

Learning to Learn with Text

The cognitive revolution of the 1970s extended beyond studies of readers making meaning for a particular text to addressing the question: Is it possible to improve a reader's comprehension—for texts that they had not yet read? The significance of this question should not be underestimated. Inherent in asking this question is a challenge to the notion that intelligence is fixed and possibly innate. It raises the possibility that intelligence, or at least some important self-learning processes, could be improved for transfer to future learning situations. But what would it take? Was it tied to teaching certain related elements such as vocabulary? Did it entail developing background knowledge? Should we teach students how to follow and connect ideas to infer, evaluate, synthesize, etc.? How might we do so, and how would we judge when we had succeeded? It seemed the real test would be to measure readers' abilities to enlist and apply these strategies across various situations, on their own or independently. Such a standard went beyond improving test scores.

The notion of learning to learn inspired the imagination of many of us, especially those of us focused upon teaching and learning, and shifted our attention to extend beyond studies of comprehension processes. And, these questions arose at a time of significant social and technological developments throughout the world. Socially, there was significant social upheaval with revolutionary developments worldwide. In China, the cultural revolution had ended; China opened up to the U.S. African countries were freeing themselves from their colonial masters. In countries such as Nicaragua, there were major literacy campaigns pursued in the name of liberation. In terms of technology, we saw the development of the personal computer and the space shuttle. And in the area of health, the world was focusing upon addressing HIV/AIDS.

Certainly, in modern times, the nature and role of teaching and learning has been a major focus of several lines of scholarship as theorists and researchers have explored and posited theories of learning and teaching. As we have discussed in previous chapters, studies of reading development often involved correlational studies (often referred to as process-product studies, in which frequencies of teacher behavior and student activity are related to achievement); program evaluations of schools and classrooms; and carefully controlled studies examining variations of teaching procedures (e.g., time on task) and different approaches (e.g., basal readers, language experience approaches) on student achievement and student engagement.

With the emphasis upon learning to learn, the focus shifted to facilitating students' agency and their ability to deploy skills and strategies for themselves. And, while learning scientists had a history of success in improving comprehension with the aid of adjuncts and strategies, the pursuit of sustained, transferable, and independent reading strategies raised the ante significantly. Over time, it became apparent that the research approaches for doing so necessitated studies that enlist a range of methods, which allows for a focus on students' learning over time and across place, and enables the implementation of various measures (i.e., online, post-measures, transfer measures) and detailed qualitative analyses of site-based learning (e.g., teacher-student and student-student interactions). They suggested a need for formative studies in collaboration with teachers and students, exploring ways to support learning to learn to read critically, creatively, strategically and independently.

Even so, what became vexing is that attempts to help students learn to learn proved more elusive as repeated efforts fell short of achieving these goals. Essentially, we could improve comprehension performance with guidance in place, but without scaffolding, students' learning and use of strategies were not readily sustained and transferable.

Shifts

The nature, role and advancement of learning have been major foci of several lines of literacy research. In the 1950s and 1960s, research focused on securing the best method for teaching reading (e.g., what are the attributes of an effective teacher? And how might we enlist adjuncts and use selected study skills—such as note-taking and summarizing—to enhance learning from text?). By the 1970s, it was as if the cognitive turn “took pause.” There was recognized that we were not teaching reading comprehension, and in terms of comprehension development, there was not an easy transition from the early grades to middle grades as the emphasis on reading to learn intensified. Dolores Durkin's (1978) observations of the teaching of reading comprehension instruction in schools (grades 3 through 6) confirmed what many of us suspected: Reading comprehension instruction was lacking in schools. Her observations of reading and social studies in classrooms in different schools across the grades revealed what other studies suggested—namely, that reading comprehension instruction was negligible, and that most teachers instead appeared more intent on assessing reading comprehension than on providing students with explanations and support (see Guszak, 1967). However, while Durkin's (1978) study made it clear that the teaching of reading comprehension was lacking, if not entirely non-existent, it did not clarify what reading comprehension teaching should be, how it should be taught, and when.

In response, there emerged a call for more classroom-based research on teaching and facilitating reading comprehension. We witnessed a major surge in research and development on the teaching of reading comprehension beginning in the 1980s. Reviews of the teaching of reading comprehension confirmed the shortcomings of our teaching practices (e.g., Pearson & Fielding, 1991; Tierney & Cunningham, 1984). They highlighted our shortcomings in terms of helping students develop thoughtful and flexible learning strategies—that is, learning to learn, in accordance with a metacognitive framework advanced by developmental psychologists (see: Baker & Brown 1984; Bransford, 1979; Bransford, Brown, Cocking, 2000, Brown, 1987; Flavell, 1977; and Paris, Wasik, & Turner, 1991).

While the cognitive turn had a seismic impact on theories and models of reading, the research and development on learning to learn had significant influences on teaching and our goals for learning. It shifted pre-existing lines of teacher research and reading to learn research, as well as classroom practices for teaching reading. These influences have also subsequently extended to and connected with cultural and critical pedagogical considerations, postcolonial theorizing, and other developments in research—especially those involved in rethinking some traditions of schooling (e.g., the ways of knowing across schools and societies).

Shifting teacher research

In the first three quarters of the 20th century, studies of teachers were oftentimes rather mechanistic and reductionist correlational studies. Frequencies of teacher behavior and student activity were related to achievement, to program evaluations of schools and classrooms, and to carefully controlled studies examining variations of teaching procedures. In the 1950s, process-product studies, drawing somewhat from Ned Flanders's (1970) work on classroom interactions, dominated the field. These studies tended to look at the relationship between teacher's affective or cognitive behavior—based upon observational analyses—and student performance (as measured by a standardized tests). Those of us who conducted process-product research engaged in extensive observations of classrooms—noting the teacher's as well as the students' behavior every three seconds. We classified teacher behavior within categories such as giving direction, asking questions of different types, responding to students, or offering praise or criticism; at the same time, we classified student behavior as initiated or response, or on- or off- task. These types of studies later extended to a consideration of the correlation of different instructional models (e.g., classroom organizational patterns or instructional regimens) with proxies for effective

learning (such as measures of academic engagement, on-task behaviors, content covered, student engagement and achievement; see Rosenshine & Stevens, 1984).

On the one hand, this research suggested some consistent trends—including a treatment-by-aptitude effect, the power of teacher-directed activities over student independent learning (with regard to academic tasks), the power of small groups over whole class level work upon student engagement, the power of a task orientation, the positive effects of a predictable sequence of activities. These studies also suggested that successful teachers tended to be clear, flexible, and business-like, and inclined to offer praise, ask various questions, and afford students the opportunity to learn with structured comments (Rosenshine & Furst, 1973).

On the other hand, these studies did not closely examine teachers and students in differential and complex ways. They did, as Dunkin and Biddle (1974) suggested, shift to studying the interactions between presage variable (i.e., teacher personality and background), context variable (i.e., class size, pupil background, community, etc.), and processes (i.e., teacher and students in classrooms) and product (i.e., what was learned). But too few studies provided details of the precise nature of the task and teaching practices, and they failed to focus on different populations. From the perspective of constructivism, these early studies were predominately focused upon whether or not the teacher delivered instruction and how the students responded to what they were expected to learn. They did not consider a full range of options in terms of what is taught, why, how, when, and where. Rather, they tended to focus on approaches that were more prescribed than emergent—involving a scope and sequence of skill development in conjunction with an attempt to construct a balanced diet of graded reading experiences. Project orientations were either sidelined or subordinated to such a regimen.

With the rise of constructivism in the 1970s, teacher research shifted. As Roehler and Duffy (1991) indicated, research veered away from a focus on what facts students remembered to examine instead how students were positioned in terms of their own learning. Studies of teaching also went beyond a model of learning tied to “the exercise model” and readers accumulating facts. Lauren Resnick (1981) described the shift as moving from a receptive model to a transformational model of learning—involving conscious control by learners. Accordingly, Resnick (1981) stated, “instruction must be designed not to put knowledge into learners’ heads, but to put learners in positions that allow them to construct well-structured knowledge” (p. 660). Lee Shulman (1986) similarly suggested that the research orientation should shift from treating students as memory machines to

acknowledging their role as active meaning makers: “the consequences of teaching can only be understood as a function of what the teaching stimulates the learner to do with the material” (p. 17). Thus, researchers who studied teaching tried to understand and uncover how teachers might achieve these new aspirations; they shifted to a more comprehensive analysis of teaching, including analyses of planning (e.g., the creation of instructional settings and attendance to material, representations, motivations, participations, direction expectations, activity structures, etc.) and actions (e.g., explanations, modeling, think-alouds, release of responsibility, participation structures, etc.).

Shifting curriculum frameworks

In response to these shifts, reading programs revised their approaches and began touting their alignment with constructivist thinking and classroom practices. Essentially, the core features of most reading programs involved collections of reading material—leveled books containing various stories and informational passages along with activity pages or workbooks that students are expected to read with the teacher’s guidance. Teachers were provided a guide, various checklists, and packages of tests to help them do so. These leveled pupil compendiums of stories and informational text comprised the diet of daily and weekly engagements with reading. The related activities focused on skill development related to the scope and sequence of skills (e.g., word recognition, comprehension, study skills, and literary appreciation) that students were expected to master. Oftentimes students were placed in reading level groups, established according to the level of material that their placement criteria suggested students could read comfortably (defined as approximately 90% oral reading accuracy and 75% comprehension).

Most reading programs had a similar look and feel, but some core programs were organized differently, oftentimes involving a more theme-based approach or other emphases (such as skill mastery). Such differences played out along various dimensions tied to prescribed or emergent philosophies and notions of skill development.¹ Overall, however, they followed similar routines of guided reading, teacher questioning, and related student activities. Leveled passages were introduced one at a time with a mix of teacher-led guided reading and questions (probes). Reading then involved a routine of pre-reading, guided, and

¹ The material for reading programs was also usually influenced by government guidelines, which prescribed the curriculum in terms of its topic/issue selection, the readability of the reading materials, and the scope and sequence of the skills to be taught.

post-reading, followed by related activities or those related to the students' own purpose or needs. After reading the selection, there often followed a mix of discussion, which was always guided by teacher questioning, and practice of selected skills (increasingly based on specific skill tests). The original and still most common lesson framework was one or another variation of the Directed Reading Lesson originated by Betts (1946). It involved a predictable sequence as students read sections of their graded readers or assigned texts. It moved from pre-reading (with teachers setting purposes and creating student interest, along with previewing some vocabulary) to guided reading and ended with post-reading (which consisted of discussion and skill development). Another 1970s variant of this sequence integrated writing and other follow-up engagements. Some other frameworks include the Directed Reading-Thinking Activity, developed by Russell Stauffer (1969); Guided Reading (an offshoot to Reading Recovery), developed by Irene Fountas and Gay Su Pinnell (1996); and Four Blocks, developed by Pat Cunningham and her colleagues (Cunningham, Hall, Defee, 1998).

In the early 1980s, the realignment of reading programs led to further tinkering to acknowledge the important role of readers' background knowledge. This acknowledgement led to a deliberate attempt to build from what students already knew, especially in pre-teaching, to enhance their understandings during guided and post-reading.

In terms of skill development, skill activities were also revamped—with more focused skill development tied to teacher modeling. Whereas the traditional lesson frameworks required the teacher to set the stage for reading (as part of pre-reading activities), lessons began to shift toward a model of engaging students by positioning them as meaning makers. Students were asked to set their own purposes and ask their own questions. Further, while traditional guided reading asked students to read portions of the text in response to the teachers' questions (to check their comprehension), guided reading became more student-driven—intended to draw from the students' ideas and predictions in a fashion that respected the students' developing understandings. Lastly, post-reading activities became sites for extending students' reading, strategy development, and self-assessment. These shifts are portrayed in Table 1.

Table 1.

Lesson Frameworks: Pre and Post Cognitive Turn and Learning to Learn

APPROACH—Pre-Cognitive

Pre-reading activities

- Creating interest
- Introducing key concepts
- Teach Vocabulary
- Set purposes

Guided reading

- Teacher-directed reading (with questions)

Post-reading

- Discussion of selection
- Related skill development
- Checks

Supplementary reading

REVISED APPROACH—Post-Cognitive

Pre-reading

- Building bridges from what children know

Reading

- Guided reading, including predicting and self-questioning
- Respecting students meaning, building on their responses (visualizing and connecting ideas)
- Altered approaches to questioning
- Student answers will vary

Post-reading

- Strategy development (reader- and text-based strategies, in context)

Shifting emphases: Learning from text to learning to learn

It was generally recognized that these changes in the routine and sequence of lesson frameworks were not enough nor would a shift to study skills or adjuncts to learning suffice. Reading educators began asking what we might do beyond adjuncts, study skills, increased reading fluency and a diet of reading selections with questions to improve reading comprehension. Though the research on reading to learn was quite impressive, it fell short in terms of addressing the shift to metacognitive abilities and learning to learn.

More specifically, most studies of reading comprehension were focused upon learning from text—examining the mathemagenic or learning enhancement function of adjuncts and the use and benefits of the readers enlistment of study style skills. This work was often funded by the military, given their vested interests in careful responses to text. In terms of adjuncts, the nature and role of aids—such as questions, pictures, study guides, previews, and

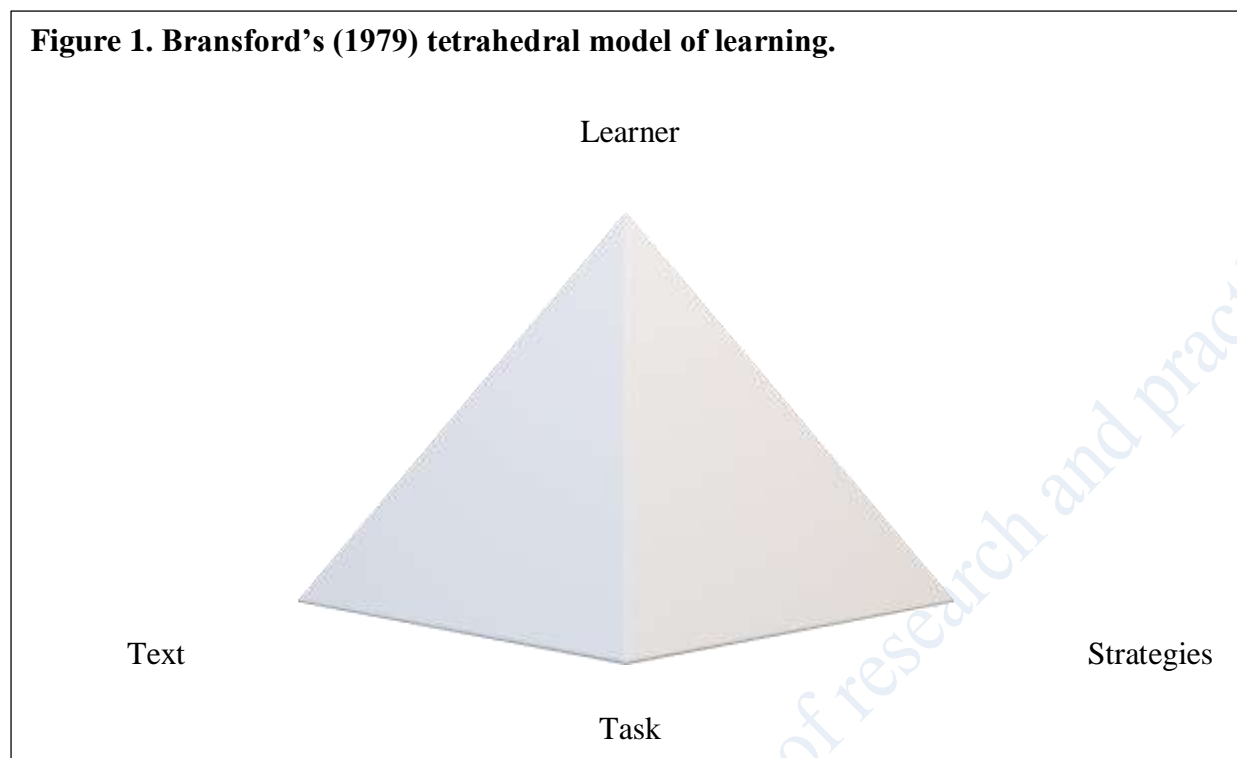
objectives before, during, and after reading—in relation to understanding were examined. In terms of studying, the role of note-taking, outlining, visualizing, and summarizing were examined. Among the most influential work during this period was the work of David Ausubel (1968) on advanced organizers and Harold Herber's (1970) work on reading in the content areas (e.g., with story previews, study guides, and structural overviews).² Their work provided consistent support for the power of adjuncts etc. on enhancing memory for text. However, if the hope was to advance the reader's independent reading strategies for other texts, results were unlikely to be achieved or even pursued. Repeatedly, efforts fell short of having readers develop flexible and deft use of strategies.

As the field focused upon research intent on teaching strategies where the gold standard was independent reading (i.e., not prompted or guided), the pursuit became more demanding. Predictably, researchers scurried to find the means of supporting readers to be independent learners—equipped with a repertoire of strategies applicable across different texts and situations. Befitting the tetrahedral model formulated by Bransford (1979; see Figure 1), the following agenda emerged:

- Can readers formulate or assess the nature of the task and its needs or demands?
- Can they formulate, implement, and assess ways to proceed with text(s) for themselves, and do so in a fashion that is flexible and adaptable?
- What strategies do they need to do so?
- How do we develop these strategies?
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² What became apparent from this past work was the power of design—namely, that the merits of any adjunct, from questions to illustrations, was related to its design or relation to the students, their tasks, and the material that they were to learn. Carefully customized material was likely to be better than generic adjuncts. Just as correlational studies of teachers had revealed, a treatment-aptitude interaction was common—benefitting lower performing students more than higher performing students.

Figure 1. Bransford's (1979) tetrahedral model of learning.



Formulating the strategies—and the approach

These developments set many of us on a new course. Based upon what we knew about meaning making and learning to learn, we asked:

- What are the strategies that readers might employ?
- When, and how?
- How might we support them in learning to employ these strategies deftly, across situations and for themselves?

As researchers pursued these questions, it was apparent that the skills specified for learning to read—especially reading comprehension—were piecemeal and tied to a notion of mastery that did not match what we imagined readers needed to do. Our view was that readers needed to exercise more nimble control over their skill and strategy repertoire—to deftly select clusters of skills and strategies for meaning making. These clusters of skills would be tied to their own analyses of their meaning making needs as they engaged in the project of reading.

In their quest to develop such clusters, some researchers provided visual metaphors or heuristics. While Scott Paris and his colleagues developed a series of extended metaphors for reading (e.g., being a detective), other researchers devised heuristics (Paris et al. 1983; 1984, 1986; 1991). For example, Donna Ogle (1986) developed KWL (i.e., what do you know, what do you want to learn, and what did you learn), Taffy Raphael (1982) developed a task

analysis procedure for readers called the Question Answer Relationship (QAR). Annemarie Palincsar (Palincsar & Brown, 1983) created an intervention that balanced facilitating comprehension with promoting active student control over strategies. Other researchers extended the strategy development already in place.

In accordance with a text-based approach, a number of researchers focused on helping readers enlist text structural prompts to support the reading of complex narratives and informational texts. They employed analyses of narrative and expository text features by Stein and Trabasso (see Mandl, Stein, & Trabasso, 1984; Stein & Trabasso, 1981), text structure by Meyer (Meyer, Brandt, & Bluth, 1980) and Bartlett (1932/1995), and the use of flowcharts by Dansereau (1979), mapping (see Armbruster & Anderson, 1980), or more author-based analyses by James Mosenthal (1984).

Undergirding these developments was a new conceptualization of reader-based and text-based strategies. Again, these compilations represented clusters of skills rather than skills isolated from one another. Over time, the list of strategy clusters also expanded to include self-assessment strategies and collaborative strategies (i.e., beyond those “inside the head” analyses). Table 2 includes a partial listing.

Table 2. Skill Clusters

<p>Reader Based</p> <ul style="list-style-type: none"> • Selecting/Judging sources • Questioning • Visualizing • Connecting ideas • Predicting • Cross-checking • Rethinking 	<p>Text based</p> <ul style="list-style-type: none"> • Flowcharting • Story mapping • Outlining • Networking
<p>Collaborative</p> <ul style="list-style-type: none"> • Seeking support • Giving support • Planning together • Networking • Sharing 	<p>Monitoring</p> <ul style="list-style-type: none"> • Formulating • Assessing process, progress and outcomes • Implementing • Reviewing • Revising • Considering and applying criteria • Judging

The ideal envisioned was a reader who would selectively and independently enlist appropriate strategies and skills (i.e., planning, researching, inquiring, formulating, contemplating, and monitoring) befitting their reading goals and activities (or what might be

considered their reading project). This reader would be able to access these strategies and skills deftly and seamlessly—just as a pull-down menu provides support for digitally-based writing, video, and other projects. While we drew upon our studies of meaning making to identify the strategies, our understanding of how to teach them was still limited—especially if we wanted students to use strategies effectively and independently across a range of situations. Consequently, several new frameworks emerged, but their results appeared less than convincing in terms of achieving this goal.

These efforts represented a major shift in classroom-based research; nevertheless, despite carefully crafted approaches, most of the results of these efforts were somewhat modest—especially when the goals became the reader’s independent use of strategies and the enhancement of learning across new situations. Researchers were often dismayed that readers did not enlist the strategies unless they were overtly prompted to do so. In other words, if the gold standard extends to independent reading of different material without prompting, then most approaches fell short. When delayed post-test and transfer tasks were used to assess whether students enlisted the strategies taught in other situations, these studies of learning to learn rarely yielded sustained or transferable influences. The studies resulted in advances of what was taught, but questions still remained in terms of the best way to scaffold and support developing independent learners—including how, when, why, and where.

Scaffolding learning to learn

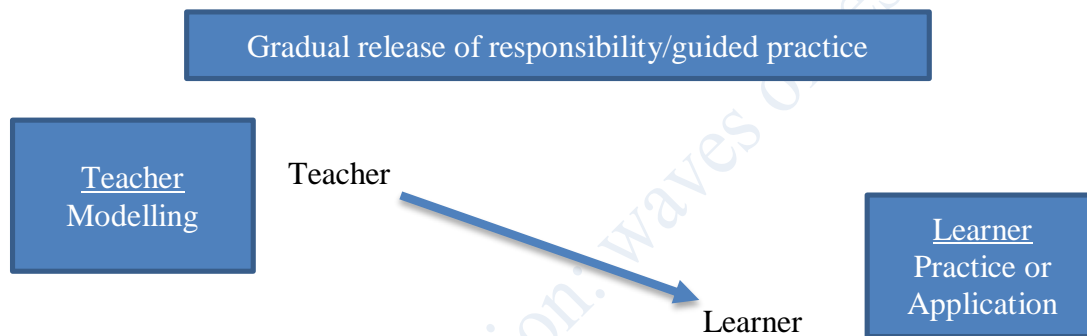
Adopting a broad perspective, in response to the question, “what are the conditions for learning that teachers should create?”, educators have been intrepid in their pursuits of ways to engage students and support their learning to learn or other challenging missions (e.g., such as anti-racism, bullying). Integral to their efforts they have explored various frameworks that might scaffold learning to learn, such as systematic and incidental, direct and indirect teaching, and project-based and strategy-focused approaches. The frameworks addressed different foci in terms of what is read and how it is taught. Plus, the frameworks offered different forms of scaffolds for learning that stretch along a continuum, from student-centered approaches, to teacher-centered, to a combination of the two.

Brian Cambourne and more recently Crouch and Cambourne (2020) suggested as a framework for teachers a list of tenets that are required for learning and that teachers might emulate (Cambourne, 1988, 1999, Crouch & Cambourne, 2020). Cambourne’s tenets include: immersion, demonstration, engagement/experimentation in risk free environments; realistic and informed expectations of development and success, learner-based responsibility and self-

direction, approximation including acceptance of mistakes and attempts, meaningful uses and responsiveness³.

Other approaches advanced teacher modeling, student practice, with a developmental orientation to mastery. For example, Manzo (1969) and Palincsar and Brown (1984) developed what they termed reciprocal teaching, which involves a give and take, or repeated rotation, between teacher modeling and student practice. David and Margaret Gallagher have developed and been refining an influential model they labelled the “Gradual release of responsibility model” (see Figure 2).

Figure 2. Pearson and Gallagher Gradual release of responsibility model



David and his colleagues (Pearson, McVee, & Shanahan, 2019) have recently revisited the Gradual Release Model in a major “revisionist” account of its successes and shortcomings, while also accounting for its spread to other areas of pedagogy besides literacy pedagogy. Among other issues, they accounted for the central role of scaffolding in the model and after reflecting on many misuses of the model, they adopted these rules of thumb for using scaffolds in instruction:

- Fade scaffolding over time
- Vary scaffolding within a lesson
- Vary scaffolding across lessons within a unit
- Vary scaffolding between students

³ Crouch and Cambourne (2020) draw upon their extensive observations of teachers pursuing a culture of learning in classrooms and capitalizing on what they deemed to be students’ “natural” learning prowess. Additionally, they draw upon Johnston’s analyses of discerning guidance by teacher’s choice words (Johnston, 2004) along with examples of complex learning offered (e.g., Howard Gardner analysis of the Suzuki method (Gardner, 1983) and James Gee’s analyses of video gaming (Gee, 2003).

- Scaffolding will inevitably ebb and flow over time, situations, and task demands

Working with Dole and Duffy (Dole, Duffy, & Pearson, 2019), David also accounted for some common misuses of the model, noting these in particular (from the work of Duke & Pearson, in press):

- Neglecting explicit teaching (on the assumption that students will “get it” from just experiencing it.
- Missing the middle (the collaborative stage in which students and teacher share responsibility for enacting a practice)
- The gradual rise of rigidity (insisting on a lock-step sequencing of the stages of pedagogy—and ironically cutting out the very heart of the model, its capacity for adaptability and nimbleness)

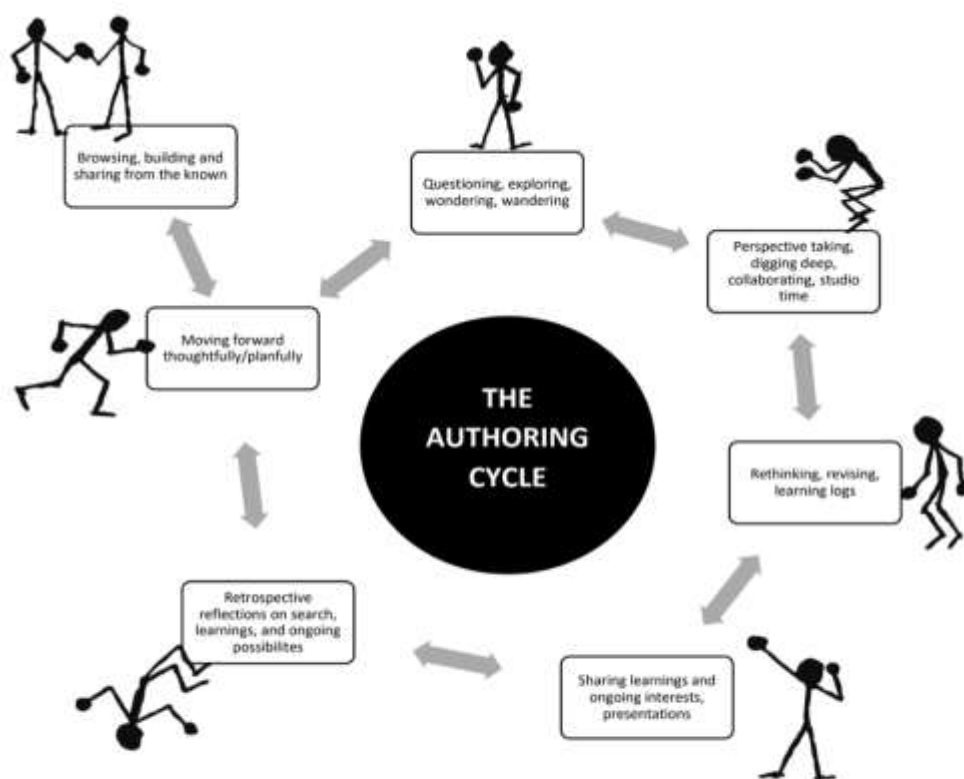
Reflecting on the future of the model, Dole, Duffy, and Pearson speculated its future depended primarily on its adaptable character, which might allow it to morph into new forms and functions:

As new theories of learning and instruction are developed, it is likely that the GRR model will evolve further. In the meantime, it is incumbent upon those who espouse the model to help teachers implement it in their classrooms. The dozens of professional articles, chapters in books, and indeed this book, will help teachers understand the emerging forms of the model, how to implement them, and when and where they are most useful. As long as we all regard it as a nimble and adaptable tool for guiding learning and teaching in our classrooms, the GRR model will retain its lasting legacy in our classrooms, our policy briefs, and our research journals. (p, 260)

In a similar fashion other models have been developed. For example, drawing upon Wittgenstein’s notion of complex knowledge acquisition and his case study approach in medicine, Rand Spiro (Spiro, Collins, Thota, & Feltovich, 2003) argued that a case study orientation was key to flexible adaptive use. Still others focused upon approaches that were integrated with students’ inquiry. For example, Jerome Harste, Cathy Short and Carolyn Burke (Harste, Short and Burke, 1988; Short, Harste, & Burke, 1996) developed the author inquiry cycle, or authoring cycle, in which students are guided in their inquiries as they pursue projects with peers (see Figure 3).

Figure 3.

Adapted from Harste, Short, and Burke's (1988) authoring cycle.



At the core of a number of approaches has been a combination of professional development tied to an orientation to developing readers' discernments of their meaning making in combination with forms of self-monitoring and strategy usage. For example, in the context of discussing some of the tenets undergirding Reading Recovery, Marie Clay (1998) advocated helping students develop self-improving systems involving their enlisting strategies including a form of triangulation—that is, cross-checking their decoding and understandings as they read. Yetta Goodman (1996) similarly developed a form of critical reflection with the advance of Retrospective Miscue Analysis following oral reading.

Yet others have focused extensively on the professional development component together with enlisting an apprenticeship model for students involving a mix of project-based learning and notions of metacognition to address disciplinary learning. For example, Cindy Greenleaf and her colleagues developed the Reading Apprenticeship Framework tied to such

tenets that has been used widely to enhance disciplinary reading—especially in science. As Greenleaf et al. (2011) note:

The Reading Apprenticeship framework centers on metacognitive conversation, involving explicit metacognitive routines, modeling, small-group work, and class discussions that focus, in the case of science instruction, on how to read science and why people read science materials in the ways they do as well as on the science content of what is read in science classes. These discourse routines offer students support to clarify content, discuss the processes they use in reading and problem solving, practice comprehension strategies, respond to and elaborate on content, engage in word-learning strategies, write to learn and to consolidate learning, and make connections to other related texts and topics. (p. 657)

The combination of an apprenticeship approach within a discipline foreshadowed and, in some ways, paralleled shifts to frameworks that were both situated and aligned with socio-cultural-political processes whether it be in disciplinary circumstances such as science or efforts to import approaches to learning aligned with community or real-world practices addressed in the next section.

Lingering questions: Ongoing considerations: Contemplating research on learning to learn for today's world

As we strive for readers who are connoisseurs, our research approach might need to open to a fuller sense of the cognitive, social, political, and cultural elements of life—and how they might factor into a reader's enlistment of insights, learnings, and strategies in ways that are critical, creative, and reflective. Our research might need to understand these worlds and support our readers and their development. To this end, perhaps we should be exploring learning to learn with research approaches that are more formative than predetermined—in the hopes that we can fashion what and how we teach to students' developing needs. Perhaps we need a more recursive research cycle for doing anchored in discerning observations and well-crafted approaches. They should begin and continue with extensive observations of what students can and might do before, in conjunction with, and after reading, and work in support of initiatives directed at advancing readers' awareness and refinement of their engagements, goals and outcomes, understandings, and potential applications and extensions. Observations should keep in mind member-checking on readers' changing and ongoing multifaceted

developments. Perhaps as we proceed, we should examine the situatedness of such pursuits, especially the relevance to a particular group. It might be a matter of engaging with reading within fields of study—as demonstrated in the “Seeds of Science/Roots of Reading” approach, which engages students in reading as an offshoot to science projects (Cervetti, Pearson, Barber, Hiebert, & Bravo, 2007).

Or perhaps it requires a bigger step involving a commitment to a plurality of knowledge and ways of knowing. In W. S Gray’s (1956) survey for UNESCO, *The Teaching of Reading and Writing*, he noted the failure of educational programs that did not connect what was taught to the everyday life and work within the communities they were intended to serve. Indeed, as they stand, approaches to formal schooling may be less conducive to engaging with broader communities and traditions (i.e., those that may be less intimately embedded in local community and family spheres, depending upon the powers at play). In other words, we might want to focus on building bridges between schools and communities in ways that extend local ways of knowing and are relevant. More specifically, we would hope that it builds on explorations of alternative models of education designed for various groups, such as Kathy Au’s (1980) exploration of an educational model for Hawaiian children, Susan Philips’ (1983) work on participation structures with the Warm Springs Indian Reservation community in Oregon, or the various research conducted in Canada by First Nations educators that enlist Indigenous ways of knowing (Archibald, 2008; Hare, 2007) and some of the elements considered key in New Zealand such as Maori ways of knowing for (see Bishop, Ladwig, & Berryman, 2014; Smith, G. H., 1997; 2002; 2015; and Smith, L. T., 1999). This may entail drawing from the work of critical theorists focused upon literacy programs connecting directly to community pursuits Freire (1995) and Boal (1979; 1995). It might connect learning to learn to frameworks such as the Reggio Emilia preschool approach in Italy, which engages so intimately with communities (Edwards, Gandini, & Forman, 1993) or New Basics for Queensland (Australia) schools (Education, Queensland, 2000a, 2000b) or the Funds of Knowledge, “after school” initiative proposed by González, Moll, and Amanti (2005) (from their work in Arizona).

In an age of migration and transnationality, it seems fitting to pursue educations that can move across cultures respectfully, ethically, safely, and supportively as they engage with communities and learners with a deep understanding of the local (see Ladson-Billings, 1994; Luke, 2004; Tierney, 2006). As Mike Rose (1995) discussed in his study of successful teachers in the southwest region of the United States, it was the sense of possibilities that distinguished these teachers from others: “I’ve come to believe that a defining characteristic

of good teaching is a tendency to push on the existing order of things. This is not simply rebelliousness. ... It's an ability to live one's working life with a consciousness of possibility, an ability to imagine a better state of things" (p. 276). And, as Rose (1995) further explained, this ability grew out of a cultural recognition and community development that those teachers pursued: "...with knowledge of individual students' lives, of local history and economy, and of sociocultural traditions and practices. ... educating themselves about the communities and cultures of the students before them, connecting with parents and involving parents in schooling, and seeing students as resources and learning from them" (p. 419).

These issues are more complex than various aforementioned pronouncements might suggest. As the Maori scholar, Linda Smith (1999), notes, cultural spaces are tricky ground. Indeed, these issues are at times quite vexing, as institutional forces of schooling are more colonizing than accommodating—with assimilation as a goal. Oftentimes cultural differences are treated as an object akin to a commodity rather than as foundational to educational endeavors. For example, there remains a bias in many educational institutions, despite the diversity of the student body, to engage students in a western image or the image of the dominant society. Local or diverse knowledge is sidelined and relegated to a secondary asset or an object of study, and the knowledge that students gain may not bear any relationship to the developmental needs of their communities. In an age of globalization, the local can be overlooked, displaced, or subordinated rather than respected; educational relevance to people's everyday lives and cultural roots lacks systemic support. Broader considerations may need to be given to developing strategies that value and build on local interests and resources—and do so in a manner that empowers rather than manages learners (see Smith, 2002; Wagner, 2011).

Recapitulating

Unpacking the teaching of reading and learning to read is not just a matter of unpacking how teachers teach a set of skills and strategies that students are expected to learn. As readers face changing and heightened demands, the notion of learning to learn should not be underestimated. Given the increasingly challenging and changing socio-political digitally demanding worlds, readers need strategies for contributing, selecting, sorting, enlisting, interfacing, exchanging, composing, sharing, and navigating within the worlds of ideas and relevant problem solving in a manner that is flexible, critical, discerning, effective, creative and informed by readings both from the page and beyond.

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