A Perpetual State of Inquiry: Our Commitment to Continue Marie Clay’s Tradition of Continuous Improvement

Salli Forbes, University of Northern Iowa; Billie Askew, Texas Woman’s University; Jennifer Flight, Canadian Institute of Reading Recovery; and Judy Embry, University of Kentucky

I live in a perpetual state of inquiry, finding new questions to ask, then moving on. I do not have ‘a position’ or a safe haven where what is ‘right’ exists. Pragmatism precludes idealism. I search for questions which need answers. What exists in the real world? And how well do our theories explain what exists? (Clay, 2015, p. 3)

Marie Clay established the example of continuous inquiry, exploration, and research which we are now responsible for perpetuating. As a dynamic intervention, Reading Recovery® is continually informed by research and inquiry. Just as the intervention itself is renewed through inquiry, methods of inquiry are developed and refined as well. Reading Recovery professionals in North America have embarked on a new journey of inquiry through the methods of improvement science (Bryk, 2015). Improvement science is defined as, “the methodology that disciplines inquiries to improve practice. Undergirding it is an epistemology of what we need to know to improve practice and how we may come to know it” (Bryk, Gomez, Grunow, & LeMahieu, 2015).

In this article, Billie Askew shares examples of Marie Clay’s inquiries; Salli Forbes describes the development and features of improvement science; and Judy Embry and Jennifer Flight explain the work that professionals in the Reading Recovery network have undertaken to learn and engage in improvement science for the continuous renewal of Reading Recovery.

Examples of Marie Clay’s Inquiries

Billie Askew, Hub executive sponsor
I am personally reminded of so many examples of Marie Clay’s perpetual state of inquiry. Although her inquiries related to Reading Recovery were revolutionary, her perpetual state of inquiry was a hallmark of her work and her life. Examples in her professional life are noteworthy — as well as some from her personal life.

When given a unique research opportunity to study higher multiple births, Marie became curious about the effects of environment that may show up in children of identical heredity — children who were growing up differently in home experiences which seemed so similar for each child. This was very differ-
ent from the pervasive emphasis on heredity in studies of multiple births. The result was a book that was the richest compilation to date on the documentation of higher multiple births (Clay, 1989). During a 1997 visit to Texas, Marie and I traveled to Galveston to visit with Helen Kirk who had been tracing the lives of multiple births for decades. I marveled as I observed these two women going through archived boxes of data and recalling stories of these children around the world — and catching up with their current lives!

Consider this inquiry: “What are the current points of contact with society for today’s children?” Although Marie knew that development is dependent on the opportunities, pressures, and crises of the particular society in which a young person lives, she found that ‘out-of-school contexts’ were rarely studied. She and a colleague set about collecting information to get a national picture of the interests, activities, perceptions, and behaviors of New Zealand youth on the threshold of adolescent changes — directly from the views of 12-year-olds. The outcome was a comprehensive volume that sensitively documented of higher multiple births. (Clay & Oates, 1984).

In both examples, Marie searched for and found answers to questions. She often deposited books on our desks with a “subtle invitation” to read and find answers to our questions!

Marie’s sense of inquiry permeated her personal life as well. She loved to travel — and inquiry guided every step of the journey. She studied the history of each destination and explored the culture with delight. Even when going to the Broadway show, “Smokey Joe’s Café,” she wanted to know more about the music of the 50s and 60s in the U.S. When we left the theater and asked for her impression, her simple answer was, “I guess you had to be there!” I guess sometimes inquiry does not lead to cultural satisfaction!

But back to Marie Clay’s journey of inquiry that has affected all of us:

I set out to be a problem-solver not a ‘stirrer.’ I admit to a long personal history of saying “What else is possible?” “What if...?” In 1960, I asked “What if we refused to accept that 15% of children will have literacy difficulties? What if the severe difficulty rate were half of one percent?” A crazy question! (Clay, 2007, p. 8)

Consider her question that leads us directly to our current commitment to engage in improvement science work:

How can a program like Reading Recovery prepare itself to change as required (a) to adapt to conditions in other education systems and (b) to take aboard new theoretical insights as they emerge in the literature, so that “black holes” in current rationales for aspects of the program can be filled by new information after it has been tried and tested on the population for which Reading Recovery was designed? (Clay, 1994, p. 136)

Marie realized that new learning should lead to change, but note her caution in the quote above — after it has been tried and tested in the population for which Reading Recovery was designed.

The Promise of Improvement Science

Salli Forbes, Hub director

The field of improvement science, developed over the past century, focuses on an organization’s continuous improvement (Bryk et al., 2015). The tools and methods of improvement science have been used in agriculture, manufacturing, and service industries for many decades to improve results. In the past two decades, the Institute of Healthcare Improvement (IHI), a nonprofit organization, has used improvement science to improve healthcare outcomes.

Researchers at the Carnegie Foundation for the Advancement of Teaching, led by Director Anthony (Tony) Bryk, began investigating improvement science as a possible approach to reducing variation in student achievement in U.S. schools. They studied Deming’s work with businesses to create continuously improving outcomes, what Deming termed a System of Profound Knowledge (LeMahieu, Grunow, Baker, Nordstrom, & Gomez, 2017). Profound knowledge necessitates “system thinking” to recognize the system’s components and processes and to integrate these “so they work together as a whole to achieve a shared aim” (LeMahieu et al., 2017, p. 7). The application

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in education is the development of a systems map, which identifies the processes provided by each part of the organization and how those separate processes lead to a common aim. Initially, in identifying the processes/parts of the current system, problems in the system are also revealed. The problems which contribute the most to unwanted variation in results or unwanted outcomes can be identified and addressed.

The Reading Recovery network is a very complex system, comprised of individuals who work across a variety of organizations, roles and responsibilities. In applying improvement science methods to Reading Recovery, it is essential to reveal the current system and any problems that occur in the processes of the system. Only then can we identify the causes of those problems within the system. This does not mean changing the organizations within the system or network but improving how they function and interact with each other to improve results.

The Carnegie team studied the IHI work with healthcare. They found that the IHI’s Model for Improvement was a good fit for improvement work in education. This is a model that can be used to address the high-leverage problems that have been identified. That model involves responding to three questions:

1. What is the specific problem I am trying to solve?
2. What change might I introduce and why?
3. How will I know whether the change is actually an improvement? (Bryk et al., 2015, p. 9)

Like the system itself, identifying problems within the system is complex. This requires a clear definition of goals and the processes that contribute to these goals. The second question calls for proposing possible changes that would address the problem and lead to better results. Each change idea will be trialed by a small part of the organization before it is scaled up, so that it can be determined if the change idea is effective. Before the change idea can be trialed, a method of measuring the results needs to be determined, so that it will be clear whether the change is effective.

The trials are done within learning communities that are connected through the methods of improvement science, referred to as networked improvement communities (NICs). The change idea is trialed in a small number of these communities and the results are determined through clearly identified measures. If the change idea produces a positive result it can be trialed in more of the communities. If there is again a positive result, this process can be repeated several times while each time scaling up the number of communities trialing the idea until it is at full scale. If there is some promise of a positive result but an adjustment is needed, then the change idea can be revised and re-trialed with a small number of communities again. If the change idea does not produce positive change toward the stated aim, then it is discarded. In all three of these possibilities, the results are helpful because they advance the knowledge of the networked communities (and related variation) about the work, for whom, and under what conditions there are positive changes.

The complexity of the network of Reading Recovery can be viewed as an advantage, since the many component groups have the potential to become NICs. As the Reading Recovery community embarks on our journey with improvement science, it seems that we have a path for continuing Marie Clay’s state of inquiry by unleashing the power of NICs that are searching for specific problems in the network, possible change ideas, and clear measurable results of implementing the change ideas.

### Reading Recovery’s Experience with Improvement Science

**Judy Embry, North American Trainers Group president**

In July of 2016, during the ninth Reading Recovery International Institute in Vancouver, Canada, a group of international trainers led by Dr. Robert Schwartz began a study of the book *Learning to Improve: How America’s schools can get better at getting better* (Bryk et al., 2015). These trainers became increasingly interested in Tony Bryk’s work on applying improvement science to education. As a result, the North American Trainers Group (NATG) invited Tony, as president of the Carnegie Foundation, to meet with them in March 2017.

The trainers’ discussion with Tony at that meeting focused on two areas for improvement, both of equal importance, which emerged as priorities related to the future of Reading Recovery:

1. the variation in student outcomes (and related variation including fidelity to standards, instructional strength, and implementation) as identified in the report from the Consortium for Policy Research in Education...
(CPRE) that detailed outcomes of the Investing in Innovations (i3) grant (May, Sirinides, Gray, & Goldsworthy, 2016), and
2. the consistent decline in Reading Recovery implementations in North America.

As a result of the discussion, the trainers were impressed with the promise that improvement science offered to help in identifying root causes of these two problems and identifying ways to address them.

At the fall meeting in 2017, NATG made a commitment to embrace the approach of the Carnegie Foundation to improvement science within networked communities; to learn not just what works, but rather what works for whom and under what set of conditions. In the spring of 2018, NATG began raising funds to support Phase One work with Carnegie. Through a collaborative effort involving NATG, university training centers, The Canadian Institute of Reading Recovery (CIRR), the Reading Recovery Council of North America (RRCNA), the Southeast Reading Recovery Conference, and several individuals, funding was secured to learn about improvement science.

A plan for Phase One of this work was developed with Carnegie researchers, coaches, and staff which involved designing learning opportunities for the Reading Recovery group and identifying participants who would represent the many roles involved in or supportive of Reading Recovery.

Joining together in Stanford to begin learning from the Carnegie experts were 49 participants from across North America: trainers, RRCNA board members, teacher leaders, site coordinators, superintendents, university researchers, a university training center dean, the RRCNA executive director, and the director of the International Data Evaluation Center (IDEC). All participants brought their own perspectives related to what is and what is not working in Reading Recovery. The Carnegie coaches supported us in sharing perspectives, voicing concerns, using new inquiry tools, and advancing towards a common aim.

The participants were divided into two groups to correspond with the two identified goals: reducing variation in results (VIR) and growing...
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and sustaining our work (GSOW). Evident from the beginning of the work was the critical nature of fostering a social learning community that has agency to exercise their knowledge and engage in the work to improve. A social learning online platform, the Networked Improvement Learning and Support (NILS), provided an online opportunity for participant communication. NILS was an important communication tool for commenting on ideas, asking questions, and sharing inquiry findings — keeping participants connected before, during, and after in-person meetings.

Phase One work included two in-person workshops called Networked Improvement Meetings (NIMs) on the Carnegie campus, with presentations, specific activities, and work sessions planned, presented, and supported by Tony Bryk and several members of the Carnegie team. There were also videoconference informational meetings and specific assignments that participants completed before and between the workshops. All participants were responsible to engage in pre-work, in-person work, and activity periods between in-person meetings.

Prior to our first in-person (NIM 1), each participant was assigned a task to either (a) prepare and post a narrative of their prediction of the future of Reading Recovery in the next 3 years, or (b) prepare presentations using existing data to illustrate both the issue of variation in results and current challenges related to growing and sustaining the work. These tasks were designed to help participants see the system, the processes that define the system, and problems within the system. From these narratives, patterns emerged about what might be responsible for the success of Reading Recovery and what might be interfering with the processes.

During NIM 1, Tony and the Carnegie team helped identify reasons that might contribute to variation in results and the Reading Recovery decline. Later, the groups were challenged to identify specific problems and ask ‘why’ questions. To assist in pulling together the ideas, Tony asked the groups to think about the future of Reading Recovery. He challenged us to use the analogy of a tree and consider what would be needed in order to move Reading Recovery from a limb to the trunk, with the image of the trunk as the necessary or main part of the tree. The outcome of this activity was to identify five main tree trunk ideas:

1. to vitalize a continuous learning research and development network studying variability in order to reliably advance quality standard outcomes,
2. to rethink the organization within and among the university training centers,
3. to expand professional development for a range of stakeholders,
4. to develop effective cost-efficient integrated models to support system leaders and schools, and
5. to create a clear message of Reading Recovery as a coherent system.

During the activity period between NIM 1 and NIM 2, participants were encouraged to conduct studies to learn more about one of the problems that had been identified during NIM 1. Inquiries included surveys of stakeholders, in-depth analysis of teachers’ complete records of Reading Recovery students’ series of lessons, analysis of IDEC data to identify groups of students with particular patterns of entry scores, analysis of data collected from the first few weeks of Reading Recovery students’ instruction, and a study of teacher leaders’ and teachers’ identification of the Reading Recovery schools they support within the four implementation schemas described in the CPRE report (May et al., 2016).

During NIM 2, Tony and the Carnegie team led the group in learning how to create specific aim statements, identify improvement hypotheses, and test those hypotheses (change ideas). As the participants left the November meeting, they had a basic understanding of the tools/processes of improvement science and were enthusiastic about moving forward into Phase Two of the work. The work in Phase One led to a deeper understanding of root causes of problems within the Reading Recovery organization. The group realized the importance of networking. They had fostered a social learning community by supporting innovations, seeing patterns, accelerating knowledge acquisition, and working in a safe environment with their colleagues. As Tony said to the participants in Phase One, “Putting a face on a problem, especially a child’s face, often builds a will to solve it.”
Reading Recovery’s Current Focus on Continuous Improvement

Jennifer Flight, Hub trainer representative

Preparing for Phase Two
To sustain and continue the work that was begun in Phase One, a network leadership group or Hub needed to be formed. In January and February of 2019, there was a nomination and selection process with consideration given to selecting members from diverse regional, institutional, and instructional settings. Bryk et al. (2015), describe a network Hub as a core group formed either as a single organization or distributed across network members that carry out critical functions necessary for the support and effective operations of a networked improvement community. These functions include, but are not limited to improvement science expertise, analytics, knowledge management, convenings, communications, and technological support. (p. 196)

In the spring of 2019, Hub members worked with Sharon Greenberg, an improvement science consultant associated with the Carnegie Foundation. Sharon coached Hub members in bi-weekly meetings and activity periods to build on the work begun in Phase One with the larger Reading Recovery network and NATG. Through videoconference meetings, the Hub worked to build community; deepen understandings of the problems; further develop the aim statement; and, map out a working theory of improvement focused on reducing variation in results.

By the end of the 8-week period, the Hub had reevaluated the problems identified during the Phase One work; developed and refined the aim statement; and, identified the factors that contribute to reaching the aim. The Hub members were learning a process as they were using improvement science tools. The products developed represented the Hub members’ best thinking at that time. They were definitely incomplete and tentative but foundational for further development in Phase Two. Members of the Hub anticipated that learning from this effort would inform and accelerate the work on the second problem of Growing and Sustaining Our Work, and perhaps the two problems might be addressed with the same aim statement.

Beginning the work of Phase Two
Chad Lochmiller is the improvement science coach for the Hub’s work in Phase Two. Chad is a faculty member at Indiana University and has had special training from Carnegie to lead improvement science projects. He currently coaches several school districts as they implement improvement science. His graduate assistant, Jennifer Karnopp, supports the learning and work of the Hub, increasing the effectiveness and efficiency of that work.

Chad is working with the Hub during the 2019–2020 academic year with both in-person clinics and regular videoconference meetings. The objective is to move Reading Recovery forward in the pursuit of improvement science as the way of operating within the North American network. The intention is to refine the work the Hub has previously done and begin to test change ideas.
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with some of the networked communities within the Reading Recovery North American organization.

Marie Clay embraced change that was thoughtful and tested, with a focus on evidence and theoretical explanation.

The art in the change process is that the changes should not distort or diminish its payoff and any changes made should be explicitly referred to theories of what is occurring. Compromise, or unthinking adaptations can readily change the impact of the innovation and reduce its capacity to deliver effective results. (Clay, 1994, p. 136)

I want to find evidence to convince me of the need for changes in understanding. (Clay, 2015, p. 3)

Like Marie’s commitment to inquiry, we are embarking on ways to improve an already successful intervention. Let’s ask ourselves her question: “What is possible?” And ask our question: “How can we explore and test ways to improve our work through a focused learning journey?” Through improvement science, that inquiry promises to provide opportunities for Reading Recovery’s continuous renewal.

References


Dr. Billie Askew is professor emeritus at Texas Woman’s University where she served as a trainer and director of the Reading Recovery Center. She is co-editor of Stirring the Waters: The Influence of Marie Clay and Boundless Horizons: Marie Clay’s Search for the Possible in Children’s Literacy. In addition to her work on the Hub, Billie continues to actively support Reading Recovery as a trainer consultant to RRCNA.

Dr. Judy Embry is director of Reading Recovery & Comprehensive Intervention Model at the University of Kentucky. Instrumental in the Carnegie Foundation work since the early stages, she continues to help define and support the work of the Hub as current president of the North American Trainers Group.

About the Authors

Dr. Jennifer Flight is a Reading Recovery trainer at the Canadian Institute of Reading Recovery, Western Region, Winnipeg, Manitoba. She has experience as an early years classroom teacher, and as a Reading Recovery teacher and teacher leader. Recent research interests include using improvement science tools to engage in small tests of change to strengthen learning opportunities for teachers.

Dr. Salli Forbes is professor emeritus at the University of Northern Iowa, where she was the director of the Jacobson Center for Comprehensive Literacy and the Reading Recovery Program until her retirement from the university in June 2019. Currently, she is a Reading Recovery trainer for Saint Mary’s College. She is co-editor of Changing Minds, Changing Schools, Changing Systems: A Comprehensive Literacy Design for School Improvement.

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