Connecting Reading and Writing
: A Historical Review of the Literature

Kwak, Subeom   Korea University
                 Center for Korean Language & Literature Education
                 Senior Researcher

I. Introduction

There has been a common belief that reading and writing needs to be integrated in theory and practice, rather than as separate components, for effective teaching and learning. However, historically, reading and writing have largely been disconnected in English language arts classrooms in the United States (Nelson & Calfee, 1998). Why is the reading-writing connection significant? Hirvela (2016) illustrates that learners will not be able to become skilled writers without being skilled readers: "The genesis of the problems may rest in the other skill. For example, it may be hard to see that a writing problem actually starts with how something was read" (p. 33). What's more, becoming a good writer, at the same time, a good reader is an essential requirement for students in an increasingly complex society (Graham & Harris, 2017).

In this paper, I argue that—whatever the reasons—reading and writing are largely taught in many language arts classrooms separately, including English language arts education contexts in the United States, while a synthesis of the findings from previous research reveals the values of connecting reading and writing.

This paper begins with some key issues in the area of reading-

writing connections, and then conceptual development, separation, and empirical studies regarding this topic are described. Then, the need to reconnect reading and writing is also illustrated based on an array of previous research in the field of literacy education. This paper will provide a foundational framework for exploring language arts classrooms; I intend to investigate what benefits and challenges emerged regarding reading-writing connections.

Before exploring the issues of reading-writing connections, as an essential step, it is important to clarify the definitions of these components of literacy.

1. Reading

There are multiple different definitions and concepts of reading. Some scholars insist that reading is a socially isolated individual act. For example, questioning Street's (1993) idea of literacy as a social practice, Gough (1995) illustrated reading as "one of the most private, unsocial things which people do" (p. 81). Disagreeing with this perspective, other researchers describe reading as a sociocognitive or social act intertwined with other components like listening, writing, and speaking (e.g., Bloome, 1993; Gee, 2001). Since reading includes an understanding of texts and also the interpretation relying on societal influences, meaning is formed by both individual and social context (Barton, 2001; Shor & Freire, 1987).

Previous research on reading instruction shows that there is a strong tendency to focus on the surface-level features of text s, such as vocabulary development, in many language arts classrooms (Shanahan & Shanahan, 2008). One possible explanation for this phenomenon is that there is a tacit assumption that reading is a fundamental skill and should be taught at an early stage of school curriculum (Horning & Kraemer, 2013). Students' difficulty in reading critically arises from the perspective that basic reading skills could be transferred to a new context. Their difficulty also stems from a lack of

learning experiences that involve reading. These experiences would involve participation in activities that engage students in integration of interpretations, ideas, and views in a social context and apply what they have learned into actual practices of reading and writing. For the purpose of this paper, then, the term "reading" encompasses the construction of meaning from texts, whether in the form of print or on screen.

2. Writing

A number of prior studies indicate a strong tendency that many language arts teachers focus on the surface textual features of texts as a final product, rather than other aspects of writing (Applebee & Langer, 2013). This is similar to a phenomenon found in reading education. Despite the importance of writing, many high school students do not seem to learn how to write at a level suitable for university-level education or for the workplace. University instructors have claimed that many students have difficulty in writing at a level that would be acceptable for university (Halbritter & Lindquist, 2012; Lunsford & Lunsford, 2008). American businesses spend nearly $400 billion due to time wasted on bad writing—every year, they spend $2.9 billion on remedial writing training for their current employees, not including any expenditure on new recruits (Bernoff, 2016; Heath, 2018; National Commission on Writing, 2004; Quible & Griffin, 2007).

High schools have been criticized for neglecting to teach students the fundamentals of writing (Applebee & Langer, 2013; Graham & Perin, 2007), with this being argued to be one of the possible reasons why students' writing is poor. Writing is neglected in high school classrooms because English language arts teachers are not sufficiently trained to teach writing from their teacher preparation programs or professional development experiences (Kiuhara, Graham, & Hawken, 2009). Writing education and teacher development for writing are complex because building a bank of pedagogical knowledge

and strategies—not only as declarative but also as procedural knowl-edge—takes years of trial and error (Smagorinsky, 2009).

As with reading, my focus in this paper is on writing in secondary school contexts. Writing includes constructing meaning into printed words and using technologies that students could encounter in these days. That is, student writers not only reproduce what they learned as a way of checking their understanding but also write about their reflections, analyses, and experiences.

II. A Historical Review of the Literature

This paper is grounded in the following questions: In what direc-tions have previous research on reading-writing connections emerged over the last decades? What have new understandings of reading-writing connections evolved and developed over time in an era of information and digital literacies?

Very little research on the interrelation of reading and writing was undertaken by the early 1980s. The first major comprehensive review of prior studies on reading-writing connections was conducted by Stotsky (1983) focusing on three themes: correlational studies; studies examining the influence of writing on reading; and studies examining the influence of reading on writing. She contributed to reading-writ-ing scholarship by reporting the consistent tendency between reading and writing skills and by suggesting directions for further research in this field. In an increasingly complex today's world, with the shift in definitions of reading and writing, new and widening dimensions of reading-writing connections have emerged (Tierney, 1992; Hirvela, 2004; Horning & Kraemer, 2013).

While many researchers of reading-writing connections do not re-gard reading and writing as exclusive relationships, it is important to explore prior conceptions about reading-writing connections to grasp the current theoretical development of an understanding of reading-

writing connections. One of the traditional notions of reading and writing assumed that reading is a passive absorption of information from a text, whereas writing is an active production of meaning. From this perspective, reading and writing might be connected dualistically.

Another view assumed that not only writing but also reading is a meaning-making process. This is because reading is a process of constructing knowledge from text, while writing is a practice of producing a text to deliver meaning. From this perspective, the shared generative nature is a connection between reading and writing.

Finally, the third perspective claimed that meaning construction and consumption are intertwined within both reading and writing. This model views reading and writing as active practices in reciprocal relationships.

1. Eighteenth and Nineteenth centuries

Historically, reading-writing connections can be dated back to the fourth century Greece and oratory practice. By examining the history of English studies, Nelson and Calfee (1998) identified reading-writing connections drawing on mimetic methods; students read exemplary texts and wrote to mimic their textual features. With the importance of oratory practice, listening and speaking, reading and writing were interconnected in Roman rhetoric (Jackson, 2009).

In the eighteenth century, the common principles of classical rhetoric—style, discourse forms, and taste—were studied. For instance, British philosopher Joseph Priestley developed new rhetorical structures and illustrated it in his book, *A Course of Lectures on Oratory and Criticism*, published in 1762 (George, 1998); this influenced later on the Declaration of Independence. Many curricula within English departments today have been influenced by this rhetoric explored by British scholars Adam Smith and Hugh Blair (Carter, 1988).

By the mid-nineteenth century, rhetoric had been reconceptualized and often means composition. Lectures on Rhetoric and Belles

Lettres (1783) by Blair was the first attempt to combine composition and language studies, even though it regarded the relationships of reading and writing as dualistic; meaning was constructed from a text, and was created by producing a text. The popular works at the time, such as Campbell (1776) and Blair (1783), tended to value reading as a passive consumption of existing knowledge. As for writing, imitation of formal forms, style, and correctness was emphasized, but a generative process was overlooked.

The main weakness with this perspective for writing is the limited role of writing practices in that passive imitative practices emphasizing reading as consumption are a way of learning to write. In this approach, reading is not a generative process because of the emphasis on consumption of valued knowledge. Given these limitations both in reading and writing, this approach "does not only reduce writing into prose structures, it oversimplifies 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).

A potential benefit of using imitation model is that this may be an effective way to teach appropriate textual forms for beginning readers and writers. According to Christiansen (2003), teachers can allow students to create their discourse by introducing textual features within a short time, instead of leaving students to figure out the existing features of text and context, which process is slow and end up rediscovering the existing textual features.

In reading-writing connections, these eighteenth and nineteenth century notions had an impact on the beginning of grasping relations between understanding and constructing a text (Nelson & Calfee, 1998). Yet, in actual teaching and learning practices, over the course of this era, writing and reading were divorced or showed a weak extrinsic connection regarding concepts of production—writing—and, consumption—reading.

2. The Twentieth century and New Criticism

The focus of literacy studies shifted from oral expression to written communication (Harl, 2013; Nelson & Calfee, 1998; Scholes, 1998). Replacing mimetic approaches, New Criticism became one of the dominant approaches to reading and writing instruction; secondary school teachers and university professors began to use writing to check student understanding of texts (Jackson, 2009). Close reading based on New Criticism also emerged since the late eighteenth century. In this view, readers' role is to analyze individual words, sentences, and syntax closely to understand how meanings and ideas unfolded within a text. Writer's intention and producing process, thus, were marginalized while the reading process attracted primary interests. Reading and writing are connected as a process of consumption, rather than production.

3. Writing process approaches

In the 1960s, researchers began to focus on the writing process from pre-writing, drafting, and revising to the final stage of editing (Harl, 2013). As the cognitive methodological approaches became popular during the early 1970s and the 1990s, the recursive nature of writing, as opposed to the linear process, was investigated by scholars (e.g., Emig, 1971; Flower & Hayes, 1981; Hairston, 1982). Flower and Hayes (1981) argued that writing research should be shifted towards producing a process for the writer. Flower (1990) described the relation between reading and writing by stating, "the process of reading-to-write guides the way readers interact with a text, forcing them to 'manipulate . . . and transform' the information for their own needs" (p. 6).

From the writing process perspective, a study conducted by Tierney and Leys (1986) illustrated the theoretical links of reading and writing, by explaining the role of writing for effective reading, ways

of reading for critical essays, and functions of reading for revision. They concluded that an integrated reading and writing instruction had meaningful benefits for learning to read and write:

1. Depending upon the measures employed to assess overall reading and writing achievement and attitude, the general correlation between reading and writing is moderate and fluctuates with age, schooling, and other factors.
2. Selected reading experiences contribute to writing performance; likewise, selected writing experiences contribute to reading performance.
3. Writers acquire certain values and behaviors from reading, and vice versa.
4. Successful writers integrate reading into their writing experience, and successful readers integrate writing into their reading experience. (p. 23)

Successful writers have a higher level of audience awareness, and they play their roles as their readers, instead of merely focusing on their ideas (Tierney & Shanahan, 1991).

Another outstanding research by Birnbaum (1986) emphasized the close relationship between reading and writing abilities. Reading and writing abilities tend to be at comparable level because the level of both abilities hinges on reflective thinking competence. Accordingly, the more reflective readers often proved to be better writers thanks to their deeper level of reflections, planning, and consideration of writing context, topics, and audiences. Emphasizing the importance of reasoning skills rather than recalling, she suggests that teachers need to integrate reading and writing, instead of the separate teaching of them respectively.

On the other hand, Stotsky (1983) indicated methodological limitations of existing studies on reading-writing connections (e.g., a small number of participants, inconsistent testing measures). Nevertheless, many subsequent studies had shown strong relationships be-

tween reading and writing abilities; strong readers are strong writers, and vice versa (Aydelott, 1998; Fitzgerald & Shanahan, 2000; Kennedy, 1985; Shanahan & Lomax, 1986, 1988; Spivey & King, 1989).

While many studies focused on products of reading and writing, and results of assessments, other studies examined cognitive processes underlying the practices of reading and writing. For example, Tierney and Pearson (1983) state that both reading and writing could be generative processes in which students produce meanings with their understanding of texts and prior experiences: "We believe that at the heart of understanding reading and writing connections one must begin to view reading and writing as essentially similar processes of meaning construction. Both are acts of composing" (p. 568). Other scholars also found that both reading and writing could be active generative practices of meanings and share similar cognitive processes (Kucer, 1985; Squire, 1984; Wittrock, 1984).

Table 1. Historical view of reading and writing

	Eighteenth and Nineteenth Centuries	The Twentieth Century and New Criticism	Writing Process Approaches
Reading	Passive consumption of existing knowledge	Close analysis of individual words, sentences, and syntax	Production of meanings with the understanding of texts
Writing	Imitation of formal forms, style, and correctness was emphasized, but a generative process was overlooked	Writing was marginalized while the reading process attracted primary interests	Recursive composing process
Reading-writing connections	Reading and writing might be connected dualistically	Reading and writing are connected as a process of consumption, rather than production	Both reading and writing could be active generative practices of meanings and share similar cognitive processes

Recent studies continue to investigate reading-writing connections. Valeri-Gold and Deming (2000) illustrate that strong readers and writers generally show higher-order reasoning processes to analyze new information, patterns, and ideas. Although the whole process of reading and writing might be varied, reading-writing connections exist in a range of ways within our brains (James & Gauthier, 2009).

III. Current Status: Reading-Writing Connections

There are three theoretical models that have guided research on reading and writing connections (Graham & Harris, 2017; Shanahan, 2016). These theoretical models are below.

1. Shared knowledge: cognitive model

Since the 1970s, this theoretical model continues to focus on underlying cognitive aspects of reading and writing, including memory, semantic systems, words, and sentences (e.g., Ellis, 1985; Emig, 1971; Fitzgerald, 1990; Swanson & Berninger, 1996). The basic assumption of this model is that both reading and writing skills rely on the same cognitive systems, even though they are not identical skills. Shanahan (2016) describes reading and writing metaphorically, "two buckets drawing water from a common well or two buildings built on a common foundation" (p. 195).

Fitzgerald and Shanahan (2000) explain that writers rely on their previous knowledge to construct their contexts, and readers also rely on their previous knowledge to grasp a text they are reading. Meta-knowledge about written discourse is another source readers and writers draw on for their reading and writing. Meta-knowledge helps readers to interpret an author's intentions and writers to produce texts to deliver their messages. Thirdly, pragmatic knowledge of textual features, such as words, sentences, and syntax, contributes to com-

prehension and construction of a text. Finally, procedural knowledge about how to read or write is a factor readers and writers draw on.

2. Functional view: combined model

The functional view regards reading and writing as tools to be combined to address a particular problem, though both are separate skills (Graham & Harris, 2017; Hayes, 1987; Langer & Applebee, 1987; Shanahan 2006). The underlying assumption in this perspective is that reading and writing need to be used together for better learning. For example, with the functional view, teachers could give reading and writing tasks together to facilitate student understanding of content. Shanahan (2016) describes this model metaphorically: "reading and writing are tools that can be used together much as a carpenter might use a spirit level and sabre saw alternately when building something" (p. 195).

3. Rhetorical relations view: sociocognitive model

The rhetorical relations view emerged to consider reading-writing connections in the sociocognitive nature (Booth, 1983; Fitzgerald & Shanahan, 2000; Rubin, 1984). According to this model, reading and writing need to be re-conceptualized considering the transactional space between readers and writers. This is because the main goals of reading and writing are to share ideas. While the cognitive model focuses on processes taking place in the mind of readers and writers, the focus of the sociocognitive model is the transactional space—con-versation—within reader-writer relations.

Fundamentally, reading and writing is a communication process. Learners develop their reading skills through the act of writing, as they can acquire deeper understanding about reading by producing texts for a particular audience (Graham & Harris, 2017; Tierney & Shanahan, 1991). Likewise, readers can sharpen their writing skills,

as they gain insights about writing by considering authors' intentions reflected in a particular usage, sentence, or patterns.

Table 2. Current view of reading-writing connections

	Shared Knowledge: Cognitive Model	Functional View: Combined Model	Rhetorical Relations View: Sociocognitive Model
Focus	Underlying cognitive aspects	Reading and writing as tools to be combined	Sociocognitive nature
Underlying assumption	Both reading and writing skills rely on the same cognitive systems, even though they are not identical skills	Reading and writing need to be used together for better learning	Reading, and writing need to be re-conceptualized considering the transactional space between readers and writers

IV. Impacts of Connecting Reading and Writing

1. Writing instruction's impact on reading

Given the three theoretical models discussed above, it can thus be suggested that writing instruction enhances reading abilities (cognitive model), writing about reading texts or literature improves learners' comprehension of text (combined model), and writing practice increases the level of awareness around the act of reading (rhetorical relations model).

As illustrated above, learners rely on common knowledge base when they read and write a text, and improvements of writing skills would develop reading abilities. For example, learning ways of combining sentences into a more complex structured sentence could result in improved reading comprehension skills (Neville & Searls, 1991; Saddler & Graham, 2005). This principle could be applied to a larger unit such as paragraphs or particular types of writing (Graham & He-

bert, 2011). Graham and Harris (2017) suggest that teaching students about writing strategies and processes will help to shape students' understanding of procedural knowledge about reading.

The combined model claimed that writing about literature or text could facilitate student comprehension of it. At least five possible explanations on how this occurs are below (Applebee, 1984; Emig, 1971; Klein, 1999; Stotsky, 1982):

1) Learners should consider the priority of information in text for writing about the text.
2) Learners need to produce their essays with their own words, which makes them think about authors' messages and intentions.
3) Learners are required to make decisions actively about how and what should be included in their writing.
4) Learners are encouraged to write coherent essays, by organizing information and ideas from texts.
5) During writing process drawing on an idea from text, learners need to re-examine, analyze, review, and connect, which would lead to shape deeper understandings.

Considering the fact that different writing tasks stimulate different types of thinking (Langer & Applebee, 1987), Hebert, Gillespie, and Graham (2013) reviewed 19 prior empirical studies to find out the relative impact of different writing activities about what students read. The findings of their research reveal that writing activity that is closely connected to the assessment could enhance reading comprehension, while types of tasks might make no difference if tasks and assessment are not aligned closely. Accordingly, teachers should consider the types of thinking and comprehension when they organize activities and assessments.

2. Reading instruction's impact on writing

Drawing on the three theoretical models, it can also be suggested that reading instruction enhances writing skills (cognitive model), reading a text closely associated with a particular writing task improves learners' writing (combined model), and increased reading practices sharpen students' writing skills (rhetorical relations model).

When it comes to the first model with a cognitive view, although preschool and elementary levels were their major target, two meta-analyses by Bus and van IJzendoorn (1999) and Ehri, Nunes, Stahl, and Willows (2001) demonstrated that reading instruction improves writing performance. These two studies may be questionable because they did not use random measurement tools and participants did not take a pre-test. Another limitation is that these two studies focused on how reading instruction enhances students' spelling. Spelling is not a main focus of secondary school or university writing, even though this may be an important issue at pre-school and elementary level (National Institute of Children's Health and Development, 2000).

Recent studies (e.g., Graham, Harris & Santangelo, 2015; Olinghouse & Wilson, 2013) also measure the relationships between vocabulary and student writing quality to figure out how reading instruction enhances student writing performance. For example, Olinghouse and Wilson (2013) measured the vocabulary of students' writing and used this result as evidence for accounting for levels of student writing. Graham et al. (2015) also contended that reading instruction improves student writing quality through quasi-experiments based on vocabulary instruction.

Of course, it seems that many studies on reading-writing connections used larger units of text, rather than spelling or vocabulary, to see whether there are positive effects on writing performance (e.g., Fitzgerald & Spiegel, 1983; Jampole, Konopak, Readence, & Moser, 1991; Mason, Davison, Hammer, Miller, & Glutting, 2013), they tended to view writing as a remedial treatment for reading performance. Ac-

cording to Graham and Harris (2017), even recent research on reading-writing connections rarely investigates practices of student writing or student growth in writing performance (p. 344). In sum, theoretically, it's reasonable to expect that reading instruction helps students to sharpen writing skills, but existing studies do not provide clear evidence or a compelling answer to this issue of reading-writing connections.

The combined model seems to be reasonable theoretically, but it is quite hard to find studies on the impact of reading for gaining information on writing performance. One study by Brodney, Reeves, and Kazelskis (1999) described that a well-planned reading task as a pre-writing activity resulted in improved writing performance. Similarly, using the Internet to find relevant information regarding writing task enhanced student writing performance (Doan & Bloomfield, 2014). These findings confirm the conceptual idea of a combined model of reading-writing connections. More comprehensive research is required to investigate the existing studies that are likely to be tentative.

The basic underlying assumption of the third model is that readers can gain insights into writing when they carefully read a text. A possible explanation is that readers might grasp authors' ways of creating texts in the process of reading texts. Some studies suggested this possibility (e.g., Graham, Kiuhara, McKeown, & Harris, 2012), but it is still not clear that reading in a natural setting, not laboratory experimental conditions, could lead to enhanced writing quality. Also, a primary attribute of rhetorical relations perspective is interactions between readers and writers (Shanahan, 2016), but there is no comprehensive research on this topic (Graham & Harris, 2017). Therefore, a further study to investigate interactions in the classroom will also be required to clarify this issue.

V. Approaches to Integrated Reading and Writing Instruction

Although the stability of economic power of a nation hinges on the next generation's reading and writing abilities (Krashen, 2004), secondary students worldwide have difficulty using reading and writing to solve simple questions (Hsiang & Graham, 2016; Organization for Economic Cooperation and Development, 2015). Considering the increasingly complex nature of contemporary society with an expansion of information, technology, and fast-changing labor markets, current jobs require much more sophisticated reading and writing skills.

According to PISA results reported by Organization for Economic Cooperation and Development (2015), about 20% of students in OECD countries showed a low level of reading performance. Another noteworthy is that no country, not even the most affluent and advanced, is free from this challenge. In the United States, according to the National Assessment of Educational Progress (NAEP) conducted in 2015, only 37% of students performed at or above the 'proficient' level in reading (National Center for Educational Statistics, 2017). This result is not considerably different from the assessment of 2013 but is lower when compared with the earliest test score in 1992. In short, the findings from PISA and NAEP confirm that many secondary students are struggling with gaining essential literacy skills.

When it comes to the teaching and learning practices in the classroom, reading and writing were taught in secondary schools in the United States as if they were separate subjects until the 1980s. The instructional separation of the two components of literacy is not a recent phenomenon. The separation is often traced back to colonial times, when the Protestant settlers of colonial America put reading before writing (Nelson & Calfee, 1998). At secondary level today, there are two features for the separation of reading and writing instruction: much more attention goes to reading education; and teaching writing

follows reading.

Aside from actual instruction in the classroom, research on relationships between reading and writing traced back to the 1930s (Stotsky, 1983). However, the interests in reading and writing connections have been intensified over the last three decades (Graham et al., 2017). While writing has been marginalized in many language arts classrooms, researchers began to pay attention to positive cognitive functions that stem from integrated reading, writing, speaking, and listening practices (Graham & Harris, 2017). Reading could play a role as a springboard for writing instruction, whereas writing could help to develop deeper understanding of reading.

Although language arts teachers continue to teach reading and writing separately (Applebee & Langer, 2009; Doubet & Southall, 2017; Graham & Hebert, 2010; Strickland, 2012), recommended pedagogy is an integrated reading and writing instruction as one whole process, rather than two separate parts (Maxwell, Meiser, & McKnight, 2011; NCTE, 2016). The separate illustration of reading and writing components in the language arts subject within Common Core State Standards (2010) may influence on teachers' instructional decisions since this could also impact on the school district or department standards and assessment plans. Doubet and Southall (2017) indicate such disconnected structures of standards (e.g., Common Core State Standards, No Child Left Behind, Texas Education Agency, 2009-2010; Virginia Department of Education, 2010) are the major source leading teachers to believe that their instruction should be separate. The problem of such separate approaches is that "formulaic instructional approaches alone may disengage students, limit students' level of participation, reinforce teachers' deficit views, and perpetuate a cycle of underachievement" (Pella, 2011, p. 123).

For teaching reading and writing as ways of thinking in limited time, teachers should orchestrate activities and resources with strong pedagogical knowledge (Hirvela, 2004, 2016). Considering the three theoretical models discussed above, teachers can ask students to

write about their reading as a response, to incorporate information from text into their essays, and to develop new understanding in their writing (Anderson & Briggs, 2011; Doubet & Southall, 2017; Hirvela, 2016). One of the challenges for such an integrated approach is that integrative reading and writing instruction is a new concept for many language arts teachers. Professional development or teacher training should elaborate the misconception of separate reading and writing in order to embrace a new concept of an integrated approach.

The key principles for reading-writing connections instruction have been developed and suggested by Hirvela (2016, p. 132):

1) Teach reading and writing together, not separately.
2) Show students that both reading and writing are acts of compositing, of meaning making.
3) Demonstrate how reading supports writing and writing supports reading.
4) Allow students to perform reading/writing tasks that are meaningful to them.
5) Create opportunities for students to talk about reading-writing connections.

Drawing on these core principles, he describes five approaches to reading-writing connections pedagogy: 1) the multimodal model; 2) the literature-based model; 3) the collaborative model; 4) the content-based model; and 5) the sequential model. It is important to note that teachers can tweak the models and types of pedagogical activities according to their instructional contexts, such as reading-writing environments, student interests, levels, and school settings.

1. The multimodal model

Since digital technology has become one of the central interests in today's literacy education, digital literacy has emerged as an impor-

tant aspect in the field of reading and writing (Hirvela, 2004, 2016; Hutchison & Woodward, 2014). The changing landscape requires language arts teachers to account for conventional literacy based on printed texts, but also for digital literacy based on online circumstances. Although language arts teachers often complained about a lack of time to use technologies in their classrooms (Hutchison & Reinking, 2010), digital tools could be used to sharpen traditional reading and writing skills. For example, online platforms could support collaboration, online sharing, and production of student works (Colwell & Hutchison, 2015). These literacy skills are essential for students in today's information age society.

2. The literature-based model

Written responses to literary texts such as reading logs, journals, and online discussion could be lead to meaningful literacy experiences regarding reading and writing skills (Blom, 2017; Langer, 1994). By reading literature and writing reflection about it, students are likely to experience pleasure as well as enhance their reading and writing skills. Hirvela (2016) stated,

"The richness of literary texts (in terms of language, content, and rhetorical schemata) can make that work more meaningful and thus motivate students because the stories at the heart of literature, with their plot twists, important moments or events, and interesting or appealing characters, lend themselves to written and/or oral discussion in ways other texts might not" (p. 149).

Learners who participate in literature-based approaches would take ownership of their meaning making through demonstration of their ability to respond to the stories (Spiegel, 1998). Their responses form personal, but not limited to a narrowed view of individual interpretations of literature; learners are able to share different perspec-

tives and tensions associated with multiple ways of understanding of literature.

3. The collaborative model

This approach generally takes the form of peer review sessions or small group discussions in which students share their different views about their reading and writing. Group production of texts could also be a way of reading-writing connections pedagogy. Students as co-authors can learn not only how to work together, but also how to negotiate intellectual conflicts and process of collective decision making (Sills, 1988; Trimbur, 1989).

4. The content-based model

As rooted in the field of second language education, this approach is pervasive in L2 writing class rather than English language arts classroom (Lyster & Ballinger, 2011). The beauty of this approach is that students could focus on relevant topics of their interests. In other words, students will be able to be engaged in learning what they will want or need. For more advantages of this approach, instructors could use sheltered course pedagogy or adjunct model. Students are clustered by their own criteria or major interests, or students could discuss their content course resources drawing on writing course with others taking the same content course.

5. The sequential model

The core idea of this approach is the gradual construction of skills as students participate in activities and tasks teachers orchestrate with the intention of scaffolding. Another important feature of this model is "recursive movement between reading and writing through revisions of readings and pieces of writing" (Hirvela, 2016, p. 167). Learning to

read and write by participating in scaffolded activities, students could increasingly develop their critical awareness of written texts and ways of creating texts.

VI. Limitations and Unanswered Questions

The findings reviewed here on reading-writing connections and integrated reading and writing instruction could provide a fundamental framework for future research in the field of Korean language arts education. Nevertheless, any finding of the impact of integrated reading and writing instruction in this paper should be regarded as tentative. While cognitive and combined models have been predominantly used in recent years for research on reading-writing connections, a sociocognitive model has not been adopted, especially from the field of reading research (Shanahan, 2016). Almost all studies on reading-writing connections that provided evidence were focused on reading performance or prioritized reading over writing (Shanahan, 2016), and not all of the studies included in this paper appropriately designed variables; spelling or vocabulary level was often viewed as writing outcomes. In particular, there are few studies investigated how teaching writing can improve reading performance (Graham & Harris, 2017). Even though there are more studies on the effects of reading instruction on student writing performance, this is still thin. Furthermore, some of the discussions were based on the findings from a short period, a small number of participants, or somewhat dated. Therefore, a more definitive conclusion on integrated reading and writing instruction still awaits more sophisticated explorations.

VII. Conclusion

This paper reviews previous research on reading-writing connections in secondary school. Three theoretical models for reading-writing connections are identified: shared knowledge (cognitive model); functional view (combined model); and rhetorical relations view (sociocognitive model). Describing the distinct features of such three theoretical frameworks, impacts of connecting reading and writing are also discussed. Given the three theoretical frameworks discussed above, it can thus be suggested that writing instruction enhances reading abilities (cognitive model), writing about reading texts or literature improves learners' comprehension of text (combined model), and writing practice increases the level of awareness around the act of reading (rhetorical relations model). As for the impact of reading instruction on writing, it can be suggested that reading instruction enhances writing skills (cognitive model), reading a text closely associated with a particular writing task improves learners' writing (combined model), and increased reading practices sharpen students' writing skills (rhetorical relations model). Additionally, five models of reading-writing pedagogy are illustrated briefly. Implications and unanswered questions are also discussed regarding theoretical and practical aspects of reading-writing connections and integrated reading and writing instruction.

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ABSTRACT

Connecting Reading and Writing
: A Historical Review of the Literature

Kwak, Subeom

There is a common belief that reading and writing need to be integrated to effectively teach and understand language arts. However, historically, reading and writing have largely been disconnected in many countries, including the United States. Based on a review of previous studies, some of the dominant perspectives and teaching approaches regarding ways of connecting reading and writing were identified. The problems caused by isolating reading from writing, as well as both the benefits and challenges of integrating reading and writing in language arts classrooms, were also discussed. This historical review explores the larger conversation about reading and writing in educational contexts by commenting on what issues need to be addressed and how we might address them within the classroom context in an increasingly complex society.

KEYWORDS   Reading, Writing, Integrated Reading and Writing, Reading and Writing Connection, Connecting Reading and Writing