification.

Harmey and Anders (2018). In this study, Harmey and Anders (2018) examined two consecutive years' annual monitoring data for all children taught in Reading Recovery in England who sat a statutory phonics screening check. The phonics screening check (PSC) is a word reading assessment with 20 real words and 20 pseudowords. Pseudowords are said to be a purer test of decoding, given that children cannot use vocabulary knowledge or prior experience with the pseudowords to support word reading.

This check is taken at the end of Year 1 in English schools. Harmey and Anders found that of the children who were yet to have Reading Recovery, only 19% passed the PSC. This rose to 45% of those who were at a midpoint in their series of lessons, whereas 75% who had completed Reading Recovery passed the PSC. This is almost equivalent to the national average

of 82% who complete the check successfully (Department for Education, 2018). These results are important, not only for Reading Recovery teachers in England, but also for colleagues in South Australia where the PSC has recently been validated for use as a screening tool (Hordacre, Moretti, & Spoehr, 2017) and in other educational contexts given its compatibility with other screening instruments used internationally.

Sharing Understandings About the Teaching of Phonics: Implementation Issues

We began this paper by considering briefly some of the issues related to what phonics is and the best ways to teach it. We then considered synergies between recent research on phonics teaching and Reading Recovery, as well as research conducted in the context of Reading Recovery. Acknowledging the importance of school-wide shared understandings, values and beliefs to support high levels of school-wide commitment and fidelity of implementation (May et al. (2016), we conclude by offering some reflections that can be used to inform professional conversations to build shared understandings of Reading Recovery principles, followed by some questions to consider when liaising with classroom colleagues.

Children identified for Reading Recovery have already experienced a classroom phonics programme and now require a different response.

One of the key assumptions of Reading Recovery is that schools in which the intervention is implemented are providing a "sound curriculum for early literacy learning" (Clay, 2016, p. 9). Therefore, children who are served by Reading Recovery will have experienced phonics teaching in the classroom. Given that Reading Recovery is implemented across the world, we know that despite different approaches to literacy teaching and learning in different countries there remains a cohort of children who, for whatever reason, still have difficulties learning to read and write after good classroom teaching, including phonics.

When discussing the efficacy of the teaching of phonics, we argued that the discussion must move beyond "what works" to "what works in which circumstances and for whom" (Pawson & Tilley, 1997, p. 2). There is a profound difference between these two questions:

- What phonics teaching works in classrooms where lessons are conducted in whole class and/or small groups for children making typical progress in literacy learning?
- What phonics teaching works in an early literacy intervention for children experiencing the most difficulty in literacy learning who have not responded to classroom teaching?

As researchers and practitioners debate phonics teaching and the efficacy of different phonics approaches, the differences between these two questions are often overlooked. In Reading Recovery, teachers work with children experiencing literacy difficulties who have already experienced classroom teaching, not children at average levels of literacy attainment in a classroom setting. Supportive of the importance of this distinction, The National Reading Panel Report's seminal report, whilst providing clear guidance that systematic phonics is a key tenet of effective classroom teaching, also concluded that systematic phonics "did not help children labelled 'low achieving' poor readers" (in Bowers, 2020, np). We suggest that any discussion regarding phonics and Reading Recovery must consider the population for whom the intervention is intended and their previous learning history.

Reading Recovery professionals need to talk about the teaching of letter-sound relationships in Reading Recovery in ways that are accessible to classroom colleagues.

There is a danger in talking about teaching of the alphabetic code in Reading Recovery as "incidental" or "only when needed" as it may be understood as disorganised or lacking in rigour. Suggesting that Reading Recovery teachers do not think carefully about how a child

uses letter-sound relationships in reading and writing contexts is not accurate. Children are not taught in an ad hoc manner, provided with support for using letter-sound relationships only at the point of error. "Systematic" isn't a word commonly used to talk about a Reading Recovery teacher's decisions to support, for example, the expansion of letter knowledge; we suggest that it would be helpful to do so. Reading Recovery teachers plan methodically for the interrelated learning involved in letter identification and letter knowledge, including explicit and systematic teaching of letter-sound relationships; those associated with single letters (/k/ with the letters *c* and *k*, for example), as well as with groups of letters (*igh*, *ou* and *oo*, for example). This learning happens across the lesson, in both isolation and in text reading and writing.

It cannot be that there is only one effective plan for teaching letter identification and letter knowledge, since programmes evaluated as "systematic" have differing teaching sequences (for example, Read Write Inc, Jolly Phonics, Sound Discovery, Wilson Fundations). These schemes are evaluated as systematic because they move from simple letter-to-sound associations to more complex. They also provide a teaching sequence that allows children to start applying letter knowledge to make words very quickly, giving attention to how frequently the graphemes appear in print and spoken language. We argue that the approach in Reading Recovery is also systematic. In classroom programmes, being systematic is implementing what is considered to be the optimum teaching sequence for all children whatever their existing knowledge, language background, and stage of directional attention. In Reading Recovery, being systematic means observing closely in order to design a teaching sequence that makes optimum use of what each unique learner brings to the task and assessment evidence of previous experience of the alphabetic code. Part of being systematic means teachers ensure

that existing and new letter knowledge is applied within the wider context of the child's literacy processing. This is a stated focus for Reading Recovery lessons.

Clay signals the importance of systematically adapting to each pupil. For example, as more similar letters are introduced, teachers are asked to "[o]bserve carefully as you make these changes" (Clay, 2016, p. 64). Clay's background in development psychology convinced her that repeated structured observations in an authentic context to document knowledge and skills was needed to provide reliable information to inform teaching. This systematic observation allows the teacher to consider the efficacy of her instruction and recalibrate responsively.

A Reading Recovery lesson is full of opportunities to observe and create a systematic response and systematically test hypotheses. One example, the running record, provides insight into how a child brings together sources of information and how the alphabetic code is used as part of that problem solving. This information is used to analyse which letters are well known and can provide a supportive context to introduce new or less well-known letters. Analysing running records also involves considering how a child problem solves in order to consider how effectively and automatically words are synthesised from left to right. This underpins systematic planning for opportunities to learn about constructing words and taking words apart. In the same way that classroom programmes are designed for application of knowledge, so the aim personalising instruction is for the child to learn about how words work and be able to use this awareness whilst reading and writing.

Beliefs about literacy learning in general influence how the term "phonics" is conceptualized and used.

For some, literacy learning is understood as a simple task: skills and items of knowledge added one by one; each letter learned representing the same perceptual and cognitive task to each and every learner; progress measured solely by scores. At some future point, it is thought, when print information can be accessed fast and fluently, comprehension is achieved. If this were a satisfactory description of what happens as children learn to read, then phonics might be seen as having a dominant, if not exclusive role in early teaching interactions. Proponents of this view might interpret the absence of the word "phonics" in the theoretical base for Reading Recovery as a serious deficit, one that causes concern over the quality of instruction provided.

However, Clay proposed a different view of learning — one where problem solving as well as correct responding contribute to progress. She called this "a 'transformation' model of progress" (Clay, 2001, p. 50), where it is the interactivity between cognition and perception that creates progress. The drawing together of sources of information and the decision making that occurs, both consciously and subconsciously, is referred to as *literacy processing* and use running records to look for evidence of change as simple processing become increasingly speeded and sophisticated.

In a constructive view of literacy progress, encounters with new and novel ways of using the alphabetic code in meaningful contexts strengthen the processing system, not weaken it (Clay, 2016). That is not to say that "phonic knowledge" is not fundamental. Knowledge of the alphabetic code is of prime importance and needs to be sufficiently fluent and flexible that it can be integrated with multiple sources of information: meaning, syntax, print, and language (Bodman & Smith, 2013). Reading Recovery lessons offer many opportunities for phonic

knowledge to be learned and applied, but there is so much more to developing fast and fluent use of the alphabetic code. Without some understanding of literacy learning as *transformation*, how Reading Recovery procedures give thorough attention to gaining and applying phonic knowledge may be hard to see.

So, how can Reading Recovery practitioners build collective and school-wide understanding of the role of phonics in learning to read and how it is used to support those experiencing the most difficulty in literacy learning? The following questions aim to bring to the fore the importance of considering the classroom context when talking about learning letters and sounds with classroom colleagues.

- What sorts of phonics instruction have children received in school before they begin Reading Recovery? How will that influence the vocabulary you use when discussing progress?
- Do classroom curricula suggest additive or transformation models of progress? What challenges might that create?
- What patterns of strengths and difficulties do you notice as you assess children for inclusion in Reading Recovery? What are the implications for Reading Recovery lessons and for liaison with school literacy teams?
- How and when do you communicate information about how the children you teach link what is seen and what is heard? Might conversations about how a child uses letters and sounds during the series of lessons and when a child exits Reading Recovery support ongoing progress and the transition during discontinuing?

- Is your teaching of letter-sound relationships rigorous and systematic? How do your observations and recordkeeping provide the information needed without needing to repeatedly check up on what is known?
- How do you use running records to plan systematic teaching of letter-sound relationships? Do you record not only the words you went back to work on, but your observations of how the child responded to this teaching?

Conclusion

The debate over how best to teach reading is not a new one. As Castles, Rastle, and Nation (2018) commented, this has continued for the past 200 years and, no doubt, will continue as educators seek to support all children to become confident readers. Within that debate exists many misunderstandings about what phonics is and what the research evidence suggests about effective teaching. Professional conversations must revolve around facts, which we hope we have provided in this article. They also need to consider the particular needs of those who are struggling to become literate even after good classroom teaching.

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