INTRODUCTION

Reading Recovery as an Epistemic Community

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ABSTRACT

This introduction to the special issue on Reading Recovery situates the enterprise in a broader educational reform context that has placed a priority on developing and fielding large-scale, systemic interventions that support ambitious instructional practice and student outcomes. Within this context, Reading Recovery is examined as an evolving, adaptive epistemic community in which tutors, teachers, leaders, coaches, and developers collaborate to produce, use, and refine the practical knowledge needed to support and sustain success among large numbers of struggling readers. Viewing Reading Recovery as an epistemic community provides a framework for more deeply engaging the articles in this special issue, for reflecting on Reading Recovery’s history of success, and for speculating about Reading Recovery’s future in rapidly evolving policy and reform contexts.

Welcome to this special issue on Reading Recovery, which is among the most established, large-scale early reading interventions in the United States. The articles in this special issue provide perspective on scaling and sustaining the Reading Recovery enterprise; on the effectiveness of Reading Recovery; on sustaining effectiveness; and on the circular role of student motivation in Reading Recovery, both as a dependent and mediating variable.

To introduce this special issue, we begin by situating Reading Recovery in the broader educational reform context in which it emerged and operates. Specifically, we examine policy initiatives that have given rise to large-scale, network-based improvement initiatives (including Reading Recovery); assumptions underlying public and philanthropic support for these initiatives (along with practical challenges that call those assumptions into question); and ways in which networks respond to those challenges.

In putting Reading Recovery in context, we argue that among its most distinguishing (and underappreciated) characteristics is that it is structured as an evolving, adaptive epistemic community in which teachers, leaders, coaches, and developers collaborate to produce, use, and refine the practical knowledge needed to support and sustain success among large numbers of struggling readers. That, in turn, provides essential background for understanding and appreciating the subsequent articles in this special issue.

Policy context

Reading Recovery was introduced in the United States in 1984 at The Ohio State University, immediately predating the contemporary standards-based reform movement (Smith & O’Day, 1991). Over almost its entire history, Reading Recovery has operated in a broader educational reform context in
which interacting state and federal policy initiatives have sought to hold public schools accountable for supporting all students in mastering increasingly ambitious academic content at increasingly high standards. Couched in the language of “21st century skills” and “deeper learning,” the most recent iterations of these policy initiatives attempt to press schools to go beyond a narrow focus on basic facts and skills to supporting students in developing capabilities for complex, authentic analysis and problem solving (Pellegrino & Hilton, 2012, p. 1).

These policy initiatives have also focused attention on supporting teachers in developing the knowledge and capabilities needed to enact much more complex, ambitious instruction (Cohen, 2011; Lampert, Boerst, & Graziani, 2011). In contrast to more didactic, rote instruction, reformers envision more ambitious instruction characterized by ongoing, rigorous assessment and diagnosis of students’ capabilities; dynamic design and redesign of instructional tasks; and active adaptation of pedagogical strategies, all while simultaneously managing social dynamics among students. Such instruction is essential not only for addressing the learning needs of individual students but, also, for supporting the development of teachers’ professional knowledge and expertise via processes of “pedagogical reasoning and action” (Shulman, 1987, p. 12).

Accountability pressure for ambitious outcomes has been felt especially acutely in early elementary reading, as early reading success is strongly linked to subsequent academic success in other content areas. In both regular classroom instruction and in supplemental instructional venues (e.g., Title I, ESL, and special education classrooms), the aim is for all students, regardless of background, to go beyond demonstrating proficiency in decoding and fluency to demonstrating capabilities to comprehend, synthesize, and critically analyze complex texts.

**School improvement networks**

Beyond making schools the primary unit of accountability, Reading Recovery emerged and operates in a broader reform context that emphasizes schools as the primary unit of treatment. Indeed, realizing new aims for instruction and student performance requires systemic (rather than targeted) approaches to improvement, in which new designs for learning and teaching are coordinated in coherent ways with complementary designs for (a) the formal and social organization of schools and (b) relationships with family, community, and policy environments.

One approach to systemic school improvement that has enjoyed formidable support is the development of **school improvement networks**. These are networks in which a central, hub organization collaborates with schools and other organizations to develop and field multicomponent designs for addressing schoolwide opportunities, needs, and problems (Peurach & Glazer, 2012).

Networks vary in their goals for improvement and in their scope of intervention, ranging from a focus on specific populations of students (e.g., Reading Recovery) to specific content areas (e.g., Success for All; see Peurach, 2011) to entire schools (e.g., International Baccalaureate Organization, 2015). Despite such differences, a common feature of leading school improvement networks is a core focus on building educational infrastructure to support teachers and school leaders in learning to work differently, more effectively, and in more coordinated ways toward intended outcomes (Cohen, Peurach, Glazer, Gates, & Goldin, 2014).

The Reading Recovery enterprise takes the form of exactly such a network. In the United States, it currently serves over 3,700 schools and 1,200 districts in 42 states. Functioning as the hub of the network, the Reading Recovery Council of North America and the Reading Recovery center at The Ohio State University collaborate to organize and manage the core programs and services used throughout the network, including publications, annual conferences, advocacy, technical assistance, and special institutes. The network also includes 19 Reading Recovery-certified, university-based training centers that provide support and assistance to both schools and the hub.

Reading Recovery is also among a small group of multicomponent programs that support teachers with systemic designs for identifying and addressing the needs of struggling readers. The program features 12 to 20 weeks of one-on-one, 30-min-per-day tutoring sessions focused on such skills as phonemic awareness, phonics, vocabulary, fluency, comprehension, writing, and oral language. Central to
Reading Recovery is teachers using these tutoring sessions to generate the diagnostic information needed to tailor instruction to students’ learning needs. The design of these tutoring sessions is anchored in a uniform framework and well-specified set of practices that rest on a set of theoretical propositions as to how children decode and make meaning from text.

**Assumptions and challenges**

Just as it emerged amidst a press to improve instruction and student outcomes, so, too, has Reading Recovery emerged in a reform context that emphasizes scalable interventions (Schneider & McDonald, 2006). Indeed, public and philanthropic support for school improvement networks hinges on their potential to effect fundamental changes in established practices, capabilities, knowledge, and norms in large numbers of schools.

Anchored in a bureaucratic orientation, these networks are widely assumed to support the top-down dissemination of so-called shrink wrapped, research-based, and research-validated organizational models that can be implemented quickly and effectively off the shelf by large numbers of schools. This view assumes that a knowledge base supporting expert practice can be developed in hub organizations and then quickly diffused to large numbers of schools.

However, research on leading school improvement networks suggests tremendous difficulty managing school improvement networks as top-down, bureaucratic, diffusion-oriented enterprises. Rather, these networks are often fraught with intractable, compounding problems and puzzles that greatly complicate the unilateral, hub-to-school transfer of a highly developed knowledge base supporting expert practice, especially among large numbers of underperforming schools serving large populations of at-risk students (e.g., Cohen et al., 2014; McDonald, Klein, & Riordan, 2009; Peurach, 2011). These are precisely the types of challenges that complicate rapid, straightforward dissemination of any instructional intervention, including Reading Recovery:

- Uncertainties and inevitable inaccuracies in communicating knowledge of complex practice, as well as the difficulty of teachers and leaders learning to enact and understand their work in new ways;
- The tremendous challenge of diagnosing and addressing the varying and often overwhelming academic and nonacademic needs of students, along with inevitable weaknesses, shortcomings, and flaws in guidance for managing this challenge;
- The tremendous challenge of diagnosing and addressing variability in the initial capabilities of teachers and leaders. Many teachers and leaders in weak schools have modest professional knowledge and skill, are inadequately prepared to enact more complex and challenging practices (and to learn from experience), and require intensive support. Others have more developed professional knowledge and skill and, thus, require fundamentally different (but often equally intensive) support as compared to their weaker colleagues;
- Difficulties funding, organizing, staffing, and managing complex hub organizations and affiliated agencies with capabilities for program development, implementation support, core business operations, and more;
- Uncertainties that arise through collaborations with funding agencies and evaluators that establish constraints on management and on strategic decision making; and
- Weaknesses and turbulence in community, policy, and professional environments, chief among them being a broader educational research enterprise that has struggled to produce a useable knowledge base supporting expert instructional practice.

**Learning systems**

Thus, the problem for hubs is not one of quickly diffusing a highly developed organizational model but, instead, of recreating complex capabilities for practice in many new schools. Reading Recovery is designed to do just that.
Central to the design of Reading Recovery is a three-tiered approach involving collaboration among teachers, teacher leaders, and university-based trainers. To become certified, teachers undergo a year-long, practice-oriented, graduate-level course of study that includes theoretical training, practice, and feedback (Bryk, 2009). With ongoing, practice-based support from colleagues and teacher leaders, teachers continue to develop observational skills and a repertoire of interventions tailored to meet the needs of individual students.

However, research on leading school improvement networks suggests that recreating capabilities for practice in many new schools requires more than a comprehensive approach to professional development (Datnow & Park, 2009; Peurach & Glazer, 2012). This research suggests that realizing and sustaining long-term success depends on hubs managing uncertainty and complexity by structuring their enterprises as dynamic, adaptive learning systems in which hubs, schools, and other agencies collaborate over time to:

- Produce knowledge supporting effective practice,
- Recreate capabilities for coordinated, interdependent practice in new sites, and
- Leverage experience in many diverse sites to refine the practical knowledge base over time.

From this perspective, leading school improvement networks appear to play against type. Rather than instruments of bureaucratic control by hubs, leading networks function as contexts in which teachers, tutors, school leaders, instructional coaches, and program developers collaborate to produce, use, and refine practical knowledge.

Among hubs, schools, and other collaborating agencies, two processes appear key to these organizations learning their way through uncertainty and complexity: exploration and exploitation (Peurach & Glazer, 2012). Often associated with local adaptation, exploration can be understood as divergent learning that involves reconsidering premises, addressing local needs and opportunities, and building ownership and agency through search, discovery, and invention. Often associated with fidelity of implementation, exploitation can be understood as convergent learning that involves leveraging established knowledge, selecting from among tested alternatives, and learning and refining through repeated use.

Although reformers have long understood adaptation and fidelity as in tension, researchers have identified large-scale networks in which exploration and exploitation function as synergistic learning strategies supporting evolutionary learning over time (Peurach & Glazer, 2012). The process is one of iteratively recreating tested, base-level operations in schools (exploitation); refining and extending capabilities at the school level in response to local needs and problems (exploration); and identifying, selecting, and exploiting favorable program improvements throughout the network.

**Epistemic communities**

One way to better understand school improvement networks (in general) and Reading Recovery (in particular) as learning systems is to conceptualize them as epistemic communities (Glazer & Peurach, 2015). First introduced by Holzner (1968), the concept of an epistemic community was initially used to examine how occupants of a particular role construct and organize knowledge in a manner that supports common ways of interpreting events and explaining causal relationships.

The epistemic community framework has since been leveraged by organizational theorists to understand the management of knowledge within and across firms (Hakanson, 2007, 2010). As elaborated by Hakanson, high functioning epistemic communities feature an organizational infrastructure consisting of three components, theory, code, and tools, that interact to support the practice, interpretation, communication, and coordination among members of an occupation and across organizational boundaries. As he explains:

> Whether based on the highly tacit knowledge of traditional crafts or on the explicit theories that underlie activities in so-called “science-based” industries, all practice encompasses three fundamental elements: cognitive frames ("theory"), coding schemes and other symbolic means of expression ("code"), and the technology embedded in physical artifacts ("tools"). (Hakanson, 2007, p. 63)
Although similar to community-of-practice models for producing, refining, and using knowledge, the community-of-practice model focuses primarily on social, person-to-person interactions among practitioners working in close proximity (Lave & Wenger, 1991). By contrast, the epistemic community framework focuses on both formal and social mechanisms for managing knowledge, understanding experience, and coordinating practice among professionals locally and in geographically distributed locations.

In that respect, the epistemic community framework is especially useful for understanding Reading Recovery as a learning system: one that goes beyond a comprehensive approach to professional development to engaging teachers, teacher leaders, university-based trainers, and developers as collaborators in an interorganizational, knowledge-producing enterprise that operates not only nationwide but, also, in collaboration with other Reading Recovery networks around the world.

**Theory**

Theory refers to the accepted set of causal relationships that undergird an epistemic community’s problem-solving capacity. Theory, in this context, can entail a scientifically validated set of causal relations. It can also include a set of commonly held understandings, or rules of thumb, about the nature of practice (Glazer & Peurach, 2015; Haas, 1992).

Together, shared understandings about causal relationships among diagnoses and treatments tie together members of epistemic communities and constitute a primary organizing mechanism of professional practice. Supporting the type of exploration central to networks as learning systems, theory serves as a key resource for collaborative problem solving, in that it enables community members to deconstruct and analyze situations that are unfamiliar or are characterized by unexpected results (Patel, Arocha, & Kaufman, 1999). It also situates those experiences in an organizing schema that infuses them with meaning (Hakanson, 2007; Kogut & Zander, 1992). In this way, shared theory creates a common basis for interpreting practice among practitioners who might otherwise arrive at very different conclusions.

Reading Recovery teachers share a common and coherent set of theoretical understandings as to how children learn to read, the nature of the difficulties faced by struggling readers, and the ways in which targeted interventions can strengthen reading skills, all anchored deeply in basic and applied research on early reading (Clay & Cazden, 1990; Pinnell, Lyons, Deford, Bryk, & Seltzer, 1994). These theoretical understandings are supported by a complementary set of ideas regarding how interventions can accelerate the reading of students at risk of falling behind.

The importance of theory in Reading Recovery is not just that it supports expert practice but, also, that it is a central component of an interpretive framework that supports practitioners’ collaborative sense-making, interpretation of experience, and analysis of complex or ambiguous scenarios. Shared theory among Reading Recovery teachers supports common interpretation of student reading and writing performance which, in turn, enables a consistent approach to diagnoses and treatment (Pinnell et al., 1994).

**Code**

Codes are the symbolic means by which community members communicate with each other and their environments. Again, supporting the type of exploration central to networks as learning systems, codes provide visual and written language that supports individuals in explicating tacit understandings, framing their experience, communicating their experiences and observations among each other, and collectively examining and refining understandings drawn from experience (Goodwin, 1994; Latour, 1986).

Code interacts with theory, in that the use of specialized language is what supports an occupation in conceptualizing experience in ways that make it more amenable to (a) diagnosis and treatment and (b) subsequent reflection and ongoing learning. As we have written elsewhere (Glazer & Peurach, 2015), “the interplay between specialized language and shared theory enables organizational members to reflect on and codify experience in ways that enhance performance and build new knowledge” (p. 183).
Reading Recovery entails a highly specified code that supports communication among teachers around problems of practice, such as diagnosing student performance, interpreting assessments, and holding constructive evaluations between trainers and teachers (Bryk, 2009). The most vivid example is the elaborate coding scheme used in conducting an assessment of student reading, which, in the language of Reading Recovery, is referred to as a *running record* (Clay, 2000). The system involves constructing a precise record of a student’s reading performance according to specific dimensions that are salient within the Reading Recovery framework. For example, Reading Recovery includes codes indicating a variety of reading behaviors, such as substituting one word for another, omitting a word, student self-correcting, or requesting assistance from the teacher. It also includes distinct codes for interpretation of the running record that signal, for example, how a student uses cues from syntax, visual information, or background knowledge to make meaning from a text.

The Reading Recovery code, then, takes on meaning in its role within the larger system of theory and tools, not only in support of exploration but also in supporting the exploitation and effective use of established, tested methods and procedures. Neither the theory, code, nor tools would, alone, be sufficient to sustain the degree of consistency of practice and interpretation across schools, states, and countries that characterize the Reading Recovery epistemic community. The theory would be of little value absent tools that enable practice, just as practitioners’ use of the tools would be greatly limited absent capabilities that enable effective use and the theoretical frame that guides interpretation of experience. It is not surprising, then, that evaluations of Reading Recovery have found a high degree of commonality of practice even in those dimensions of practice that rely on discretion and judgment and are not specified in routines or materials (Pinnell et al., 1994).

### Tools

As key resources supporting the exploitation of established, tested practical and theoretical knowledge, tools are artifacts used in practice that increase efficiency, perception, and memory and that aid in the codification, storage, and transmission of articulated knowledge (Håkanson, 2007). Examples include documents, maps, models, heuristics, instruments, and prototypes that are as far-ranging as the expert communities they serve. Tools function as the chief mechanisms in which community members embed and codify essential knowledge of practice and, thus, both retain knowledge in ways independent of individual members of the community and mobilize that knowledge in new sites (Glazer & Peurach, 2015).

Within epistemic communities, tools support the movement of knowledge within and among schools. Once embedded in transferable artifacts, knowledge can cross distances and organizational boundaries with relative ease (Håkanson, 2007; Kogut & Zander, 1992). Further, tools support the coordination of complex work within and among schools, because they make it possible to “chunk, store and communicate technological knowledge” in consistent ways (Håkanson, 2007, p. 75; see also Glazer & Peurach, 2015).

The exploitation of knowledge embedded in tools, in turn, creates the basis for exploration and problem solving. Tools support common experiences among practitioners that facilitate collective reflection and further learning at a level that would be difficult if practice was uncoordinated and idiosyncratic. Further, embedding and codifying practical knowledge in tools functions to make tacit knowledge explicit, thereby exposing personal and parochial theories and assumptions to broader discussion, debate, and verification.

Reading Recovery contains an elaborate set of tools that support and constrain the work of teachers and leaders, and that are common to all members of the network. Some of the key tools include a system of leveled books that allows teachers to match carefully calibrated texts with the specific needs and capabilities of readers; assessment instruments such as the running records template and the observation survey for constructing a diagnostic portrait of a student’s reading needs and capabilities, and chalkboard, magnetic letters, writing books, and other materials that support teachers’ work with students (Bryk, 2009; Schwartz, 2005).
The epistemic community framework sheds light on the importance of the Reading Recovery tools. For example, the tools constrain and coordinate practice in ways that create a degree of commonality among all Reading Recovery teachers, despite their geographic dispersion. This interorganizational coherence and consistency is the hallmark of an epistemic community, and a characteristic that distinguishes interorganizational epistemic communities from local communities of practice.

Additionally, tools generate common experiences among Reading Recovery teachers that, in turn, create opportunities for the development of shared knowledge. For example, one would expect proficient Reading Recovery teachers to construct similar interpretations of student performance and to make adaptations to practice that were governed by like-minded thinking, despite the variety and subtlety that made these components of practice too hard to embody entirely in explicit routines and materials.

Finally, tools and theory are interactive in the Reading Recovery network. The adaptation of tools to particular situations, as well as the interpretation of their impact on students, depend on a combination of theoretical and tacit knowledge that support sense making across the entire Reading Recovery epistemic community. Bryk (2009) put it well in describing the Reading Recovery system as “a common set of pedagogical practices and materials that are conceptually integrated around a working theory of how students learn to read” (p. 18). Stated otherwise, the tools in the Reading Recovery network create the context for a common set of experiences which, in turn, become the grist for formal and informal learning opportunities, collegial interaction, and collective problem solving.

Thus, in the context of joint work and common practice, tools, in combination with theory and codes, support a dynamic interplay between local and global communities of practice, as well as between the tacit and explicit knowledge that underly effective performance. Tacit and explicit knowledge are mutually constitutive. Locally developed tacit insights can potentially be codified and embedded in tools, thereby enabling the spread of new knowledge across the epistemic community. The reverse is also true. As new knowledge is introduced into an epistemic community in the form of new tools, it creates opportunities for generating new tacit capabilities and insights derived from the experience of using the tools in practice.

Overview of the special issue

This special issue continues with a collection of articles that provide additional perspective on the design, implementation, and effects of Reading Recovery. Rodgers (2016) provides a comprehensive review of the design of Reading Recovery, examines features of the design critical to scale and sustainability, and discusses experiences evaluating and improving the design in the context of the federal Investing in Innovation program. D’Agostino and Harmey (2016) conduct a meta-analysis of international research on Reading Recovery, with an average overall effect among the highest reported in the What Works Clearinghouse. At the same time, they also identified variability in effects among literacy domains targeted by Reading Recovery. Bates, D’Agostino, Gambrell, and Xu (2016) examine student motivation in Reading Recovery, including the reciprocal relationship between motivation and achievement in struggling readers. Writing from his perspective as a cofounder of Success for All, Slavin (2016) looks across these pieces to further situate Reading Recovery in the context of contemporary educational reform and policy.

It is important to engage each of these articles on its own terms. At the same time, one can see the entire collection of articles as evidence of the possibility of developing and managing novel types of school improvement networks as learning systems and epistemic communities that can evolve and adapt in positive ways in dynamic and demanding environments.

The perspectives of learning systems and epistemic communities are useful for reflecting on the success, scale, and sustainability of Reading Recovery. Further, they are useful for reflecting on the future of Reading Recovery, and on the strengths on which the network can draw in evolving and adapting in response to new policy initiatives such as the reauthorization of the Elementary and Secondary Education Act (US Department of Education, 2015), the Common Core State Standards movement (Supovitz & Spillane, 2015), and the evidence-based reform movement (Slavin, 2005). Finally, they are useful for
reflecting on commonalities among Reading Recovery and other leading school improvement networks, most notably Success for All, which bears remarkable similarity to Reading Recovery in organizing and managing its network to support continuous, enterprise-wide learning and improvement (Peurach, 2011; Peurach & Glazer, 2012).

Indeed, as summarized by Pinnell et al. (1994), Reading Recovery founder Marie Clay’s “theory of learning to read is based on the idea that children construct cognitive systems to understand the world and language. These cognitive systems develop as ‘self-extending systems’ that generate further learning” (p. 11). So, too, do the teachers, leaders, coaches, and developers of the Reading Recovery network collaborate as an epistemic community to support struggling students in learning to read. Viewed from this perspective, Reading Recovery functions as the self-extending cognitive system through which their understandings and practice evolve in response to students, their own work, and the broader environments in which both are situated.

References


