

## Reading-Writing Relationships

Prior to the 1980s, reading and writing were more strange bedfellows than soulmates. Reading and writing were viewed quite differently, approached in different ways in schools and scholarly writings, and reading overshadowed writing in terms of its priority. In the most common conceptualization, the one was the complementary undoing of the other; reading was receiving and writing was producing/constructing written language—just as listening was receiving and speaking was constructing oral language. But change was afoot, partially as a result of the growth of interdisciplinarity (Side Comment III.3b.1), but also at the hands of writing scholars who fomented their own revolution. Change was looming as developments in writing processes and pedagogy began experiencing their own zeitgeist with an array of research on writing processes and author-reader relationships. Guiding these developments with the field of English studies were writing theorists and pedagogists, such as James Moffatt, Donald Murray, Donald Graves, Peter Elbow, Mina Shaughnessy, and Janet Emig. Parallel to the work in English studies were comparable catalysts with cognitive psychology—Linda Flower and John Hayes—with alliances with rhetoricians, sociolinguists and scholars in artificial intelligence, such as James Kinneavy, Richard Enos, Herbert Simon and Allen Newell.

In turn, schools from kindergarten through university were increasingly invested in supporting learners' finding their "voice" through student-centered writing practices focused on processes, audience, etc. While developments in writing were historically separated from reading, that was about to change as reading and writing became powerful partners with enormous synergy—indeed, signaling a shift in thinking about reading, writing, speaking, listening and media as tools for learning, exploration, expression and discovery under the umbrella notion of literacy.

### **Side Comment III.3b.1.**

*In the 1970s and 1980s, interdisciplinary teams were commonplace in efforts to address educational matters such as the priority given to advancing our understanding of reading. The creation of national centers for the study of reading—initially at the University of Illinois, later at the Universities of Maryland and Georgia and then at Michigan and Michigan State University—involved scholars from psychology, computer science, education, linguistics, psycholinguistics. And, as interest in writing grew, a national center for the study of writing was funded at the University of California and Carnegie Mellon University with a similar mix of interdisciplinary scholars.*

## A Closer Look at These Developments

The history of reading-writing relationships can be characterized as involving three periods. The first period (until 1980) involved a separation of reading and writing in terms of research, theory, and practice. In the 1980s there was a period of crossover, when reading and writing informed one another. Then, beginning in the late 80s, reading and writing became almost inseparable—interwoven under the umbrella of literacy.

**Pre-1980s: Reading and Writing as Separate.** Reading and writing education has different histories and, in turn, different views, theories, research traditions, and practices. While psychologists traditionally dominated the field of reading education, a mix of practitioners and theorists with literary backgrounds informed writing education. In schools, reading and writing were mostly taught as separate subjects, timetabled in different time slots. Mainly, teachers treated writing as a form of expression and exposition.<sup>1</sup>

Reflecting the notion of separate but mirror image processes (the reception and production of written language), a number of studies of reading and writing relationships focused on what reading and writing might share. Walter Loban's (e.g., Loban, 1963) study of reading and writing abilities in the 1960s involved detailed examinations of students' reading and writing abilities across 12 grade levels. His study suggested that reading and writing were strongly correlated, but that high-performing readers might not be high-performing writers (and vice versa) and that low performers in one area might be better in the other. Likewise, later studies of the correlations between measures of reading abilities with those of writing abilities confirmed statistically significant correlation accounts—demonstrating a shared variance between reading and writing that approached 50% (Shanahan, 1984; Shanahan & Lomax, 1986; 1988). Such findings prompted the view that reading and writing abilities interacted with one another and that advances in reading would in turn advance writing.

To a large extent, writing was not (and in fact still isn't) as much of a priority as reading. The focus in schools, at least until the 1980s, was learning to read before learning to

---

<sup>1</sup> This treatment of writing was perhaps most evident in the language experience approach, wherein students' writing or dictated stories served as initial reading material, and in some of the other techniques that employed free writing as a vehicle to explore ideas.

write, with the understanding that writing abilities would develop as reading abilities advanced. In a 1978 report for the Ford Foundation, Donald Graves described the neglect of writing in school—detailing the national obsession with reading and mathematics, but not writing. Writing received less than 1 dollar for every 100 dollars of research funding for reading and was often viewed as secondary to reading in schools. As Graves (1978) suggested, writing was viewed more as an outlet for expression rather than a key vehicle for thinking, a means of preparing students to have voices for advancing democracy, responsible citizenship, or economic productivity. While his report was aligned with the notion of reading and writing as separate (including the view of reading as reception and writing as production), it might be considered a historical marker of a new emphasis upon writing in research, theory, and practice—an emphasis that eventually contributed to the integration of reading and writing.

Adding to the separation of reading and writing was the relationship between writing and reading educators. Writing educators were wary of reading educations given the orientation in the reading curriculum to skill mastery and testing reading outcomes. The political benefits of testing writing were viewed as questionable when weighed against the impact such an emphasis would have on schools. Additionally, traditional views of reading and writing positioned them as opposites, with writing as expression or production and reading as reception. More than a springboard for thinking, writing was positioned to follow reading in ways that afforded an outlet for thinking. Such views may have contributed to a lack of investment in research on writing (compared with reading) and a tendency to look at their influence on one another as if they were separate rather than intertwined.

The entrance of reading researchers into the world of writing scholarship in the early 1980s was more the exception than the rule and occurred at a time when the fields were still quite separate—both conceptually and, to a large extent, in practice. Reading researchers were engaged in reading research, not writing research. Most reading researchers reflected a tradition aligned with psychology, emphasizing what was observable and measurable. In terms of practice, the teaching of reading, again at least until the late 1970s or early 1980s, was approached mechanically, much in the spirit of the assembled reader discussed earlier. There was a scope and sequence of skills (as determined by the grade level of the material) that readers were expected to acquire as they advanced in their reading proficiency.

Writing instruction, on the other hand, was influenced by reflections by writers, practical theorists, rhetoricians, and scholars with an interest in literary work.<sup>2</sup> Writing scholars seemed focused on helping writers develop their craft through the study of advanced rather than basic practices—the study of genre, voice and persona. The influences on writing pedagogy came from conceptualizations of the writing done in secondary and even college writing programs, and studies of the evaluation of writing by Charles Cooper and others (e.g., Cooper, 1983; Cooper & Matsuhashi, 1983; Cooper & Odell, 1977; Odell & Cooper, 1980). At the same time, studies of the writing process were on the rise—beginning with the work of Janet Emig (1971) and spurred by Donald Murray’s (1984) declaration of writing as a process. By contrast, reading instruction was driven more from the concerns of learning to read in the K-1 classroom, so the extension of basic skill acquisition into the intermediate and middle grades was more common.

A major catalyst was writing process research undertaken by a small group of cognitive psychologists at Carnegie Mellon (e.g., John Hayes and Linda Flower) and elsewhere (e.g., Toronto, with Carl Bereiter and Marlene Scardamalia). While these researchers were not without their critics, as their approach was outside of the norm for writing scholarship, it eventually gained traction. The cognitivists used think-alouds as a basis for their proposed model of the writing process and spurred (or dovetailed with) a range of other studies examining writing and developments (Side Comment III.3b.4). To some extent, they also complemented writing practices in the elementary school that were shifting to a process-orientation and a concern over voice and audience (a shift stemming from the work inspired by Donald Graves, Donald Murray and, later, Tom Newkirk and Jane Hansen at the University of New Hampshire).<sup>3</sup>

Indeed, writing research and practice flourished in ways that were distinct from reading. Within universities, academic writing received significant attention. Networks of writing programs created coalitions such as the National Writing Project (initiated by James

---

<sup>2</sup> Writing scholars included practical theorists such as James Moffett, Peter Elbow (1998), Ken Macrorie, and Don Murray; rhetoricians such as James Kinneavy and Kenneth Burke and scholars interested in the study of literary works, such as Alan Purves.

<sup>3</sup> Other writing studies included work by Ann Berthoff (1981) and Nancy Sommers (1980; 1982), who studied revisions. This work also connected with Mina Shaughnessy’s notions of basic college writing (emanating from her work on students writing difficulties) as well as a host of contributions by writing researchers who were interested in a range of issues with regard to writing as a way of knowing and a pedagogy (e.g., David Bartholomea, Anthony Petrosky, Lester Faigley [1981], Stephen Witte [1992], John Daly, Glynda Hull, Sarah Freeman and others).

Gray at Berkeley in 1974) for teachers to share and enhance their practice. At the same time, in conjunction with the efforts of university-school partnerships, classroom writing practice was shifting in a manner that was student-centered, process-oriented, and collaborative.

Research in writing was also quite multifaceted—bringing together communication theorists, literary theorists, and educators. The recipients of the National Council Teachers of English Promising Research Award during this period illustrate this diverse range of perspectives. The award was tantamount to an award for the most cutting-edge dissertations during this period (see Table III.3b.1). The recipients present a mix of process-oriented studies together with studies enlisting rhetoric, etc.

**Table III.3b.1.**

### **Promising Research Award Winners**

1985

- Kathleen Ann Copeland, St. Edward's University, Austin, Texas, "The Effect of Writing upon Good and Poor Writers' Learning from Prose"
- Anne J. Herrington, Pennsylvania State University, "Writing in Academic Settings: A Study of the Rhetorical Contexts for Writing in Two College Chemical Engineering Courses"
- Glynda A. Hull, University of Pittsburgh, "The Editing Process in Writing: A Performance Study of Experts and Novices"

1984

- Deborah Brandt, University of Wisconsin-Madison, "Writer, Context, and Text"
- George E. Newell, University of Kentucky, Lexington, "Learning from Writing in Two Content Area: A Case Study/Protocol Analysis"

1983

- Stephen B. Kucer, University of Southern California, Los Angeles, "Text Production and Comprehension from a Transactional Perspective"
- Linda Hanrahan Mauro, University of Maryland, "Personal Constructs and Response to Literature: Case Studies of Adolescent Readers"

1982

- Anne Haas Dyson, University of Georgia, Athens, "The Role of Oral Language in Early Writing Programs"
- Robin Bell Markels, Ohio State University, "Cohesion in Four Paragraph Types"

1981

- Margaret A. Atwell, California State College, San Bernardino, "The Evolution of Text: The Interrelationship of Reading and Writing in the Composing Process"
- June C. Birnbaum, Rutgers University, New Brunswick, New Jersey, "The Reading and Composing Behaviors of Selected Fourth- and Seventh-Grade Students"

- Lee Galda, University of Georgia, “Three Children Reading Stories: Response to Literature in Preadolescents”
  - Mike Rose, University of California-Los Angeles, “Writer’s Block in University Students: A Cognitivist Analysis”
- 1980
- Lillian S. Bridwell, University of Nebraska-Lincoln, “Revising Strategies in Twelfth-Grade Students’ Transactional Writing” (*Research in the Teaching of English*, Oct. 1980, pp. 197–222)
  - Colette A. Daiute, Teachers College, Columbia University, “Psycholinguistic Influences on the Writing Process” (*Research in the Teaching of English*, Feb. 1981, pp. 5–22)
  - Ann Matsuhashi, University of Illinois at Chicago Circle, “Pausing and Planning: The Tempo of Written Discourse Production” (*Research in the Teaching of English*, May 1981, pp. 113–134)
- 1979
- Sondra Perl, Herbert H. Lehman College, CUNY, “Five Writers Writing: Case Studies of the Composing Processes of Unskilled College Writers” (*Research in the Teaching of English*, Dec. 1979, pp. 317–336)
  - Donald L. Rubin, University of Georgia, “Development in Syntactic and Strategic Aspects of Audience Adaptation Skills in Written Persuasive Communication”
  - Nancy T. Sommers, University of Oklahoma, “Revision in the Composing Process: A Case Study of Experienced Writers and Student Writers”
  - Renee K. Weisberg, Beaver College, Pennsylvania, “Good and Poor Readers’ Comprehension of Explicit and Implicit Information in Short Stories Based on Two Modes of Presentation” (*Research in the Teaching of English*, Feb. 1979, pp. 337–352)
- 1978
- Janet K. Black, University of Texas, Arlington, “Formal and Informal Means of Assessing the Communicative Competence of Kindergarten Children”
  - Marion Crowhurst, Brandon University, Manitoba, Canada, “The Effect of Audience and Mode of Discourse on the Syntactic Complexity of the Writing of Sixth and Tenth Graders”
  - Barry M. Kroll, Iowa State University, “Cognitive Egocentrism and the Problems of Audience Awareness in Written Discourse”
  - Don Nix, International Business Machines, Thomas J. Watson Research Center, Yorktown Heights, New York, “Toward a Systematic Description of Some Experiential Aspects of Children’s Reading Comprehension”
  - Sharon Pianko, Livingston College, Rutgers University, “A Description of the Composing Process of College Freshman Writers”

**Reading and Writing Crossovers.** In the 1970s, there seemed to be only a handful of reading researchers who were interested in writing and engaging with the reading and writing-related research that was beginning to emerge. Reading educators interested in writing were certainly in the minority and were viewed skeptically both by their own reading colleagues and by writing scholars. Yet their early interest foreshadowed the crossovers from

writing to reading and the subsequent significant shift as the two fields became more wedded to one another. Indeed, the 1980s might be described as a period of crossover between reading and writing, not unlike other forms of border crossings.

Authorship and readership were areas for which there were crossovers, especially from writing to reading. Writing educators and researchers, as well as literary theorists and communication scholars, had engaged for centuries in explorations of the author's representation of meanings in written forms—delving into notions of persona, ethos, audience, and other considerations (particularly across key works of philosophers and notable literary writers). In more recent years, this work had extended into the dialogical tendencies that undergird writing (especially with regard to the writing development among college writers and high school students). A number of the practical theorists and process-oriented researchers focused more on the reading that writers do of their own writing.

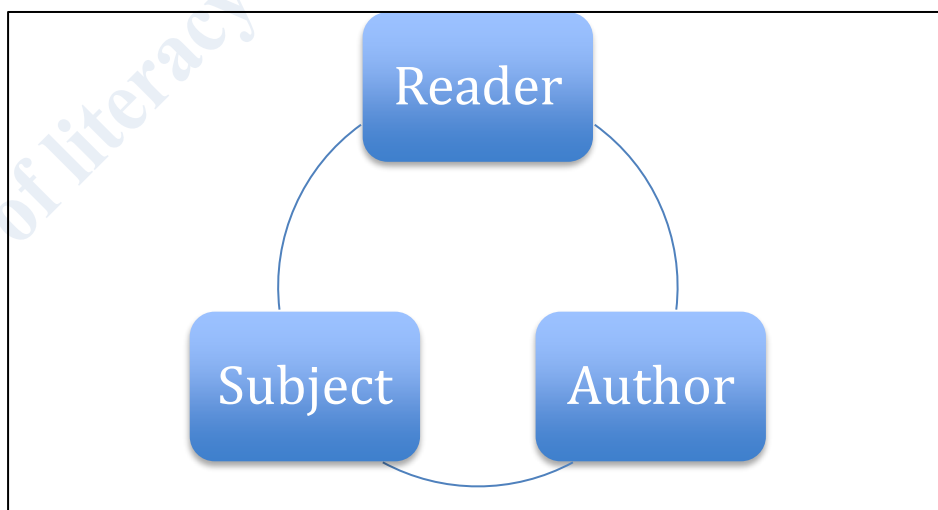
There was some engagement with these ideas among reading scholars, though not extensive (e.g., Bertram Bruce and James Britton). Certainly, authorship was a key interest, but still an undersubscribed area for advancing cognitive notions of meaning making. For a number of us, interest in writing was spurred by the notion that meaning making involved the transaction between readers and authors; that readers engage with the world of the text conjured by authors as well as with the author's voices, ethos, and persona (i.e., as Aristotle and, more recently, Walker Gibson explore). We were therefore keen to understand the nature and roles (including responsibilities) of authors and readers in relation to one another. One of the frames used to unpack reading-writing relationships was speech act theory—building on Paul Grice's (1975) cooperative principles, the work of John Austin (1975), and John Searle's (1969) suggestion that writers and speakers actively try to get readers or listeners to engage with what they want them to think and do. There was an interest in applying these notions to extended text (e.g., Pratt, 1977) as more and more reading scholars gravitated toward a view that readers create meaning with the support of authors, but not rigidly. The scope of meanings for a text was apt to be broadened depending upon the match between the author's intents and the reader's purposes as well as other factors, including the shared knowledge or individual background experiences of reader and author and the influence of the setting within which the reading occurred (including any interactions with others). Authors and the texts that they produced were not fixed, but rather, to some degree, elastic as if there is an allowable bandwidth or licensed affordances for readers (Tierney & LaZansky, 1980).

As researchers attempted to advance our understanding of these dynamics and move beyond the text, they turned to alternative frames. Just as analyses of spoken conversations required intensive observations and analyses of exchanges, analyses of reading and writing required close observation, careful analysis, and more. The dynamics of reader-writer exchanges were less visible and demanded a means of analyzing the text (i.e., what the writers provided) as well as tools to delve into the ongoing meaning making “in the heads” of readers and writers. Accordingly, many of us found ourselves enlisting a mix of approaches to make the meaning making of readers and writers visible (i.e., interview-type questions, spontaneous think-alouds, and debriefings)—enabling us to align what writers and readers were thinking with the text that they read and produced.

Some of us found Walker Gibson’s (1950; 1969) frame for interpreting reader, author, and subject to be quite useful in separating the dimensions of each and identifying their interactions with one another. For example, Tom Crumpler and Rob explored how researchers positioned themselves in reporting their research by mapping how they positioned themselves relative to subjects and audiences across their reviews of literature and their methods, results, and conclusions. They found researchers shifting from first person to third person—suggesting that while researchers treated their research pursuits as subjective, they presented their findings as objective. It was as if the subject, author, and audience configuration shifted (Figure III.3b.1).

**Figure III.3b.1.**

**The Subject-Author-Reader Dynamic**



(See: Crumpler & Tierney, 1995; Gibson, 1950; 1969)

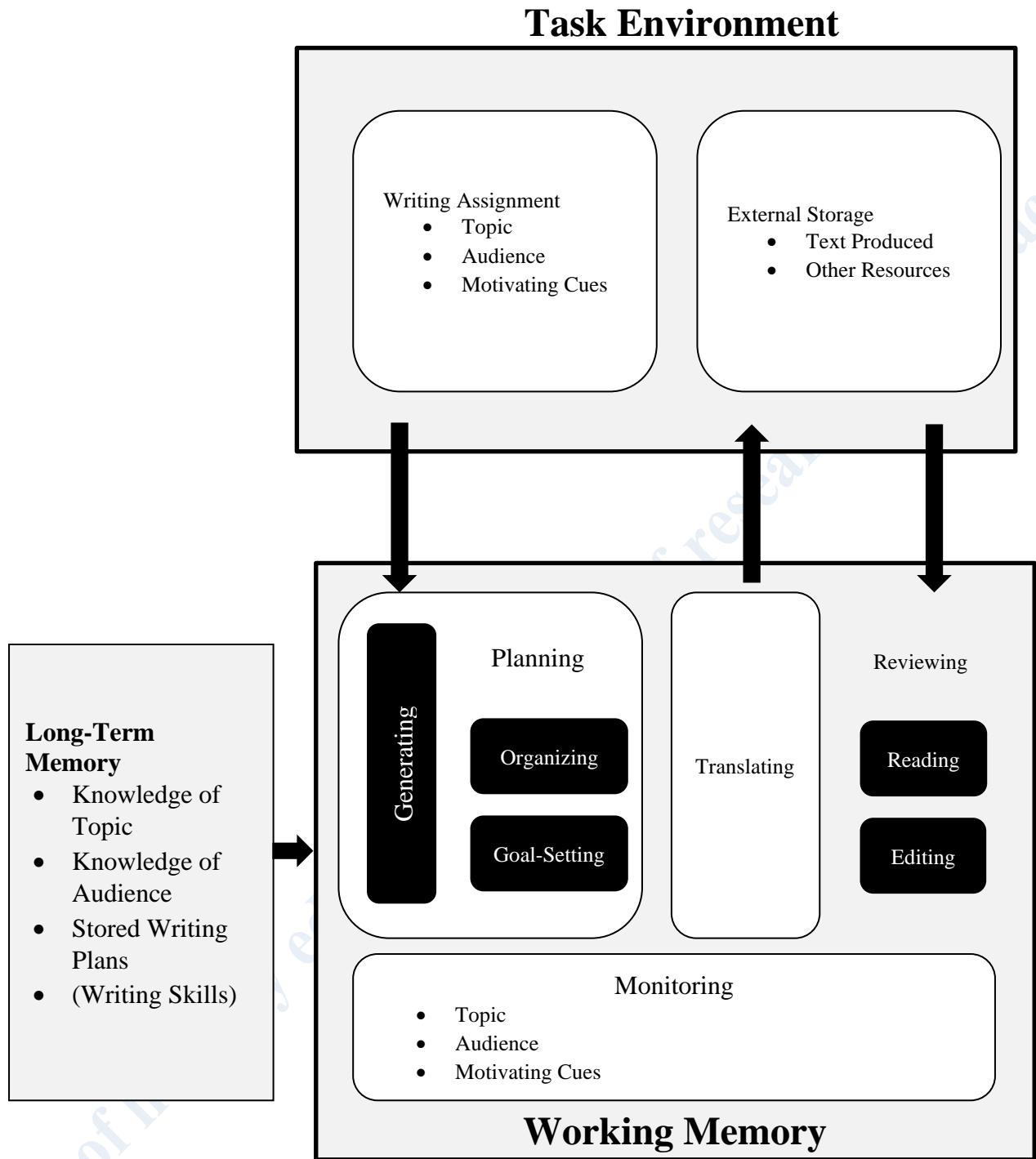


Process-oriented research on writing constituted a second area of major crossover from writing to reading. In the writing field, process-oriented approaches emerged in practice and in research. In practice, Don Murray (1984) had impressed upon writing practitioners that the focus of writing should be the process, not the product. His views and recommendations for practice impacted writing pedagogy and, to some extent, undergirded the re-invention of the teaching of writing at all levels. One of the most notable contributions to the process-orientation to writing was the work of Don Graves (1978; 1983) and a group of teachers in New Hampshire, which had a widespread and revolutionary impact on approaches to teaching writing in schools. Don Graves' (1983) book, *Writing: Teachers and Children at Work*, described their initiative and had an impact of global proportions. Its influence should not be underestimated; as a result of Graves' work, reading teachers made shifts to integrate writing and reading, altering their overall approaches to reading instruction. Additionally, students who were engaged in these writing experiences acquired abilities and attitudes that carried over to their engagements in reading.

Other process-oriented work in writing also had a crossover effect. In particular, the process-oriented research on writing by Linda Flower and John Hayes (Flower & Hayes, 1981), and Bereiter and Scardamalia (see: Bereiter & Scardamalia, 1984; Scardamalia, Bereiter, & Steinbach, 1984) propelled a shift in how writing was conceptualized. Flower and Hayes (1981) developed a model of the writing process based on writers' think-aloud processes (e.g., goal-setting, refinement, and revision) that suggested how writing may shape thinking (see Figure III.3b.2).

**Figure III.3b.2.**

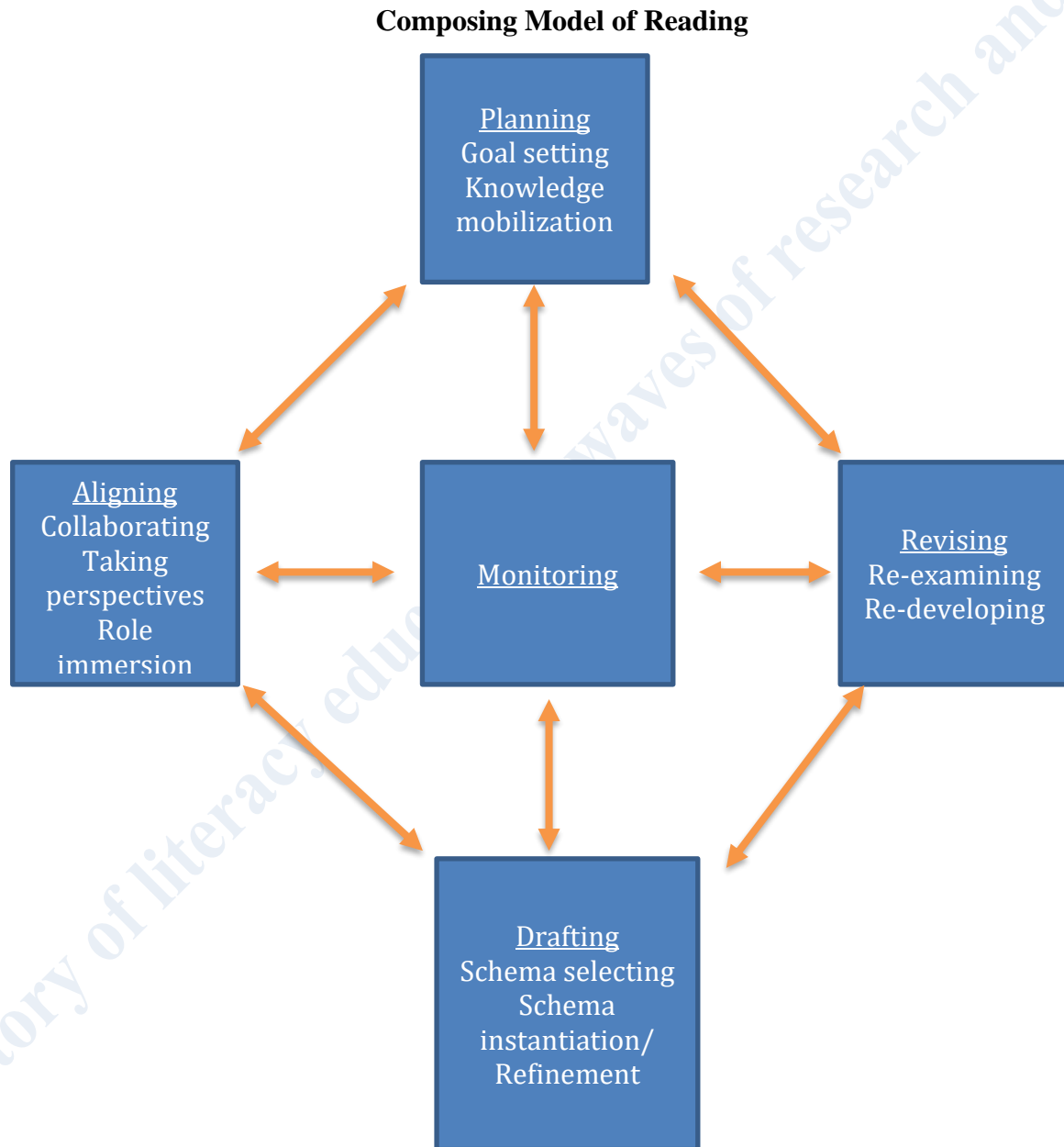
**Flower and Hayes' (1981) Cognitive Process Theory of Writing**



While the Flower and Hayes model seemed to have obvious parallels to the models emerging for reading formulated by cognitive scientists, it also suggested provocative extensions and differences—such as notions of recursiveness and revision. Unlike those process-oriented notions of meaning making by readers tied to schema access and schema selection (e.g., Collins, Brown, and Larkin’s Progressive Refinement Model of Reading, in Collins, Brown & Larkin, 1980), writing theorists delineated a composing process that more

fully embraced meaning making as a process in which readers engaged—an adjustment approaching a paradigm shift. Together with P. David Pearson, I proposed a Composing Model of Reading (Tierney & Pearson, 1983) and also discussed the notion of learning to read like a writer (Pearson & Tierney, 1984). Both represented a key crossover from writing to reading at the time (see Figure III.3b.3).

**Figure III.3b.3.**



(Source: Tierney and Pearson, 1983)

Other crossovers occurred as process-oriented practices in writing and reading research advanced and as writing assumed a more prominent role (in different classrooms for different purposes) with the backing of networks of writing teachers. Writing to learn became more commonplace in science, history, and mathematics classrooms—especially as research on writing to learn made visible the positive impacts of writing on the learning and thinking in which students were engaged. For example, George Newell (1984) demonstrated that the think-alouds students engaged in as they wrote enhanced their learning (and strategies thereof). Langer and Applebee (1987) along with a number of their colleagues (Marshall, 1987) addressed how different genres of writing shaped thinking. And, in studies of genre, a number of writing researchers (especially in Australia) such as Frances Christie and James R. Martin (see: Christie & Martin, 1997) argued for the teaching of different genres as crucial to reading and writing development (as an alternative to process-based approaches).

Finally, there was a crossover in pedagogy from writing to reading in terms of interpersonal, intrapersonal, and social skills and strategies. Whereas reading was focused on reading skills and strategies acquired in concert with teacher modeling and guided and independent student practice, learning to write was done in concert with students engaging with their classmates as they negotiated their drafts, contemplated their next steps and strategies, and shared their emerging texts with their classmates (who were also authors and readers and learners). These conferences among students constituted sites for discussing the meaning making that they were pursuing as well as for sharing the strategies that they might employ in doing so. Learning to learn in writing classrooms interfaced the intrapersonal and interpersonal. It positioned writing as a social enterprise—foreshadowing or existing as a precursor to the social turn and its influence with regard to approaches to reading. Learning to learn in writing also signaled a move toward an amalgamation of reading, writing, speaking, listening, and viewing under the umbrella of literacy. Accordingly, it necessitated a shift to studying reading and writing development across individuals (i.e., not just within a single person's head)—viewing meaning making as social and occurring outside the head (in a manner which not only informs an individual's meaning making, but also connects those meanings with those made within and across collections of people).

**Reading and Writing Working Together.** As writing assumed a more prominent and dynamic role in classrooms, more teachers began integrating reading and writing. Initially this entailed employing writing activities as precursors or follow-up activities to reading; however, increasingly reading and writing began to meld as if they were

crisscrossing students' explorations and projects. Lucy Calkins, who had worked with Donald Graves, detailed the critical eye that writers had for reading—arguing that writers approached published authors as authors themselves. As she stated, young writers came to realize that books were developed by persons not something produced by a machine. Indeed, it was apparent that reading was the potential beneficiary of writing—not only as writers read their own writing and shared it with others, but also as a result of the dialogical attitudes that it propelled.

There were other notable breakthroughs. Among the most stunning were early writing studies that suggested that young students may learn to read by writing—particularly as they transition from scribbles to invented spelling to conventional text (see: Chomsky, 1969; Ferreiro & Teberosky, 1982; King, Rentel, Pappas, Pettegrew, & Zutell, 1981; Teale & Sulzby, 1986). Readers learn about written language as they experiment with writing, from labels to sentences to story to captions. Their first reading, therefore, was of the words that they wrote.

Also stunning to some of us was the realization of the power of the integration of texts (i.e., those read, written, viewed, spoken etc.). As studies of the reading process moved forward to study comprehension and learning from extended text (especially in everyday settings), the mingling of reading and writing and the sharing of common sub-processes could not be avoided. Further, as studies of processes focused on meaning making across texts, the notion of reading and writing working together rather than separately was increasingly apparent. Classrooms became sites for such discoveries, and as teachers also became engaged as writers and researchers, they shared their reflections of their practices and their observations of the benefits of integrating reading and writing to enhance reading and writing abilities (as well as thinking and discovery) in ways that aligned with real-world problem solving (including the multilayered meaning making that occurs across digital environments).

The unfolding of these developments in the late 80s seemed almost preordained as researchers explored students' reading and writing at all levels. These included studies of early readers and writers (e.g., Ann Haas Dyson, 1988; Cathy Short, 1986; Nancy Shanklin 1981; Deborah Rowe 1987); and Stephen Kucer 1985); reading and writing studies at the elementary level (e.g. Jane Hansen; 1983; Lucy Calkins, 1983); reading and writing among high school and college students as well as among those in the workplace, with projects examining reading and writing from multiple sources (e.g., Nancy Spivey, 1984; McGinley & Tierney, 1989; Tierney, Soter, O'Flahavan and McGinley, 1989); and studies of digital

developments, which involved multilayered interfaces for meaning making. Befitting its new status, writing was highlighted as one of the cornerstones of reading development in the U.S. national report on reading, *Becoming a Nation of Readers* (Anderson, 1985).

As work in this new arena advanced, it prompted (and required) the advancement of research approaches, tools, and frames to support it. Research on these matters required new norms for studies, including recognizing the importance of engagements over time and space, and keeping track of the interchanges (i.e., spoken, written, and with media) across individuals. They required a shift to more qualitative, thick, and in-depth observations and extensive data collection and reflection. They also required lenses and frames for describing the intrapersonal and interpersonal nature of engagements among and with people who were animating ideas in multilayered and multifaceted ways. For example, Spiro (Jacobson & Spiro, 1995; Spiro & Jehng, 1990) enlisted Wittgenstein's notion of crisscrossing complex knowledge domains to examine how meaning makers engage with multilayered, multi-text environments of significant relevance in digital learning in what they called Cognitive Flexibility Theory. Others gravitated to semiotic perspectives as well as biological metaphors to unpack these dynamics (e.g., Witte, 1992).

Overall, as reading and writing became recognizable interwoven threads in support of meaning making, literacy emerged as a more apt name for the resulting fabric—thus replacing the separate domains of reading and writing.

### **Rob's reflections**

*My entrance into the world of writing scholarship occurred at a time when the fields were quite separate both conceptually and to a large extent in practice. Reading researchers were engaged in reading research not writing research and vice versa. This was despite obvious connections in terms of issues of authorship as undergirding reading and readership undergirding writing.*

*Initially I was looked on with suspicion by writing researchers as potentially colonizing and slanting their research practices and teaching practices to what was perceived as quite restrictive. My reading colleagues also thought that my interest was moving me a step away from reading at the time. It did, but then reading seem to engage with writing eventually adopting the term "literacy" to encompass the various combinations.*

*Some of my shifts*

*In the 1970's, I was among a handful of reading researchers who were interested in issues that tended to be more under the purview of writing versus reading or in terms of organizations such as the National Council of Teachers of English and aligned with College Composition and Communication scholars interested in rhetoric or communication theory and writing research or scholars focused upon language developments, including early writing and reading. As a relative unknown and with the guidance of colleagues such as Richard beach I ventured into sessions at such conferences and was rivetted with what was being shared and the relevance for reading. Further, to my good fortune, I had two graduate students, Mary Ellen Giaccobe and Susan Sowers, who were respectively the teacher and research assistant tied to Don Graves' engagement in Atkinson Academy in New Hampshire that was a major source of his writings. Mary Ellen and Susan invited me to visit Marilyn Boutwell's classroom at the Academy where I was able to see first-hand and talk with elementary students about their reading and writing pursuits—their connections between their reading and writing and their consultation with peers as they wrestled with their writing process. It seemed so clear that these writers were combination of the strategic, social and critical self assessor in ways far beyond what students in other classrooms elsewhere—especially those focused on reading. The school visit was followed by a gathering where I chatted with the two Don's (Murray and Graves), Tom Newkirk and Jane Hansen and presented to them what they viewed as a radical proposition that reading was production not reception.*

*For me, these engagements were among the highlights of my literacy life. They spurred and converged with my interests in reading-writing connections in three major ways. First, my interest in writing was spurred by interest in the transaction between readers and authors and how readers engage with the world of the text conjured by authors and with the author's voices, ethos and persona as Aristotle and more recently Walker Gibson had enunciated. I was keen to understand the nature and role (including responsibilities) of authors and readers to one another. I was drawn to speech act theory building upon Paul Grice's cooperative principles or the work of John Austin and John Searle suggested that writers and speakers were engaged in trying to get readers or listeners to engage with what they wanted them to think and do. I was interested in extending these notions in the context of extended text as Mary Louis Pratt had discussed in "Toward a speech act theory of literacy discourse". However, as suggested in this chapter I was gravitating to a view that readers created meaning with the support of authors, but not rigidly. The scope of meanings for a*

*text was apt to be broadened depending upon the match between the author's intents and the reader's purposes and other factors such as the reader's and author's shared knowledge or own background of experience and the influence of setting including other readers. In a number of studies, I studied the tug of war between authors and readers in the context of readers responding to a writer's directions across modes of communication (face to face, e-mail, paper and pencil and telephone) and text where I manipulated author's persona. In one study, writers' directions for assembling a water pump were explored across modes of communication and text (i.e., face-to-face, email, paper and pencil, and telephone) (Tierney, LaZansky, Raphael, & Cohen, 1987). Across modes, readers approached the text in a fashion that was transactional rather than solely reliant upon the author's text to complete the task confirming the view of the reader and writer relationship as transactional (Rosenblatt, 1969) involving reader-writer negotiations than were less detached interactional model of top-down, bottom-up meaning making/*

*Second, with David, I became to formulate reading as a composing model stemming from observations of and conversations with the students at Atkinson Academy and the subsequent conversations with Don Graves with whom I often ran and sometimes conferenced as a writer together with exchanges Linda Flower, John Hayes and Anthony Petrosky. The model of Flower and Hayes (presented earlier) who were having writers think aloud as they wrote en route to delineating their processes (goal setting, refinement and revision) had obvious parallels to the models emerging for reading by the cognitive scientists, but also provocative extensions and differences—such as notions of recursiveness and revision.*

*Third, I was interested in how reading and writing activities worked together as readers wrote and writers read. It was becoming increasingly common for students in classrooms to be expected to read then write or write then read. In the real world, reading and writing was difficult to separate beginning at a very young age. As studies of reading process moved forward to study comprehension and learning from extended text especially in everyday settings, then the mingling of reading and writing and the sharing of common sub-processes could not be avoided. As studies of processes focused upon meaning making across texts, the notion of reading and writing working together rather than related at a distance was increasingly apparent. And I found myself increasingly interested in the benefits of integrating reading and writing to enhance reading and writing abilities as well as thinking and discovery in ways aligned with real world problem solving including the multilayered*



*meaning making that occurs across digital environments. With William McGinley especially and other colleagues at Illinois (Anna Soter and John O'Flahavan) we pursued studies of reading and writing from multiple sources and in its influences upon one another especially thinking critically (Tierney, Soter, O'Flahavan, & McGinley, 1989).*

*There were at least three major shifts that occurred. First, the notion of reader as writer or composer as discussed in "Toward a composing model of reading" and "Learning to read like a writer" with David Pearson was related to these exchanges. Second, the work on reading and writing working together tied to Wittgenstein and Spiro's notion of crisscrossing complex knowledge domains had proven foundation to looking at how meaning makers engage with multilayered, multi-text environments of significant relevance to digital learning (McGinley & Tierney, 1989). Third, reading and writing were no longer construed as separate to one another but taking form under the umbrella of "literacy."*

## References

- Anderson, R. C. (1985). *Becoming a nation of readers: The report of the commission on reading*. Washington, D.C.: National Academy of Education, & Urbana, IL: Center for the Study of Reading.
- Austin, J. L. (1975). *How to do things with words* (2<sup>nd</sup> ed.). Oxford: Clarendon Press.
- Bereiter, C., & Scardamalia, M. (1984). Learning about writing from reading. *Written Communication*, 1(2), 163–188. doi: 10.1177/0741088384001002001.
- Berthoff, A. E. (1981). *The making of meaning: Metaphors, models, and maxims for writing teachers*. Montclair, NJ: Boynton/Cook Publishers.
- Calkins, L. (1983). *Lessons from a child*. Portsmouth Lake, NH: Heinemann.
- Chomsky, C. (1969). *The acquisition of syntax in children from 5 to 10*. Cambridge, MA: M.I.T. Press.
- Christie, F., & Martin, J. R. (Eds.) (1997). *Genre and institutions: Social processes in the workplace and school*. London: Pinter.
- Collins, A., Brown, J. S., & Larkin, K. (1980). Inference in text understanding. In R.J. Spiro, B. C. Bruce, & W. F. Brewer, (Eds.), *Theoretical issues in reading comprehension:*

*Perspectives from cognitive psychology, linguistics, artificial intelligence, and education* (pp. 385–410). Hillsdale, NJ: Erlbaum.

- Cooper, C. R. (1983). Procedures for describing written texts. In P. Mosenthal, L. Tamor, & S. A. Walmsley (Eds.), *Research on writing: Principles and methods*. New York: Longman.
- Cooper, C. R., & Matsuhashi, A. (1983). A theory of the writing process. In M. Martlew (Ed.), *The psychology of written language: Developmental and educational perspectives* New York: Wiley.
- Cooper, C. R., & Odell, L. (1977). *Evaluating writing: Describing, measuring, judging*. Urbana, IL: National Council of Teachers of English.
- Crumpler, T. & Tierney, R. J. (1995). *Literacy Research and Rhetorical Space: Reflections and Interpretive Possibilities*. Research monograph. Retrieved from [https://www.academia.edu/9699516/Literacy\\_Research\\_and\\_Rhetorical\\_Space\\_Reflections\\_and\\_Interpretive\\_Possibilities](https://www.academia.edu/9699516/Literacy_Research_and_Rhetorical_Space_Reflections_and_Interpretive_Possibilities).
- Dyson, A. H. (1988). Negotiating among multiple worlds: The space/time dimensions of young children's composing. *Research in the Teaching of English*, 22(4), 355–390.
- Elbow, P. (1998). *Writing without teachers* (2nd ed.). New York: Oxford University Press.
- Emig, J. A. (1971). *The composing processes of twelfth graders*. Urbana, IL: National Council of Teachers of English.
- Faigley, L., & Witte, S. (1981). Analyzing revision. *College Composition and Communication*, 32(4), 400–414.
- Ferreiro, E., & Teberosky, A. (1982). *Literacy before schooling*. Exeter, N.H: Heinemann Educational Books.
- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365–387.
- Gibson, W. (1969). *Persona: A style study for readers and writers*. New York: Random House.
- Gibson, W. (1950). Authors, speakers, readers, and mock readers. *College English*, 11(5), 265–269. doi: 10.2307/585994.
- Graves, D. H. (1978). *Balance the basics: Let them write*. New York: Ford Foundation.
- Graves, D. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinemann.
- Grice, P. (1975). Logic and conversation. In P. Cole, & J. Morgan, *Syntax and semantics, volume 3: Speech acts* (pp. 41–58). New York: Academic Press.

- Harste, J.C.; Burke, C.L.; & Woodward, V.A. (1981). *Children, their language and world: Initial encounters with print* [Final report, National Institute of Education].  
Bloomington: Language Education Department, Indiana University.
- Harste, J. C., Burke, C. L., Woodward, V. A. & Bouffler, C. (1983). *The young child as writer-reader, and informant* [Final report, National Institute of Education].  
Bloomington: Language Education Department, Indiana University.
- Harste, J. C., Woodward, V. A., & Burke, C. L. (1984). *Language stories & literacy lessons*.  
Portsmouth, NH: Heinemann Educational Books.
- Jacobson, M. J., & Spiro, R. J. (1995). Hypertext learning environments, cognitive flexibility, and the transfer of complex knowledge: An empirical investigation. *Journal of Educational Computing Research*, 12(4), 301–333. [doi: 10.2190/4T1B-HBP0-3F7E-J4PN](https://doi.org/10.2190/4T1B-HBP0-3F7E-J4PN).
- King, M., Rentel, V., Pappas, C., Pettegrew, B., & Zutell, J. (1981). *How children learn to write: A longitudinal study*. Columbus, OH: The Ohio State University Research Foundation.
- Kucer, S. L. (1985). The making of meaning: Reading and writing as parallel processes. *Written Communication*, 2(3), 317-336.
- Langer, J. A., & Applebee, A. N. (1987). *How writing shapes thinking: A study of teaching and learning*. Urbana, IL: National Council of Teachers of English.
- Loban, W. (1963). *The language of elementary school children: A study of the use and control of language and the relations among speaking, reading, writing, and listening*. Research Report No. 1. Champaign, IL: National Council of Teachers of English.
- Marshall, J. D. (1987). The effects of writing on students' understanding of literary texts. *Research in the Teaching of English*, 21(1), 30–63.
- McGinley, W. and Tierney, R. J. (1989). Traversing the topical landscape: Reading and writing as ways of knowing. *Written Communication*. 6, 3, pp. 243-269.  
<https://independent.academia.edu/RobTierney/Papers>
- Murray, D. (1984). *Write to learn*. New York: Holt, Rinehart, and Winston.
- Newell, G. E. (1984). Learning from writing in two content areas: A case study/protocol analysis. *Research in the Teaching of English*, 18(3), 265–287.
- Odell, L., & Cooper, C. (1980). Procedures for evaluating writing: Assumptions and needed research. *College English*, 42(1), 35–43. doi: 10.2307/376031.

- Pearson, P. D. & Tierney, R. J. (1984). On becoming a thoughtful reader: Learning to read like a writer. In A. Purves & O. Niles (Eds.), *Reading in the Secondary School* (pp. 144–193). Chicago: National Society for the Study of Education.  
<https://independent.academia.edu/RobTierney/Papers>
- Pratt, M. L. (1977). *Toward a speech act theory of literary discourse*. Bloomington: Indiana University Press.
- Rosenblatt, M. (1969) Towards a Transactional Theory of Reading. *Journal of Reading Behavior* 1: 1, 31-49
- Rowe, D. W. (1987). Literacy learning as an intertextual process. In J. E. Readence & R. Scott Baldwin (Eds.), *Research in literacy: Merging perspectives*. Rochester, NY: National Reading Conference.
- Scardamalia, M., Bereiter, C., & Steinbach, R. (1984). Teachability of reflective processes in written composition. *Cognitive Science*, 8(2), 173–190. doi: 10.1016/S0364-0213(84)80016-6.
- Searle, J. R. (1969). *Speech Acts: An essay in the philosophy of language*. Cambridge: Cambridge University Press.
- Shanahan, T. (1984). Nature of the reading-writing relation: An exploratory multivariate analysis. *Journal of Educational Psychology*, 76(3), 466–477. doi: 10.1037//0022-0663.76.3.466.
- Shanahan, T., & Lomax, R. G. (1986). An analysis and comparison of theoretical models of the reading-writing relationship. *Journal of Educational Psychology*, 78(2), 116–123. doi: 10.1037/0022-0663.78.2.116.
- Shanahan, T., & Lomax, R. G. (1988). A developmental comparison of three theoretical models of the reading-writing relationship. *Research in the Teaching of English*, 22(2), 196–212.
- Shanklin, N. (1981). *Relating reading and writing: Developing a transactional theory of the writing process*. Monograph on Teaching and Learning, Indiana University
- Short, K. G. (1986) Literacy as a collaborative experience: The role of intertextuality. In J. A. Niles & R. V. Lalik (Eds.), *Solving problems in literacy: Learners, teachers, and researchers* (pp. 227-232). Rochester, NY: National Reading Conference.
- Sommers, N. (1980). Revision strategies of student writers and experienced adult writers. *College Composition and Communication*, 31(4), 378–88.
- Sommers, N. (1982). Responding to student writing. *College Composition and Communication*, 33(2), 148–156.

- Spiro, R. J., & Jehng, J. C. (1990). Cognitive flexibility and hypertext: Theory and technology for the nonlinear and multidimensional traversal of complex subject matter. In D. Nix & R. Spiro (Eds.), *Cognition, Education, and Multimedia* (pp. 163–205). Hillsdale, NJ: Lawrence Erlbaum.
- Spivey, N. N. (1984). *Discourse synthesis: Constructing texts in reading and writing* (Monograph). Newark, DE: International Reading Association.
- Teale, W. H., & Sulzby, E. (1986). *Emergent literacy: Writing and reading*. Norwood, NJ: Ablex.
- Tierney, R. J., LaZansky, J., Raphael, T., & Cohen, P. (1987). Authors' intentions and readers' interpretation. In R. J. Tierney, P. L. Anders, & J. N. Mitchell (Eds.), *Understanding readers' understanding: Theory and practice* (pp. 205–226). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Tierney, R. J., & LaZansky, J. (1980). The rights and responsibilities of readers and writers: A contractual agreement. *Language Arts*, 57(6), 606–613.
- Tierney, R. J., & Pearson, P. D. (1983). Toward a composing model of reading. *Language Arts*, 60(5), 568–580. <https://independent.academia.edu/RobTierney/Papers>
- Tierney, R. J., Soter, A., O'Flahavan, J. F., & McGinley, W. (1989). The effects of reading and writing upon thinking critically. *Reading Research Quarterly*, 24(2), 134–173. doi: 10.2307/747862. <https://independent.academia.edu/RobTierney/Papers>
- Tierney, R.J., & Shanahan, T. (1991). Research on the reading-writing relationship: Interactions, transactions, and outcomes. In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research*, Vol. II (pp. 246–280). White Plains, NY: Longman. <https://independent.academia.edu/RobTierney/Papers>
- Witte, S. P. (1992). Context, text, intertext: Toward a constructivist semiotic of writing. *Written Communication*, 9(2), 237–308. doi: 10.1177/0741088392009002003.