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7 Reading/Writing Connection

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Historically and currently at the college level, and indeed at lower school levels as well, reading and writing are often taught separately. This occurs despite the fact that teaching reading involves writing in terms of taking notes and writing responses to what was read, and teaching writing involves reading—either reading something as a prompt for writing or a student reading his or her own work in the revision process. Research well documented in the first edition of this *Handbook* (Flippo & Caverly, 2000) and further documented here demonstrates the inextricable link between reading and writing. This research has prompted some reading and writing centers and courses to merge. Although there are many exemplary models of teaching reading and writing together as integrated and complementary, an informal survey of the websites of post-secondary reading/writing centers done in the process of writing this chapter shows that, despite some claims to the contrary, many institutions teach reading and writing as discrete subjects. Furthermore, new technologies have shaped people's communicative practices in such a way as to emphasize the blending of reading and writing as well as introducing new means of communication that call into question definitions of reading, writing, literacy, context, and text, which should challenge reading and writing centers to re-examine their practices in light of these new literacies.

HISTORY OF READING-WRITING: CONNECTIONS AND DISCONNECTIONS

Many authors note the historical disconnect between reading and writing—a history Elbow (2002) describes as "a vexed tangle of misunderstanding and hurt" (p. 533). This disconnect has been reinforced by different models of English studies, such as the four strands of English (reading, writing, speaking, and listening) and the tripod model (literature, composition, and language). Mayher observes that "teachers could go on ... teaching literature, grammar, and writing in separate compartments, usually on different days of the week, and letting whatever integration is required happen in the minds of the student rather than in the practices of the classroom" (quoted by Nelson & Calfee, 1998, p. 24). Nelson and Calfee (1998) provide a concrete example of this lack of connection: "For instance, an elementary teacher might teach students about 'main idea' when teaching reading and about 'topic sentence' when teaching writing—without pointing out any overlap" (p. 36). Elbow (2000) explains why reading and writing have been seen as different sets of skills: "the erasing, crossing out, and changing of words as we write is much more visible than the erasing, crossing out, and changing of words that do in fact go on as we read—but more quickly and subliminally" (p. 290). Historically,

this lack of connection has extended from the elementary classroom to college programs of study. Attempts, though, at bridging this gap have occurred over the years.

Historical patterns have worked to bring reading and writing together and to push them apart, what Nelson and Calfee (1998) call "centripetal" and "centrifugal" forces respectively (p. 2). In addition, college English has influenced K-12 English education, particularly at the high school level, what Nelson and Calfee (1998) call a "push down" (p. 6) effect, and ideas and practices at the high school level have shaped college English, or "push up" (Nelson & Calfee, 1998, p. 21). Whether reading and writing are brought together or treated separately, what beginners attend to differs from what older readers and writers attend to because reading and writing are developmental (Shanahan, 1997). On the other hand, because children "must devote conscious attention to a variety of individual thinking tasks which adults perform quickly and automatically," studies of children's thinking processes "can show us the hidden components of an adult process" (Flower & Hayes, 1981, p. 374). Although this chapter focuses on college students, because children can make some of these automatic processes explicit and because of the "push up" described by Nelson and Calfee (1998), some studies on non-college students are included here as well.

Origins of college reading and writing in rhetoric: English studies in the 1800s

Nelson and Calfee's (1998) pulsating view of the history of English Studies in the United States reveals that historically, when connections between reading and writing were made, they often consisted of mimesis—having students read "great works" and write to imitate them. This dates back to progymnasmata, or oratory exercises devised by Aphthonius in fourth century Greece, where some of the exercises involved students learning the rules of various forms, reading exemplars of these forms, and imitating them (Smagorinsky, 1992). The Roman version of rhetoric, on the other hand, integrates reading, writing, speaking, and listening (Murphy, 1998; Ronald, 1986). The way teachers taught rhetoric in the US in the 1800s traces its roots back to Europe, which in turn is based on these Greek and Roman traditions (Langer & Flihan, 2000; Smagorinsky, 1992). Writing in these rhetoric courses of the 1800s involved writing what the student would later deliver as a speech; therefore spelling and grammar rules were often overlooked (Scholes, 1998).

Despite its emphasis on oration, or perhaps because of it, rhetoric held some promise of connecting reading and writing in that it studied the "relation between producing and understanding texts" (Nelson & Calfee, 1998, p. 5), particularly in terms of the author tailoring his or her writing to a particular audience. This stems from Plato and Aristotle, who both described how audience awareness should play a role in rhetoric:

> Plato's rhetorical theory ... encouraged the dialectician to move back and forth among various positions of 'self' and 'other' in order to reach a synthesis of the two ways of looking at the world. Plato wanted his students to be aware of their simultaneous roles as the 'one' and as part of the 'many.' Aristotle's rhetoric argued for a speaker's ability to know another's views, to be able to take on and to make predictions about others' backgrounds, beliefs, and feelings in order to present more effective arguments. (Ronald, 1986, p. 238)

In addition to acknowledging the recursive nature of the roles of the audience and the composer, rhetoricians also saw similarities between the processes involved in reading and writing. In 1783 Hugh Blair, who had enormous influence on the shape of rhetoric, stated: "The same instructions which assist others in composing will assist them in judging and relishing the beauties of composition" (quoted by Nelson & Calfee, 1998,

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p. 7). Although this statement implies that writing should precede reading, followers of Blair's approach to rhetoric used mimesis as their primary form of instruction. Despite the decline of rhetoric as a college course at the end of the 1800s, its emphasis on mimesis had a lasting effect on college English. Mimesis is still used today; for example, Seyler's (2004) college text *Patterns of Reflection* states: "Imitate the readings in this text to improve your writing skills" (p. 3).

Over the course of the 1800s, rhetoric moved from an emphasis on oral expression to an emphasis on written expression (Scholes, 1998). In 1884, Thomas Hunt, a professor of rhetoric, advocated for the inclusion of literary studies at the college level, but with the caveat that "the writing one does about literary studies is different from literature"; thus "the segregation between literature and writing ... [was] born" (Yood, 2003, p. 527). With reading, writing, and speaking orations no longer the center of study when, at the end of the century, rhetoric met its demise as a formal course of study, the reading of literature and writing of criticism that Hunt advocated took its place, resulting in "transform[ing] the students from producers of work comparable to what they studied into passive consumers of texts they could never hope to emulate" (Scholes, 1998, p. 11). These movements transforming rhetoric into literary studies set the stage for New Criticism to take hold at the college level later in the century, despite the progressive movement occurring at the K-12 levels in the early 1900s.

Early promises of integrating reading and writing in the 1930s, 1940s, and 1950s

In the 1930s, various publications held out the promise of integrating reading and writing. In 1932, the National Conference on Research in English Charter established both reading and writing as part of English studies, although they were depicted as separate pieces of a whole (Langer & Flihan, 2000). In 1938, Linda Rosenblatt, writing for the Progressive Education Association, argued in her book *Literature as Exploration* that students "can come to appreciate the artistry of a literary work by engaging in their own creative writing" (quoted in Nelson & Calfee, 1998, p. 21), an argument that expands on Hugh Blair's sentiments from the 1780s. Scholars often cite her transactional theory of reading, which asserts meaning is co-constructed by the text and the reader, as a forerunner of the reader-response theory. This provided the foundation for later arguments that reading, like writing, is a process of constructing meaning. This basis was furthered in a 1939 NCTE committee report, *Conducting Experiences in English*, where reading was portrayed as "an emotional and imaginary experience in which a reader 'rewrites' a book through his or her own experience, and, because of 'emotional intensity,' would want to express himself or herself through extemporaneous writing" (Nelson & Calfee, 1998, p. 20). Shannon (2007) credits progressivism, what he terms "New Education," with introducing the concepts of "voice, choice, and self-expression" (p. 80) that laid the foundations for later ideas such as process writing and whole language. These reports from the progressive movement connected reading and writing by depicting both as meaning-making activities and sowed seeds for future connections.

Because the progressive movement tended to impact English at the high school level, with very little "push up" to the college level, New Criticism—which argues that meaning resides solely in the text—"eclipsed" Rosenblatt's 1938 "innovative theory of the relationship between reader and text" (Newton, 1999, p. 239). Its claim that situating meaning within the reader was committing an affective fallacy remained largely unchallenged during the 1940s and 1950s (Nelson & Calfee, 1998; Reynolds, Herzberg, & Bizzell, 2003). New Criticism did bring together reading and writing at the college level, as professors used writing as a means to assess the reader's ability to derive the meaning of a literary work (Nelson & Calfee, 1998). Because students' interpretations were judged against the interpretations of experts, members of the progressive movement saw this use

of writing as elitist. Instead, progressives argued that writing should be used and taught as a communication tool. In this way, members of the progressive movement pushed for a separation of composition and literature (Reynolds, Herzberg, & Bizzell, 2003).

As GI's returning from World War II went to college in the 1940s, a demand for teaching composition and communication gave rise to the journal *College Composition and Communication*. Initially, composition and communication aligned themselves against their "common enemy" of literature (Heyda, 1999, p. 667), a "joint venture" that, if continued, Heyda (1999) speculates could have "grounded first-year writing in a network of literate practices (writing, as well as speaking, listening, and reading), thereby opening up a wealth of new teaching and research opportunities" (p. 680). By the mid-fifties, though, composition and communication developed their own "turf war" (Heyda, 1999). Eventually composition's traditional ties won out over communication's more "permissive" and "experiment[al]" nature (Heyda, 1999, p. 667). Freshman English and composition became synonymous.

The 1960s revolution

In the 1960s, rhetoric re-emerged, transformed into what was termed the writing process (Reynolds, Herzberg, & Bizzell, 2003). During this time, instructors emphasized the personal ethos aspect of rhetoric, moving from the New Criticism view of writing as deriving meaning from a text to the progressive view of writing as a means of self-expression. At the Dartmouth Conference in 1966 the connection between reading and writing emerged in the form of "creating a 'language community' in which students' writings become the 'literature'" (Nelson & Calfee, 1998, p. 25). In addition, the attention to author and audience from both the reader's and the writer's perspectives, similar to the emphasis in rhetoric, was revived (Nelson & Calfee, 1998). During the 1960s, the call for writers to develop an "authentic voice" alluded to the oral tradition of rhetoric (Reynolds, Herzberg, & Bizzell, 2003). Despite this more synthetic approach to teaching and writing during the 1960s, the analytic field of linguistics gave rise to the phonics movement at the elementary level and an analysis of language structures at the college level (Kucer, 2005).

Early studies focused on the correlation between reading and writing, in other words that a person has similar levels of reading and writing abilities. In 1964 Loban concluded that the relationship between reading and writing is "so striking to be beyond question" (quoted in Tierney & Shanahan, 1991, p. 247), based on his correlational study. Christiansen's (1965) study suggests Loban's findings can be extrapolated to the college level by showing that in two freshman college writing classes, one of which did no reading but had three times the number of writing assignments as the class that did read, the students' writing improved to the same degree. Because these early studies focused on the products of readers and writers instead of the processes they undergo, assumptions made beyond correlation were limited.

Reading and writing as meaning-making activities: Movements in the 1970s, 1980s, and 1990s

Irwin and Doyle (1992), in their review of research on the connections between reading and writing, noted a shift from educators conducting the majority of this research before 1971 to psychologists conducting studies in the 1970s, ushering in a more cognitive approach to reading and writing as both were studied as processes instead of products. This was not a new idea as the five parts of classical rhetoric—invention, arrangement, style, memory, and delivery—outline a process of composing that was revisited in the 1960s (Reynolds, Herzberg, & Bizzell, 2003). This shift in focus from

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decoding language to encoding language reinforced the idea that reading and writing are both constructive processes. Studies in the 1970s by Janet Emig, Donald Graves, Linda Flower, and John Hayes, though, introduced the notion that these constructive processes for both composing and reading are not necessarily linear, but rather are recursive (Nelson & Calfee, 1998; Reynolds, Herzberg, & Bizzell, 2003). Just as thinking involves stops, starts, and jumping around, so do reading and writing.

In the 1970s and continuing into the present, a multitude of scholars examined the cognitive skills common to both reading and writing. The assumptions behind these studies, though, have varied. Sternglass (1986) describes a shift from studies focusing on the interaction between reading and writing, which suggests reading and writing are two separate processes, to studies focusing on the transactive nature of reading and writing, which describes a dialogic process that creates new knowledge. She classifies those studies that focus on the interaction between reading and writing into two orientations: "(1) looking at the role of reading while writing was occurring and (2) the more indirect effect that reading has on a writer" (p. 3). Using think aloud protocols to glimpse into the minds of readers and writers, researchers in the 1970s described reading and writing as conversations between author and audience that create new meanings.

In 1986, Tierney and Leys attempted to move the scholarship in the domain of reading and writing into the classroom by asking, "What are the benefits or learning outcomes that arise from interrelating or connecting reading and writing?" (p. 15). The reader-response, writing workshop, and whole language movements provided answers to this question. Based on Rosenblatt's 1938 idea of meaning occurring as a transaction between the reader and the text, the reader-response method expanded on the cognitive perspective by bringing attention to what the reader brings to a text. This approach led to more expressive forms of writing such as journaling and response papers instead of the more analytical critiques of texts (Nelson & Calfee, 1998). Reader-response still holds sway at the elementary and secondary levels but has been replaced at the college level by newer models of critical theory such as feminism, queer theory, and cultural studies, which use identity as a lens for analysis (Harkin, 2005; Nelson & Calfee, 1998).

Just as the reader-response method shifted the focus of authority from the teacher to the reader, the writing workshop model of the 1980s shifted the focus from teacher-led direct instruction to student-directed writing, where teachers modeled their writing process but students were free to explore their own processes. In this writing workshop model, writers become readers of their own and others' writings through peer response, teacher conferencing, dialogue journals, and portfolios, thus making the movement between their roles as readers and as writers more fluid (Atwell, 1998). The writing workshop model gave educators practical tools to enact the idea of "language communities" introduced at the 1966 Dartmouth Conference.

Although reader-response theory and the writing workshop model both combine elements of reading and writing, each emphasized one over the other. The whole language approach, on the other hand, argues that the development of all aspects of communication—reading, writing, listening, and speaking (what were known in the 1950s as the four strands of English)—depend on each other, instead of operating independently of each other as previously thought. Unlike educators' assumptions in Colonial times that reading had to be "mastered" before writing could be learned, the proliferation of studies in the 1980s concluded that reading and writing skills develop together, not one after the other (Fitzgerald & Shanahan, 2000; Langer, 1992; McCarthey & Raphael, 1992). Although some scholars question the effectiveness of the whole language approach, Gunderson (1997) qualifies the mixed results of research by pointing out that definitions and practices vary and that assessments in research studies often do not test what whole language strives to achieve—that is to encourage students to explore language naturally—and instead test for the skills incorporated in a more phonics/basal

reader approach. Although whole language is associated primarily with emergent literacy, it represents a change in thinking about language development that is reflected in such practices as studying language in use (Reynolds, Herzberg, & Bizzell, 2003), and some have argued for its application at the college level (Fitzgerald, cited in Griswold, 2006).

Because all three of these movements—reader-response, writing workshops, and whole language—"shift the control of literacy from the teacher to students" (quoted in Irwin & Doyle, 1992, p. x), Wilinsky combined these various approaches into what he calls "the new literacy" and cites its origins in the earlier progressive movement (Nelson & Calfee, 1998). This "new literacy" ushered in several shifts from the 1970s to the 1990s as movements in reading and writing paralleled each other, shifting focus from the teacher to the student, from individual construction of meaning to social constructions of meaning, from reading and writing as the domain of English to reading and writing across the curriculum, and from reading and writing single texts to negotiating intertextuality. Tierney (1992) sums up the changes in thinking about reading and writing that evolved from the 1970s to the 1990s that subsequently influenced practice:

1. In conjunction with the process-based descriptions of writing as a problem-solving experience and composing activity, reading researchers developed models of the reader as writer, which complemented and extended the schema-theoretic traditions of constructivist views of meaning making.
2. Developments in linguistics, especially pragmatics, prompted reading and writing searchers to describe meaning making in terms of author-reader interactions and the social dynamics of interpretative communities (i.e., reading and writing are similar to conversations).
3. Studies of preschool literacy development challenged age-old notions of how literacy was acquired and brought to the fore the extent to which reading and writing are intertwined and work together from a very early age.
4. Studies of the relationship of reading and writing to thinking and learning indicated that when writing and reading were tied to one another, both thinking and learning were enhanced. (pp. 248–249)

Studies in the 1970s, 1980s, and 1990s also saw the addition of context to notions about the interactions among the reader, writer, and text. Initially, context was thought of in the immediate present and purpose of the reader and writer (Langer & Flihan, 2000) but later was viewed in terms of the cultural and historical contexts that shape the reader and writer (Gee, 1999; Hourigan, 1994; Langer & Flihan, 2000; Reynolds, Herzberg, & Bizzell, 2003; Smagorinsky, 2001), a shift Gee (1999) describes as a "social turn" (p. 61) away from the individual towards the social. Hirsch (1983) found that readers' assessments of the quality of a piece were greatly influenced by their familiarity with the topic, leading him to conclude, "We found, on the contrary, that it was not possible to separate reading skills from the particular cultural information our readers happened to possess" (p. 143). B. Kennedy (1994), although using a small sample size, also found that topic mattered in terms of non-native speakers of English exhibiting their writing skills and that this was related to various factors such as gender and ethnicity. For Hirsch, these results mean all readers should be enculturated with the same knowledge so readers and writers can share understandings. Other scholars, on the other hand, advocate for honoring diversity in interpretations. Initially, these scholars focused on the cultural contexts of gender, race, and class, but the current decade has seen the addition of exploring the impact of (dis)abilities, sexual orientations, and whiteness (Reynolds, Herzberg, & Bizzell, 2003). Over the course of the 1970s, 1980s, and 1990s, scholars moved from depicting reading and writing as internal cognitive processes governed by the reader/writer's present situatedness to performances of identity.

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The 1990s introduced a new term, or rather a reconfiguration of a term, connecting reading and writing: literacy. Langer and Flihan (2000) found that titles containing the word literacy increased from 18% in the 1980s to 82% in the 1990s in their study of reports, articles, and books published between 1984 and 1997 that were identified by the keywords "reading and writing," "writing and reading," and "literacy." Originally, the term literacy "described the skill of encoding and decoding print" (Morris & Tchudi, 1996, p. ix), i.e., reading. Over the years, though, definitions of literacy have broadened to encompass writing, to include more than just the written word, and to mean "competence" in a variety of areas unrelated to printed text (Morris & Tchudi, 1996). In addition, distinctions among types of literacy emerged. For example, Langer (2002) distinguishes between basic literacy and "high literacy," which she defines as "a deeper knowledge of the ways in which reading, writing, language, and content work together" (p. 3). Morris and Tchudi (1996) break literacy into three different types: basic, critical, and dynamic. Others use the term critical literacy to mean "question[ing] the basic assumptions of our society" (L. Christensen, 2000, p. 56) and information literacy to speak to the need to critically evaluate information in the age of the Internet (Grabe & Grabe, 2007). As definitions of literacy have expanded, so have our understandings of what it means to be literate.

Some have tried to capture the impact of culture on these broader notions of literacy. In 1994, the New London Group, a group of ten scholars in the field of literacy studies, coined the term "multiliteracies" to capture both the expanding nature of literacy studies and the dynamic nature of language as it is shaped by culture (Cope & Kalantzis, 2000). Similarly, Landis (2003), Street (2005), and others use the phrase "New Literacy Studies" as an interdisciplinary approach to examining the socio-cultural aspects of literacy. Martin-Jones and Jones (2001) define literacies as "ways of reading and writing and using written texts that are bound up in social processes which locate individual action within social and cultural processes" (pp. 4–5). These broader conceptions of literacy, or of literacies, led Miller (2006) to suggest English departments should regard themselves as "departments of literacy studies" (p. 154).

At the college level, these shifts in thinking culminated in the discourse community movement, reminiscent of the language communities advocated for at the 1966 Dartmouth Conference, in which participants create a larger, wider conversation by responding to each other's texts and develop their own body of knowledge and ways of knowing. Nelson and Calfee (1998) describe this organic process as "blending the roles of author and audience" as members "read one another's texts and build upon one another's work in producing one's own" (p. 33). These "interpretive communities" create the text of the class (Fish, 1980). Reading and writing about multiple texts requires readers to negotiate tensions among texts and evaluate authors' perspectives, a process Tierney (1992) describes as "learners crisscross[ing] between published texts, their own writing, and the writing of peers" where "a kind of dialectic between ideas emerges; this exchange facilitates shifts in thinking and builds momentum for further learning" (p. 251). Instead of writers creating an "invented reader" (Augustine & Winterowd, 1986) to test their intentions against potential reactions and readers creating an "invented author" (Shanahan, 1998), discourse communities provide a multitude of real readers' responses to authors who can be questioned about their intentions (Chappell, 1991). Thus, discourse communities enact the internal conversations that Murray (1990) and Brandt (1986) describe as taking place between the reader and the author and blur the distinctions between the writer as participant and the reader as spectator (Ronald, 1986). Chappell (1991) describes this as "bring[ing] the reader into the picture as a co-composer" (p. 57). In other words, discourse communities make the transactional nature of reading and writing public.

Discourse communities also make public the enculturation process literacy performs. Landis (2003) and others argue that reading and writing are the result of socialization processes that privilege some and disadvantage others. Having "discourse competence" (Kutz, 2004) reveals whether or not one is an "insider" in a discourse community. Because "the acquisition and use of languages and literacies are inevitably bound up with asymmetrical relations of power between ethnolinguistic groups" (Martin-Jones & Jones, 2001, p. 1), discourse communities have the potential to become what Pratt (1996) describes as "contact zones" where cultures clash. Depending on how this clash of cultures is negotiated, it can be a place of democratizing voices or of exacerbating differences between those advantaged and those disadvantaged by cultural language practices. Because of this, the English for Academic Purposes movement formed to make these unwritten rules explicit and thus accessible to a more diverse student population (Ferris & Hedgcock, 1998). Macbeth's (2006) study of international students grappling with concepts of academic writing demonstrates the need for rendering visible protocols that are taken for granted. White (2007), who views entering college as a cultural transition where some students need to learn the foreign language of academies that have been "modeled upon a white, western tradition" (p. 273), confirms the effectiveness of this approach by showing an increase in the retention and academic success of minority college students after being taught academic literacy. During the 1970s, 1980s, and 1990s, scholars formed more complex views of reading and writing.

Bringing research practices together in 2000 and beyond

The current decade has already seen researchers combining the various areas and approaches previously treated in isolation. Rice (2006) defines English studies as the "intersection of various areas of discourse that produce thought and knowledge" (p. 132), a definition Nowecek (2007) explored by studying the interdisciplinary connections professors and students made in an interdisciplinary course. Kucer (2005) calls for the different perspectives on reading and writing—linguistic, cognitive, sociocultural, and developmental—to take off their blinders and consider how all the approaches interact in authentic literacy: "Disciplinary perspectives frequently result in viewing reading and writing from a single angle that may obscure an understanding of how literacy operates in the real world" (p. 6). Some researchers have responded to this call. For example, Dudley-Marling and Paugh (2004) bring together the ideas of authentic voice and whole language to advocate for an approach that honors cultural influences. Wardle (2004) examines how understanding the conventions of various genres can be aided by peers as they navigate the socialization process together. In their current research, Paulson, Alexander, and Armstrong (2007) are using eye-movement to illuminate what college freshman pay attention to during the peer review process. In these ways and others, a more complex understanding of real world reading and writing practices is emerging.

In addition to combining approaches within these various fields that have traditionally studied the relationship between reading and writing, the current decade has also seen examinations of how other areas influence reading and writing. For example, Sohn (2004) examines how college freshman describe music as influencing their literacy development. This is supported by Gromko's (2005) study that suggests music instruction may improve kindergartners' phonemic awareness. Johanek (2004) argues that lack of numeracy at the college level inhibits students from understanding texts and forming arguments. Gutstein (2006) takes this a step further by promoting mathematics as a tool to work for social justice by teaching students to "'read and write the world' with mathematics" (p. 4). Cheville (2004) shows professors fail to take advantage of kinesthetic schema in their teaching, arguing that "one's embodied activity is the means to language and thought" (p. 343). Her claims are supported by Allen, Morrison, Deben-

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ham, Musil, and Baudin's (1999) study of third-graders who improved their reading and writing skills through using a sign system for movement and by Roth's (2001) review of studies that demonstrate the positive impact of gestures on acquiring "scientific modes of discourse" (p. 375). Fleckenstein (2001) argues that there has been a lack of attention to the role imagery plays in reading and writing at the postsecondary level. Stroupe (2000) asserts that increases in graphic technologies makes this a necessity and proposes an English studies curriculum he calls "visualizing English" (p. 609). All of these studies examine how assumed dichotomies—between pleasure (music) and academics (literacy), between quantitative (numeracy) and qualitative (literacy), between body (kinesthetics) and mind (literacy), between the visual and the linguistic—can blind us to the connections and influences each have on the other, similar to how assumed differences between reading and writing have historically separated the two. Although Dembo and Howard (2007) call into question learning style research, Armstrong (2003) brings all of these approaches together in his advocacy of applying multiple intelligences (MI) to literacy learning: "We have limited ourselves too much in the past—even in the field of MI theory—by considering too narrow a range of interventions and ignoring many other strategies that are available for helping children and adults acquire literacy skills" (p. 7). All of these authors argue for studying and teaching reading and writing in ways that simulate real world literacy.

Conclusion: Exploring the split

Despite the reading-writing connections described in this section, there are still distinctions made between reading and writing at the college level:

> College English, a discipline that still lacks a center, is populated by literature (reading) people and composition (writing) people who have experienced different kinds of graduate education, who cite different authors, who use different terminology, and who publish in different journals; and turf wars still rage. (Nelson & Calfee, 1998, pp. 35–36)

The two sides of this false binary, though, have not been seen as equal historically. To use Emig's (1983) metaphor: "In the house of English studies, literary study is in the parlor; writing, in the kitchen" (p. 174). McLeod (2006) expands upon this metaphor by citing a colleague who refers to the composition faculty as "the housewives" (p. 526), which suggests underlying sexism behind the split. Bleich (1986) explains this hierarchy in terms of class: "literature is the subject that was taught to the rich to increase their cultivation; composition is the subject that has grown out of getting 'literacy' into the minds of the previously poor, enslaved, or otherwise unprivileged" (p. 104). Comley and Scholes (1983) echo this assessment: "As might be expected in a society like ours, we privilege consumption over production, just as the larger culture privileges the consuming class over the producing class" (p. 97). As a result, "teachers of writing are usually paid less to teach more under poorer working conditions" (Elbow, 2002, p. 533). Horner (1983) explains this disparity by pointing out that historically English professors viewed grading papers as tedious and complained about the quality of student writing, so they assigned graduate students to grade papers and then to teach composition. This allowed literature faculty to teach the graduate seminars they preferred. Because graduate students and adjunct faculty could be paid less, this financially benefited the university, especially since freshman writing classes required a lot of instructors due to small class sizes and large enrollments.

Harris (2000) uses a factory metaphor to describe the dynamics of this "economic exploitation" (p. 44). Employing the term "comp droids," coined by Cary Nelson to

describe composition teachers, and the term "boss compositionist," coined by James Sledd to designate the faculty member "assigned to supervise the droids" (Harris, 2000, p. 44), Harris (2000) describes Sledd's argument that "in exchange for faculty status for [boss compositionists, they] have, in effect, agreed to make sure that the academic faculty hums along efficiently in the interests of management—that is, of the tenured professoriate" (p. 44). The economic, teaching, and intellectual advantages to those making the decisions have entrenched the chasm between reading and writing.

Elbow (2000) adds another dimension to this turf war beyond the teachers of English to the readers and writers of texts. He writes that the "war between reading and writing" is about who has "'author'—ity" (p. 282) over the text, i.e., who has the right to determine the meaning of the text, the author or the reader. He quotes Toni Morrison to point out how the "death of the author" (Barthes, 1968) can rob minority writers of their voices. The current divisions between literature and composition are a manifestation of the competing theories about where meaning resides that have driven the history of college English.

Although McLeod (2006) argues composition needed to break from English Studies in order to establish itself and mature as a field, some hold out hope that scholars will have the "curricular courage" to "heal the split" (Murphy quoted by Ronald, 1986, p. 231). Back in 1983, Horner's book *Composition and literature: Bridging the gap* developed from a concern about the "widening gulf" (p. 1) between the two, expressed by the Teaching of Writing Division at the 1980 Modern Language Association (MLA) conference. At the 1982 MLA conference, Wayne Booth in his presidential address called for composition and literature to come together (Yood, 2003, p. 534). In 1986 Ronald suggested that discourse communities "can lead the profession away from such arbitrary distinctions as 'lit person' and 'comp person.' After all, we are all primarily interested in teaching our students how language shapes and communicates knowledge" (p. 244). Although the high hopes from the 1980s have not been fully realized, Mattison's (2003) study of graduate teaching assistants does offer optimism, as he found that "they would more appropriately be seen as inhabiting both [literature and composition worlds] simultaneously" (p. 440). Jolliffe (2007) encourages composition instructors to teach reading as well, and Griswold's (2006) study of writing center tutors found that even though they did not address reading skills, they all indicated they wanted to but did not know how. Harris (2000) proposes that the solution involves restructuring freshman writing courses and argues that in addition to using tenured and tenure track professors to teach composition, those who currently teach composition courses need more support and respect. If the hopes and suggestions of these scholars and others come to fruition, perhaps the research about the benefits of integrating reading and writing can be realized in college classrooms and learning assistance centers.

THEORY INTO RESEARCH

How scholars have gone about researching the connections between reading and writing is based on whether they view reading and writing as consumption versus production, as constructing meaning from a text and constructing a text to convey meaning, or both as creating a conversation. Ironically, in order to tease out the connection between reading and writing, some researchers have separated them out, which, as Tierney and Leys (1986) point out, is "confounded [because] when an individual writes he or she also reads, and when an individual reads he or she often writes" (p. 17). One way of organizing studies exploring connections between reading and writing is the three different approaches outlined by McCarthey and Raphael (1992): cognitive information processing theories, Piagetian/naturalist theories, and social-constructiv-

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lst theories. Each of these comes with its own set of assumptions that guide and shape the studies.

Cognitive approaches

Those scholars operating from the cognitive information processing arena use the metaphor of the computer as their lens for analyzing reading and writing. As such, they see reading and writing as processes composed of subprocesses, or to use computer lingo, routines and subroutines, which aptly suggest the importance of "automaticity" that information processing theorists expound. Just as computers have a limitation on their processing, theorists from this camp contend that humans do as well. Therefore, the more subprocesses that are routine, or automatic, the more processing energy can be devoted to subprocesses that are not automatic, such as planning, comprehension, and metacognition. Correlational studies originating in the 1960s provided the foundations for cognitive approaches taken in the 1970s and beyond.

Studies connecting reading and writing began, and continued, with correlational studies. Several studies (Aydelott, 1998; Birnbaum, 1986; Kennedy, 1985; Spivey & King, 1989) have shown correlations between reading and writing scores at the college level. Stotsky's 1983 meta-analysis of reading-writing studies (cited in Fitzgerald & Shanahan, 2000) supports the findings of these studies: that struggling readers are often struggling writers and that proficient readers are proficient writers. She found that correlational studies compared writing ability to reading achievement, to reading experiences, and to reading ability, with the latter comparison specifically looking at writing ability in terms of the complexity of writer's syntactic structures. Many of these correlational studies used reading comprehension scores in comparison to writing abilities based on scoring the participants' written work and found correlations at all stages of the writing process—planning, composing, and revising. Some of the particular studies have been criticized, though, for using different types of measures to test reading than to test writing, for having small sample sizes, for ignoring other possible variables, and for not being longitudinal, leading Fitzgerald and Shanahan (2000) to question their generalizability and pedagogical use.

Despite this criticism, these correlational studies laid the foundation for studies of causal connections by analyzing the products of reading and writing and by exploring the processes of reading and writing primarily through think aloud protocols. For example, interviews about the backgrounds and background knowledge of participants revealed that poor readers and writers had fewer experiences with reading and writing, less knowledge about reading and writing, and less background knowledge on the topic area (Birnbaum, 1986). Similar conclusions have been drawn on studies of English Language Learners (ELL). Ferris and Hedgcock (1998) found that the more ELL students read in their second language for pleasure and academics, the more their writing skills in that language improved. This improvement, though, was dependent on their levels of literacy in both their first language and their second language. Olson and Land's (2007) study of ELL students at the secondary level lends support to the necessity for some students of making the connections between reading and writing explicit in order to foster transfer between the two.

College students' attitudes about their reading and writing also correlated with their abilities (Birnbaum, 1986; Selfe, 1986). Selfe points out, though, that these differences may not be due to differences in their willingness, but rather differences in their skills, pointing out that the apprehensive writer in her study said, "I'm not sure I know *how* to revise my papers" (p. 59). Birnbaum (1986) also found that poor college readers/writers viewed themselves this way. In her earlier study on fourth and seventh graders, Birnbaum found that "more proficient readers tended to know *how* to think and *what* to

think about while they were reading and writing" (quoted by Tierney and Leys, 1986, p. 23). Further studies using the cognitive approach examined the specific skills proficient readers and writers use; many found that they use the same skills for both.

Kucer describes this phenomenon as "reading and writing ... become one instance of text world production, drawing from a common pool of cognitive and linguistic operations" (quoted by Moore, 1995, p. 600). Because of this, Valeri-Gold and Deming (2000) explain:

> Reading and writing are based on cumulative abstract processes, and the cognitive restructurings caused by reading and writing develop the higher reasoning processes involved in extended abstract thinking (Havelock, 1963; Squire, 1983). Good readers and writers develop higher order thinking processes that involve reasoning, recognizing patterns of organization, and synthesizing the author's ideas. Reading-writing processes include exploration and comparison of what readers and writers state and what they mean and what others say and mean (Carothers, 1959). Thus, an analysis of the cognitive processes becomes essential for understanding how reading and writing are related. (Ong, 1972, p. 158)

Many models have been proposed to capture the similarities between the skills of reading and writing. Although they use different terminology, they list common skills such as: setting goals, testing hypotheses, predicting outcomes, using prior knowledge, making inferences, monitoring, contextualizing, categorizing, questioning, and revising.

Further studies show, though, that the difference between good readers and writers and poor readers and writers goes beyond employing these cognitive skills to an awareness of one's own reading and writing goals, strategies, constructions of meaning, and alternative constructions of meaning, i.e., metacognition. This awareness leads to a greater willingness to revise. Based on her observations and interviews with college students of varying proficiency with reading and writing, Birnbaum (1986) concludes that good readers and writers have acquired the skills to reflect on written language and thus can see how it varies depending on context, audience, purpose, and discipline. In addition, good readers and writers reflect on their own reading and writing processes and therefore can see the connections between reading and writing, allowing for transfer between the two (Birnbaum, 1986). She concludes by advising teachers to model their own reading and writing strategies by thinking out loud and to give students opportunities to articulate their thoughts while reading and writing. Although their focus was on reading, Shrokrpour and Fotovatian (2007) made similar recommendations for teachers of ELL students.

El-Hindi's (1997) study enacted Birnbaum's suggestion by having students in a precollege summer program write "reading logs" where they reflected on their reading and writing processes and learned other metacognitive strategies. Through qualitative analysis of these logs and pre- and post-program questionnaires, she found that "metacognitive awareness for reading and writing increased over time and that learners developed a greater sense of the relationship between reading and writing" (p. 10). Having students record their work through portfolios where they choose their best and most improved work and explain those choices also makes metacognition explicit. Advocating for the use of portfolios and anecdotal records as assessment instruments, Lewis-White (1998) points out that if reading and writing are interactive, assessment instruments should be as well. Metacognitive awareness has even been used for placement purposes. Administrators at Lyndon State College in Vermont place students into Freshman English classes partially based on student essays in which students choose which Freshman English class they should take and defend their choice based on their own assessment of their reading and writing abilities, giving them a "sense of ownership ... [which] is the first

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step toward being active participants in their own learning" (Luna, 2003, p. 391). Previously the administrators had found little relationship between success in Freshman English classes and placing students based on standardized reading scores and writing samples; using students' own assessments increased success. Examining and increasing metacognition proves to be a promising avenue to understanding the connections between reading and writing and increasing transfer between the two.

Showing there is a potential link between reading and writing through correlational studies and then examining the specific cognitive processes that comprise that link, cognitive approaches to studying reading and writing have advanced the field. McCarthey and Raphael (1992) criticize these studies, though, for focusing on the differences between experts and novices instead of studying "how the novice becomes more expert" (p. 8), and for not taking into account such variables as the purpose of the reading and writing tasks, the context of the instruction, and the background of the reader/writer.

Piagetian approaches

In contrast to the cognitive information-processing approach, the Piagetian/naturalist approach, or whole language, emphasizes the natural development of reading and writing "driven by the learner's need to make sense of the world" (McCarthey & Raphael, 1992, p. 9). Based on this view, learning to read and write is viewed as an organic process originating from oral language, rather than a mastering of subskills. The "new literacies" movements of the 1970s and 1980s that include reader-response, writing workshops, and whole language reflect this approach of seeing reading and writing as a means of human expression rather than a set of discrete skills.

Because both reading and writing use language as a tool to "name and compose and grasp their own experiences" (Demott & Holbrook quoted by Comprone, 1986, p. 248), reading and writing satisfy the "perpetual human quest for *meaning*, for understanding experience" (Tchudi, 1986, p. 250). Reading and writing express and shape the self—"*the self writing* and *the self being written*" (Buley-Meissner, 1991, p. 30)—and enable readers and writers to imagine possibilities, challenge the status quo, and hypothesize "alternative social, economic, and sexual structures" (Emig, 1983, p. 177). Thus reading and writing not only help people understand themselves and make sense of past experiences; they help people imagine future selves and future experiences as well.

Blending arguments from the cognitive approach with the developmental approach, Ronald (1986) advocates for expressive discourse "because it works from the cognitive skills common to both processes ... expressive discourse can help teachers integrate reading and writing in ways that will improve students' control of both" (p. 236). Developmentally, children move from outer speech to inner speech, and expressive writing can be seen as reversing that, moving inner speech to outer writing, to further understand the self (Comprone, 1986). Gee argues that "one of the primary ways—probably the primary way—human beings make sense of their experiences is by casting it in narrative form" (quoted by Kutz, Groden, & Zamel, 1993, p. 40). In these ways, expressive writing brings together both feeling and knowing (Elbow, 2002).

Instead of writing for an invented reader, the primary audience of expressive writing is the self. The self takes on both roles of reader/spectator and writer/participant, thus blurring that false dichotomy and increasing writer/reader awareness:

> Expressive discourse collapses the rhetorical triangle and thus focuses the writer's attention on the reader, as he or she moves among the roles of reader, speaker, listener, responder. Expressive writing, because it is private discourse, at first makes the writer into the subject on the page and then into the reader of that discourse. Beyond providing an argument for reintegrating reading and writing, teaching

expressive discourse suggests another line of inquiry: how does the writer's self change as it moves outward from its role as initial subject and audience? What happens as students consciously examine the changes that the "I" goes through from varying perspectives of "other" as the text is composed while reading or writing? (Ronald, 1986, p. 238)

Adherents to this approach make the claim that expressive writing develops the meta-cognition described by cognitivists.

Studies on college students show benefits of expressive writing. In science, an area where lab reports and research projects are the norm, Deal (1998) found that through expressive writing such as poetry and learning logs, pre-service teachers improved their attitude toward teaching science and learned science concepts and problem-solving: "The reflective writing they do during my class seems to help students become aware of their own growths and beliefs regarding science" (p. 253). Kutz, Groden, and Zamel (1993) describe how reading expressive writing by multicultural authors helps students develop their own authentic voices as writers: "For our students, to read the too-often silenced worlds—the poems and stories that speak to them ... and thereby to retrieve their own words and give voice to their own silences, is an essential part of their lives as writers" (p. 168). By building on the idea that reading and writing are natural means of human expression, scholars in this domain encourage students to explore connections between reading and writing. McCarthey and Raphael (1992) criticize this approach, though, for not acknowledging the role of teachers or of culture.

Socialconstructivist approaches

Socialconstructivists address the criticisms McCarthey and Raphael (1992) have of the Piagetian/naturalist approach by emphasizing the importance of culture and others on learning. As such, they explore the effects of context, peers, and cultural differences on literacy practices. Modeling by more advanced peers and teachers provides scaffolding for learners to become proficient at new strategies and applies social constructivism to cognitive approaches described previously. Elbow (2002) describes this "newer and powerful tradition of cultural studies" as helping "students use texts for making sense of their lives" (p. 538). Citing Chase's words that "writing profits from being taught against a meaningful background of reading and vice versa.... [W]riting and reading become more meaningful still when they are placed in a still larger context of overall language use" (p. 601), Moore (1995) argues that "a socioconstructivist classroom can provide the larger context for overall language use" (p. 601). One aspect of the socio-constructivist classroom involves the teacher as a collaborator with students. Salvatori (1996) criticizes theories connecting reading and writing that urge teachers to do to and for students "rather than something teachers do with their students to open up areas of investigation that this particular focus makes possible" (p. 445). Peer reviewers, another aspect of the socioconstructivist classroom, embody the invented reader by "provid[ing] a visible audience for each other. They also motivate each other to self-reflect and they create a need to respond to questions and answers" (Forman & Cazden quoted by Moore, 1995, p. 602), thus making the "dialogue with the author" (Murray, 1990, p. 1) tangible. Atwell's (1998) descriptions of reading and writing workshops encompass all of these pedagogical strategies.

Social constructionists move beyond uni-directional notions of readers and writers bringing their own "play of cultural resources and uniquely positioned subjectivity" (Cope & Kalantzis, 2000, p. 23) to texts by acknowledging and exploring the influence reading and writing texts has on readers. As Bartholomae and Petrosky (1996) put it, "you make your mark on a book and it makes its mark on you" (p. 1). The term

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languaculture, coined by Agar (1994), speaks to the inextricable interconnectedness of language and culture. The reception theory explores the flip-side of the reader-response theory by exploring how texts influence "specific classes of readers" (Harkin, 2005, p. 411), instead of what an individual reader brings to a text. The New London Group (Cope & Kalantzis, 2000) coined the term "redesigned" to indicate how "meaning-makers remake themselves" (p. 23) through literacy practices. Wallace (2006) addresses the need for readers and writers to acknowledge their differences instead of assuming commonality, but Himley (2007) points out teachers need to move beyond "invoke[ing] difference" to "evok[ing] a commitment to action, social change, and redistributive social justice" (p. 452). In these ways and others, scholars have attempted to capture the complex multi-directional relationships among individuals, contexts, and texts. McCarthey and Raphael (1992), though, point out the difficulties in testing these theories and the overemphasis on culture with an accompanying lack of acknowledgement of the role of the learner.

Differences between reading and writing

Despite scholars describing similarities between reading and writing, it is important to note that some have found stark differences. Although Emig (1983) defines writing and reading both as acts of creation, she distinguishes between the two by noting that "writing is originating" (p. 124) and reading is not. Similarly, Elbow (2000) insists "writing simply does promote more activity and agency than reading" (p. 292). Tierney and Leys (1986) suggest that the relationship between reading and writing is not a given. Examining the data from Loban's 1964 research, one of Shanahan's studies, and their own study, they found good readers were not necessarily good writers and vice versa. Langer and Flihan (2000) also reviewed several studies and came to similar conclusions. Tierney and Leys (1986) point to differences in reading and writing instruction as well as measurements of reading, which tend to be quantitative, and writing, which tend to be qualitative. They suggest that other factors may be involved as well, such as the degree to which reading and writing are paired together and/or that the correlation may be task or genre specific. Fitzgerald and Shanahan (2000) point to a number of brain injury studies where people can read but not write or can write but not read. These studies demonstrate that just because reading and writing are similar, they are not the same.

Shanahan (1997) asserts that if reading and writing were the same, then instruction in only one would be needed in order for development to occur in the other. Finding that his 1987 study did not support this, he suggests that reading and writing are complementary processes, but that combining the two does not automatically mean improvement in both. The National Literacy Panel on Language-Minority Children and Youth found that reading skills were necessary but not sufficient by themselves to improve the writing skills of ELL students (August & Shanahan, 2006). The panel explained this by pointing out that decoding text requires word-level skills such as word recognition and spelling whereas writing and reading comprehension involve encoding, which requires both word-level and text-level skills. Fitzgerald and Shanahan (2000) describe choice as the essential difference between the reading and writing. In other words, readers are constrained by the author's words, whereas authors choose from an unlimited number of words.

Although some of the knowledge and skills involved in reading and writing overlap, several studies found that readers and writers prioritize and use them differently, supporting Shanahan's view of reading and writing as complementary. For example, Langer's 1986 study found that writers were more concerned with grammar and goal setting, whereas readers focused on content and validation (cited in Langer & Flihan, 2000). Shanahan (1997) points out that these priorities are developmental, as students'

concerns shift from decoding to encoding. He concludes that instructional practices combining reading and writing need to be developmentally appropriate. Tierney (1992) warns of the dangers of connecting reading and writing, urging educators to critically examine the effects:

> I encourage researchers and practitioners to pull back from their enamorment with reading/writing connections to consider the drawbacks. Sometimes, writing and reading may stifle rather than empower. We should try to understand how and in what situations reading and writing contribute to didacticism versus dialogue, rigidity rather than flexibility, entrenchment rather than exploration, paraphrasing or plagiarism as opposed to new texts. (p. 258)

Despite this caution, taken all together these studies suggest it is these differences, in addition to the similarities, that allow reading and writing to truly complement each other. Thus, teaching reading and writing together can be greater than teaching them separately.

RESEARCH INTO PRACTICE

Reading to write

In composition courses, reading has traditionally been employed to inspire writing (the "bounce off function") to provide evidence for student essays (the "digest to incorporate method"), and to serve as models for writing, ("reading-to-imitate-development") (Jolliffe, 2007, p. 477). The last usage, the mastery of forms, has been codified in such a way that some writing programs insist not only on students imitating specific types of writing such as writing summaries, definitions, persuasive essays, and so forth, but also insist on having students imitate the style of a particular author. Not only does reducing writing into prose structures oversimplify the complexity of writing, as writers often employ multiple genres in their writing, but it assumes transfer between reading and writing will occur by "osmosis" (Prose, 2006, p. 3). Tierney and Leys (1986) question the automaticity of this transfer, stating that at the college level "we have very little research exploring ... transfer possibilities" (p. 23) between reading and writing. Birnbaum (1986) advocates for teachers to "rejoin the teaching of reading and writing, and view one as a mechanism for developing the other" (p. 42), but her own study shows that it is when the *students* "view one as a mechanism for developing the other" that this transfer can occur.

Foster (1997) questions the value and assumptions behind what he calls the "modeling effect" (p. 518). Unlike most studies in this area that focus on the cognitive domain, he focuses instead on the affective and attitudinal domains by studying college students' reactions to using this method. Through documenting his students' resistance to appropriating textual strategies into their own writing, he found that they made deliberate choices about which elements they imitated, rejected, or re-contextualized in order to create their own voices as writers. He points out that research studies attesting to the transfer of reading to writing are often based on tasks in which students were asked explicitly to imitate a prose structure, text strategy, or author's style. In his study, he had students write reactions to the readings and construct personal essays in which they could choose whether or not to base it on the text. Although his students, for the most part, resisted copying writing techniques based on the readings and instead attempted the techniques "only in small and gradual increments" (p. 536), he found students extremely articulate about their reactions to the texts and the structural and writing techniques used by the authors, suggesting a "readiness" (p. 538) to use such techniques.

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He does note that the intimidation factor may have worked to prevent students from attempting to imitate the authors they read and also argues that requiring students to imitate texts they find intimidating could serve to shut down the writing process. He concludes by saying, "I don't think this study means that reading/writing transferability does not work for students. Rather, what it shows is that students' willingness to enact this transferability is strongly affected by the pedagogical context of the task" (p. 537). This suggests that perhaps what should be studied is the transfer between directed reading-writing tasks and more authentic forms of writing.

Smagorinsky (1992) addresses Foster's concern about the limited transferability of modeling by pointing out when it can be of most use. He names some of the common criticisms of mimesis: that authentic writing combines the different forms and that "the study of a product simply cannot *teach* a writing process" (p. 163), quoting Murray's (1980) example that "process cannot be inferred from product any more than a pig can be inferred from a sausage" (p. 163). He then emphasizes that modeling can be one of many tools in learning to write if used appropriately. To drive home his point that students need both skills and content knowledge to benefit from imitating an exemplar, he uses an example from Bransford of a physicist modeling a proof that is clear to other physicists, but unclear to non-physicists. In addition, he points to studies that show focusing on and imitating a few features instead of all the features of a model has greater benefits. In his own study, he found that combining procedural instructions with models resulted in greater critical thinking and more purpose driven writing than did using models alone.

In addition to concerns about transferability, other scholars have concerns that mimesis might restrict a writer from finding his or her authentic voice:

> Such assignments fail to show students how their responses play a part in shaping the meaning of the texts they read and write. The texts they read, then, become obstacles rather than opportunities for students to reason about how they shape what they read and incorporate it into their own personal schemes, and the texts they write become formulaic rather than exploratory, making students passive participants in the acts both of reading and writing. (Ronald, 1986, p. 236)

In 1974, Coles called for composition teachers to throw out anthologies and other reading materials because they led to what Salvatori (1996) calls "'canned' or 'theme' writing" (p. 442). Instead, Coles argues students should write from their own experiences, develop their own voice, and respond to their own texts (cited in Salvatori, 1996). In 1980, Fish's book, *Is there a text in this class? The authority of interpretive communities,* describes what Coles advocates.

Because the reader-response theory involves students' own experiences in their reactions to texts, it allows the students' experiences and authentic voices entry into writing based on reading. Others also suggest that making the internal conversations readers have with texts visible through close readings (Prose, 2006), glossing (Kutz, 2004), and dialectical journals (Smith, 1997) will improve writing. Salvatori (1983) argues that students who pay attention to how they respond to texts will discover the connection between how a writer writes and how a reader reacts, and thus will be able to "read with a 'writer's eye' and to write with a 'reader's eye'" (Birnbaum, 1986, p. 32), what Murray (1990) calls having a "double vision" (p. 13). Salvatori (1983) specifies, though, that this benefit is unidirectional: "My research suggests that the improvement in writers' ability to manipulate syntactic structures—their maturity as writers—is the result, rather than the cause, of their increased ability to engage in, and to be reflexive about, the reading of highly complex texts" (p. 659). In these ways, readers read to write.

Viechnicki (1999) uses research about readers' expectations to structure her college level writing courses. For example, she cites research that shows readers prefer that old

information precede new, that subjects and verbs appear together and near the beginning of the sentence, and that verbs describe the action in the sentence (active voice) and subjects are the active agents of that action. By making her students aware of how they can use this research to compose and revise their writing, she finds that this "reader-based" approach to writing makes her students more aware of audience when they write and more aware of themselves as audiences to the writings of their peers. Others have also advocated for writing based on reader's expectations (Duncan, 2007; Gopen, 1990; Kuriloff, 1996). Providing students with linguistic tools to analyze writing allows both writers and readers to move beyond "personal reactions" (Ronald, 1986, p. 127) to gain the distance necessary to revise writing, in other words to become both a "spectator" and "participant" (Ronald, 1986) to their own and others' writing.

Writing to read

Although most research, theories, and classroom practices emphasize reading to write, a number of works investigate writing to read. Jencke's 1935 study of high school and college students found that writing summaries after reading improved comprehension and vocabulary (cited by Valeri-Gold & Deming, 2000, p. 157), as did Wittrock's 1983 study (cited by McCarthey & Raphael, 1992). Shokrpour and Fotovatian's (2007) study found that the better readers among ELL students used strategies such as elaboration, note-taking, summarizing, understanding text-structure, and assessing comprehension—all strategies that can be enhanced by writing. One way of using writing to improve critical thinking about texts is through asynchronous online discussion boards, which can give students opportunities to reflect and revise ideas (Lee, 2007). Elbow (2000) explains that writing first creates avenues for students to be "able to take in more new material" because "they [have] first work[ed] out their own thinking about it" (p. 289). These studies support Petersen's assertion that "[W]riting plays a perhaps unique role in helping students think about and comprehend texts" (quoted by Sternglass, 1986, p. 1).

Salvatori (1996) uses writing to make students' "introspective reading" (p. 446) explicit. To do so, she uses what she terms a "triadic (and recursive) sequence" (p. 447), where students first write a response to the text, then reflect on how they read and possible reasons why, and then rewrite the text in terms of their reading of it. Her goal is to "teach readers to become conscious of their mental moves, to see what such moves produce, and to learn to revise or to complicate those moves as they return to them in light of their newly constructed awareness of what those moves did or did not make possible" (p. 447). She admits that she meets resistance from students who are not used to doing such reflection but concludes by saying it is "an approach that might mark the difference between students participating in their own education and their being passively led through it" (p. 452). Similarly, Soldner (1997) describes having her college students freewrite in order to increase their metacognition by exploring their various reading strategies when they read with ease and when they read with effort. Elbow (2000) employs a procedure he compares to using a slow-motion camera, where he has students read part of a text, write down their understanding of it, then read more of the text, do more writing, and so on. In this way, he shows students that reading is active hypothesis testing, as students write out their "rough drafts of reading" (p. 290). These scholars advocate for writing to increase the reader's awareness of his or her own reading strategies.

Elbow (2000) flips the typical pattern of reading to write employed by those practicing the "modeling effect" in order to challenge presumptions about the authority of authors:

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The usual pattern in literature classes—indeed in almost any kind of class in any kind of school—is to read a text first and then write afterward in response to it. And even if the text we read is imaginative, the writing is usually expository and critical. I hear two messages in this conventional arrangement. First, "The role of writing is to serve reading." Second, "We cannot enter the same discursive territory that the 'literary artist' occupies." I want to jostle these assumptions ... by putting writing before reading and giving ourselves permission to write imaginatively. (p. 361)

This approach "dispel[s] the myth that texts are magically produced" (Elbow, 2000, p. 363) by allowing students to approach texts as fellow writers. Scholars have used writing to read to increase comprehension and retention, to improve metacognition, and to build confidence.

Teaching in between

Instead of seeing reading as part of the process to achieve the end product of writing or writing as part of the process to achieve the end product of reading, some theorists see them as complementary, not as a means to an end. Emig (1983) captures this synergy in her statement: "We believe that writing in concert with reading uniquely sponsors thought and imagination" (p. 177). Aydelott (1998) details this in describing the transactional nature of reading and writing:

> The "knower" as well as the "known" are transformed during the processing of learning and knowing. New knowledge is accommodated and assimilated by the reader, thereby altering the reader's conceptual schemata, which allows the writer to give voice to the new awareness and knowledge. This connection between reading and writing allows for the construction and expression of meaning. (p. 111)

Ostrowski (2002) identified making connections between reading and writing explicit as one of the common features among four exemplary middle and high school teachers. At the college level, some scholars propose restructuring curricula in order to take advantage of this synergy.

Scholes (1998) attacks the tradition in English studies of pitting reading and writing as opposites of consumption and production. He argues that learning best takes place in the spaces in between instead of at the polar ends of this binary. To do so, curriculum should be organized around textual practices, or a "canon of methods" (Scholes, 1998, p. 148), rather than texts themselves. Similarly, North (2000) advocates for what he calls a "fusion-based" curriculum, where learning is organized around shared textual practices by the teacher and students rather than literary texts. He describes this as "not a system for parceling out a body of knowledge by way of replicating a certain kind of expert (the Magisterial model), but rather a coordinated series of occasions for negotiating claims about who knows what, how, why, and to what ends" (p. 92). Instead of shying away from "contact zones" (Pratt, 1996), the goal is to "harness the energy generated by the conflicts in order to forge some new disciplinary enterprise altogether" (North, 2000, p. 73). Kutz (2004) also proposes a curriculum based on viewing reading and writing as conversations, but points out that reading and writing must make explicit the contexts that are often implicit in conversations. In these ways and others, scholars have proposed ways in which integrating reading and writing call into question past pedagogical practices and challenge teachers and students to cross boundaries into new territory.

FUTURE AVENUES OF RESEARCH

Research has challenged the notion of reading and writing as linear and examined the dynamics of reading and writing. Up until recently, though, reading and writing research has primarily focused on print cultures. New technologies call into question what counts as reading, writing, context, and text. In 1999, Selfe implored attendees of the College Composition and Communication Conference to use technology when teaching composition, to think critically about that use, and to teach students "critical technological literacy" (p. 432), due to the increasing importance of the link between literacy and technology and the realities of the digital divide. In today's day and age, what people read and write and how we read and write differ greatly from the past; consequently, researchers need to explore the impact of these new technologies.

Even if we limit the definition of literacy to interacting with words, technology has dramatically changed the composing process. Studies have shown that students enjoy writing more, write longer pieces, and spend more time rereading with word processors than writing by hand, although some studies call into question the quality of revision, suggesting that the revising focuses more on proofreading than structural changes (Bitter & Pierson, 2004). Words themselves are coming in different variations; just read any IM or text message conversation. These new modes of communication require readers and writers to master code-switching and audience awareness: "the need to fluidly shift performances from audience to audience is unique to the dyadic yet nearly simultaneous nature of IM" (Lewis & Fabos, 2005, p. 494). Other popular uses of technology for expression, such as blogs and some electronic news articles that have a way for readers to post their comments, also allow for greater interaction between author and audience as people have an instant means of responding to what they read. In these ways, conversations with texts are enacted, are made public, and are recorded.

In addition, people more and more are reading texts non-linearly, pursuing one avenue and then another, through hypertext. This forces readers to be more active in their construction of meaning as they pull from a variety of sources to create textual structures in their minds, connecting the bits and pieces of information they glean from weaving in and out of texts and enacting intertextuality. Travis (1998) describes this type of reading as "the linking and combining of discrete chunks of text—a bricolage effect" (p. 9), as a "version of choose-your-own-adventure" (p. 101), and as "interactivity for the reader in the form of creative agency to reconstruct the text, acting either alone or as part of a performance with other readers" (p. 90), so that "the reader actively rewrites the text" (p. 99). In other words, reading becomes more like writing, at least writing in the mind, as readers explicitly do more of the active work of creating meaning. Just as hypertext generates opportunities for readers to take a more active role in their reading, composing texts using hypertext creates opportunities for writers to think more deeply about how to structure the information they present and offers opportunities to structure the information in a variety of ways. Because of the more active nature of construction for both reading and writing, DeWitt (2001) found in his study that hypertext has the potential to increase students' metacognition. Janangelo (1998) and Charney (1994) warn, though, that hypertext may not convey enough coherence, organization, and closure to convey a sense of meaning. To solve this problem, Ensslin (2007) suggests "'intelligent hyperdocuments' that help readers navigate through a hypertext" (p. 41) in order to increase comprehension and coherence. Hypertext operates at maximum efficiency when freedom and structure are balanced.

Due to the multitude of sources used when reading hypertext on the World Wide Web, reading in this way forces readers to reconcile contradictions, disconnects, and slippages they run across as they encounter multiple perspectives. Because there is no vetting process on the Internet, readers need to call into question the authority of texts

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and to examine bias. This sounds good in theory, but in reality, do readers employ these active reading strategies or do they passively accept what they read on the Internet, contradictions and all? Or, do they simply ignore what they do not believe and go to sites that reaffirm their beliefs, entrenching their beliefs further and polarizing belief systems? Unfortunately, some early studies on information literacy suggest that Internet users have difficulty discerning scholarly sources from non-scholarly sources and even paid advertisements from news sources (Fallows, 2005), supporting Pugh, Pawan, and Antommarchi's (2000) assertion that "Maneuvering hypertext may well define what it means to be literate in the next century" (p. 36). Before students enter college, but certainly at the college level, teachers will need to teach students to refine their critical literacy skills.

Technology is creating more demands for teaching students to become the informed citizens necessary for democracy. The blogosphere has introduced new possibilities for a more democratic literacy space by creating a "virtual public sphere" (Travis, 1998) where ideas are bandied about and anyone can get on their virtual soapbox, expanding the reach of discourse communities. In 1998, Travis held out hope that changes in pedagogical structures at the college level brought about by technology would transform the "top-down instructional method" (p. 17) of lectures into a "reading culture or a community of readers" (p. 17) where the anonymity of electronic forms of communication would lead to cultural exchanges as people shed their privileges and disadvantages, but he also expressed reservations about this potential:

> International students in Faigley's classes at the University of Texas claimed that the computer removed the problem of accents and that "the computer has only one [skin] color," enabling them to feel more comfortable engaging in the classroom exchange. Though I find these reports of enhanced intercultural conversation to be encouraging, there is something unsettling about this electronic 'passing' of marginalized students who are empowered through the disappearance of embodied differences. Less fraught with ambivalence is another scenario in this electronic exchange: the culturally privileged students losing through anonymity his or her advantage, which might be a crucial step in the unlearning of privilege that I see as necessary for multicultural learning to occur. (p. 127)

An anecdotal example of this democratizing effect of online instruction comes from a college student who did not realize her professor was legally blind until he "came out" as blind towards the end of the class in an online discussion. Because of the ability to control, and sometimes create, identities, Peterson and Caverly (2005) suggest that online discussion forums can create discourse communities where all members feel they have insider status. On the other hand, other scholars who have analyzed cyber communities have concluded it is "woven of stereotypical cultural narratives that reinstall precisely these conditions" (Punday, 2000, p. 199). Hawisher and Selfe (2006) describe the Internet as a global and dynamic "contact zone" (Pratt, 1996) where various literacies develop and compete. Whether or not virtual worlds challenge or reinforce hegemonic societal structures, it does render these new types of literacy visible: "cyberspace may well represent a different way of manipulating these real-world elements ... [and] draws our attention to how these narratives are constructed and manipulated" (Punday, 2000, p. 208).

Perhaps the closest integration of reading and writing occurs in another democratic space—Wikis—where the reader can delete, add, and change information he or she is reading. Sites such as Wikipedia enact the marketplace of ideas, where a multitude of readers can instantly correct false information. This presents an opportunity to study the intimate relationship between reading and writing and the dismantling of the role of the author as the authority.

The way people express themselves is expanding beyond the written word. In both business and education, PowerPoint presentations and podcasts are substituted for written reports and lecture notes. Because video has pervaded our world and become an increasing source of information, even in 1986 Tchudi argued for integrating media into English classrooms:

> I believe English teachers would find more success with media if they were simply to use them as an integral, natural part of the classroom where ... language and humanness are the central concerns. When the media are treated this way, they cease being the rivals of print and simply become tools in the English teacher's attempt to broaden the base of literacy and to extend the dimensions of literacy in the classroom. (p. 253)

Tierney, a literacy expert, heeded this call and, as early as 1992, began examining the role video plays in students' learning. Since then, technologies have become more and more graphic user interfaced (GUI), where users of technology must decipher a multitude of icons. Beyond reading print texts and reading texts that exist in our face-to-face world, people are reading avatars, cyber worlds, and cyber situations in 3-D versions of online communities and in video games. Even in education, not known for being on the cutting edge of technology, professors are using 3-D virtual worlds such as Second Life to hold classes. Gee's (2003) description of playing video games as a four-step cycle of probing, hypothesizing, re-probing, and rethinking correlates with the steps of reading and writing outlined by cognitivists. Ramey (2004) uses the term "imagetext" to refer to a mixture of words and images; perhaps the term "mediatext" would be more appropriate to describe the integration of the written word, pictures, graphics, video, and sound that mark the new literacy products.

Massive multiplayer online role-playing games (MMORPGs) bring together online communities and videogames. In discussing multi-user domains (MUDs), an earlier text-based version of MMORPGs, Travis (1998) describes how they connect reading and writing:

> The more interactive that hypertextual literature becomes and the closer it moves to virtual reality, the more the reader becomes a role-player in 'real-time' dramatic performance with other readers. This kind of performance features the same game-playing that Iser describes as fundamental to literary make-believe, but with the addition of textual others who talk back. One is involved in a dialogue not only with one's 'othered' self but with real others. Although reader theory has convincingly argued that all literary reading requires performance, the performance mandated by the immersive experience of representational realism contrasts with the performance of the interactive reader as role-player in a virtual world. (p. 12)

In other words, role-playing games simulate the imagery that occurs when reading narratives, but they add the elements of being able to control your own character and other characters reacting and responding to your choices. This results in the social production of a narrative text and brings a real-time dimension to interactions between author and audience.

"Reading" texts in the virtual world incorporate a physical dimension, as video game consoles such as Wii simulate the user's physical movements on the computer screen, thus "writing" a text through physical actions. Augmented reality, where a virtual reality is overlaid on physical reality, also integrates physical movement into creating texts. For example, students might have hand-held global positioning system (GPS) devices that allow them to "interview" generals by moving to different locations on a Revolu-

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tionary battlefield (Devany, 2007). In these ways and others, technology is bringing to life an integrated language arts curriculum.

Looking to the future of technology suggests even more ways in which traditional notions of reading and writing may be challenged. For example, instead of links having a neutral value as they do now, hypertext may evolve into a system where "articulated" links indicate the type of relationship that exists between two items. For example, an "articulated" link might be coded to show that the relationship between two items is as synonyms, antonyms, a subset of, an example of, and so forth, giving to hypertext the structure that some say it lacks. The introduction of VIVO, or voice in/voice out technologies, in combination with GUI computers may eliminate the need for a keyboard or even the written word. Written language was invented to preserve verbal discourse. Now that we can do so without the written word, it could become obsolete, radically altering how people receive information and compose their thoughts.

In her introduction to Irwin and Doyle's 1992 book *Reading/Writing Connection: Learning from Research*, Jane Hansen answers the question, "Is [literacy] the ability to use reading and writing to understand and transform the world in which one lives?" (p. l) in the affirmative but goes on to clarify that literacy "can be used either as a weapon to maintain the status quo or as a tool to challenge it" (p. vii). Changes in technology have added new dimensions to this old statement. Technology is changing people's relationships with reading and writing, thus forcing our notions of literacy to change, whether we as educators acknowledge or race to keep up with these changes. New terms such as "information literacy" and "technological literacy" attempt to meet these changes, but educators need to do more than just adapt to the changes technology introduces. We need to add a critical lens and make sure our classrooms do not become "technocentric" (Papert, 1987), i.e., using technology uncritically and focusing more on technology than on student learning. The ways in which technologies affect the writing and reading processes cognitively, developmentally, and socially need further examination.

IMPLICATIONS AND RECOMMENDATIONS

How reading and writing practices are viewed impact how they are taught. If they are seen as a set of discrete skills and subskills, then a diagnostic approach is taken, where certain skills are targeted. If reading and writing are seen as natural developmental processes, then a more whole language approach is used. If reading and writing are seen as a means of gaining cultural capital, then teachers should guide students in exploring the enculturation of students into discourse communities. Kuriloff (1996) uses an example of his child responding "both" when given a choice between chocolate and vanilla ice cream. In this vein, instead of seeing these approaches as mutually exclusive, selecting "all of the above" uses the strengths of the various approaches to best complement each other.

All of these approaches demonstrate the importance of making everything explicit. Whether it means making the process of reading and writing explicit, the transferability between reading and writing explicit, or the sociocultural elements of reading and writing explicit, this transparency aids students in developing their reading and writing. At the research level, this means using think aloud protocols and interviews. In the classroom, this means both teachers and students modeling their thinking to increase metacognition. Technology can aid in this by providing a multitude of ways authors and audiences can instantly interact and as a means to record these interactions for further study.

Scholars and educators need to take into account the changing nature of reading and writing as technology challenges our notions of what counts as "text." Rice (2006) argues that:

> English studies maintains a fixed point of view through a singular notion of writing as static, fixed, and individually composed.... The definitions of "writing" produced in this economy of thought ... no longer serve the media society of networks and connections contemporary culture generates. (p. 129)

As understandings of the connections between reading and writing have become more complex to address real-world applications of reading and writing, real-world applications have become more complex as well. Technology creates opportunities for recording this complexity. Now it is up to scholars and educators to study, understand, and put into practice what we learn.

CONCLUSIONS

As I read multiple texts in the writing of this chapter and paused frequently to read what I had written, I could not help but think about my own connections between reading and writing. The approach I took to composing this piece was much different than my normal approach to writing. Instead of laboriously taking notes on everything related to the topic, reviewing the notes, and outlining before composing, this time I composed as I read, making frequent notes to myself as I did so. Approaching my writing this way brought my processes of reading and writing much closer together. As I read and re-read, wrote and re-wrote, I reflected on my process and the words of someone I encountered at a conference. When I found out she worked in the reading center of a local college, I asked if the center also supported students in developing their writing skills. She replied that she referred students to the writing center. When I pressed her further, she adamantly asserted that reading and writing are two different skill sets, an assertion my own process of reading and writing contradicted.

Despite the research presented in this chapter, as evidenced by this encounter and observations made by scholars in the field, there is still a prevailing distinction made between reading and writing. With a few exceptions, studies cited by Valeri-Gold and Deming (2000) in the previous edition of this *Handbook* and studies cited in this edition have shown that, for the most part, college students who struggle with reading also struggle with writing, and those who are strong readers are also strong writers. Whether this relationship is correlational or causational, and no matter the theoretical words we apply to the relationship between reading and writing, in practice reading instructors employ writing and writing instructors employ reading. The more the nature of the relationship between the two is explored, the more we can help our students improve both.

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