How Might Pragmatic Language Skills Affect the Written Expression of Students with Language Learning Disabilities?

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This article describes ways in which pragmatic language abilities may play a role in the writing performance of children and adolescents with language learning disabilities. First, a brief overview is presented of how pragmatic language difficulties might negatively influence writing performance. Next, research on the writing performance of students with language and learning problems is reviewed. Key components based on these reviews are incorporated into a sociocognitive model of writing in which pragmatic language abilities are highlighted and illustrated as they apply to writing poetry. Finally, some suggestions are offered for scholars and practitioners to encourage attention to pragmatic issues in the writing of children and adolescents. **Key words:** *children and adolescents*, *language impairment*, *learning disabilities*, *pragmatics*, *writing*

WRITTEN EXPRESSION can be a demanding form of communication for children and youth with speech/language impairments and learning disabilities. These two categories represent nearly 68% of all individuals between the ages of 6 and 21 years served under the Individuals with Disabilities Education Act (U.S. Department of Education, 2003). For a variety of reasons, writing is an area of difficulty for many children with disabilities, and problems with pragmatic aspects of written language, which are the focus of this article, deserve attention but often are overlooked.

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Research over the past three decades has provided substantial insight into the writing problems experienced by children and adolescents with disabilities, both in terms of the nature of their difficulties as well as the underlying causes (see Silliman & Berninger, 2011). There have been many efforts to identify the cognitive and linguistic underpinnings of literacy problems in these populations, or more broadly, children and adolescents with language learning disabilities (LLD), but these have largely focused on the domains of memory, executive control, phonology, morphosyntax, and semantics (e.g., Bishop, North, & Donlan, 1996; Bourke & Adams, 2010; Catts, Fey, Zhang, & Tomblin, 1999, 2001; Dockrell, Lindsay, Connelly, & Mackie, 2007; Roth, Speece, & Cooper, 2002; Stothard, Snowling, Bishop, Chipchase, & Kaplan, 1998). Many individuals with LLD also experience difficulties in the realm of pragmatics (e.g., Bishop & Adams, 1991, 1992; Bishop & Norbury, 2002; Leonard, 1998), possibly due, in part, to deficits in right hemisphere processing

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(Shields, 1991). Thus, it should prove fruitful to explore how pragmatics, the use of language in social contexts to fulfill communicative purposes and regulate social interactions (Bates, 1976; Prutting, 1982), and difficulties in this domain, may be manifest in written expression as well.

Pragmatic difficulties can be expected to have a negative impact on students' social and emotional well-being (Schalock, 1996). For instance, individuals with LLD tend to participate in fewer peer interactions and are less preferred communication partners (e.g., Cartledge, Frew, & Zaharias, 1985; Fujiki, Brinton, Robinson, & Watson, 1997; Gertner, Rice, & Hadley, 1994; Hadley & Rice, 1991; Juvonen & Bear, 1992; Pearl et al., 1998; Rice, Sell, & Hadley, 1991; Weiner & Schneider, 2002). Consequently, they have difficulty establishing and maintaining friendships. Moreover, these individuals exhibit a greater incidence of problem behaviors, most often internalizing behaviors (e.g., Cohen, 1986; Fujiki, Brinton, Morgan, & Hart, 1999; Fujiki, Brinton, & Todd, 1996; Redmond & Rice, 1998). Children and adolescents with LLD also perceive themselves as socially less adept than their peers (e.g., Jerome, Fujiki, Brinton, & James, 2002). Overall, these students display fewer sociable behaviors, such as sharing, cooperation, and offering comfort, which are strongly related to positive peer relationships (e.g., Bender & Wall, 1994; Brinton & Fujiki, 2004; Hart, Robinson, McNeilly, Nelson, & Olsen, 1995; Kavale & Forness, 1996; Ladd & Price, 1987; Pearl et al., 1998; Vaughn, Hogan, Kouzekanani, & Shapiro, 1990). These attributes are thought to be the result of difficulties perceiving and interpreting social cues, which are frequently linguistically coded (Pearl, Donahue, & Bryan, 1986; Weiner, 1980, 2004). However, the severity of language difficulty does not necessarily predict social competence, and when the linguistic demands of social contexts are minimized, children with LLD may continue to exhibit less sociable behaviors (Brinton & Fujiki, 2004). Thus, the causal mechanisms between specific pragmatic skills and social in-

teraction and adjustment are not well understood. It is not known to what extent deficient social skills related to pragmatic language difficulties, as well as the pragmatic difficulties themselves, influence written expression.

PRAGMATICS, WRITTEN LANGUAGE, AND STUDENTS WITH DISABILITIES

Written expression, in most circumstances, may be viewed as a form of communication for social purposes aimed at achieving social-interaction goals. Although currently it is unclear how the social adjustment problems of children with LLD interact with writing demands in the classroom, pragmatic difficulties can be expected to limit the development of written expression for these children through their disruption on participation in social literacy practices as well as their direct impact on the use of language forms and functions. Aspects of at least three fundamental components of pragmatics may be involved: presupposition abilities, discourse regulation, and nonliteral (figurative) language usage.

Pragmatic difficulties likely have a pronounced impact on writing performance when perspective taking is at a premium, such as when tailoring a written text for a specific audience. Perspective-taking relies on at least one particular aspect of pragmatic functioning—presupposition—which is directly related to social cognition and theory of mind, both of which involve making inferences regarding the actions, beliefs, and intentions of others and to adapt based on those inferences (Carruthers & Smith, 1996; McTear & Conti-Ramsden, 1991). In other words, how much a student presupposes about a reader's prior knowledge in written text is predicated on his or her inferences about what the reader believes, knows, and wants. Children with LLD tend either to presuppose too much shared knowledge between themselves and their readers, rendering communication ineffective because the reader is left to ponder what has been unstated, or to presuppose too little shared knowledge, rendering a text cumbersome and laden with

unnecessary information. Likewise, children with LLD may be unskilled at employing the Gricean conversational maxims of truthfulness, relevance, informativeness, and directness (Grice, 1975), as required by written task demands, audience needs, and personal rhetorical goals (e.g., Bliss, 1992; Noel, 1980; Spekman, 1981). For instance, a student with LLD might erroneously present personal opinions as facts to support an argument in an opinion essay or fail to use polite forms when making a request in writing. A student with LLD also may have difficulty correctly using deictic terms that mark noun relationships (e.g., *I* versus *you*, *a* vs. *the*), spatial relationships (e.g., *here* vs. *there*, *this* vs. *that*), and temporal relationships (e.g., *before* vs. *after*, *now* vs. *then*) because of poor presupposition (e.g., Bishop, 1997).

Children and adolescents with LLD frequently exhibit problems with discourse regulation, a different but related aspect of pragmatics that is a key contributor to good writing. Effective discourse regulation is possible when the writer possesses a strong understanding of the structure of the form of discourse used for communication in a given social context for specific social purposes. This includes knowledge of genre structure (Gee, 1999; Roth, 1986; Roth & Spekman, 1984; Roth, Spekman, & Fye, 1995), as well as a firm grasp of the topic (e.g., McCutchen, 1986; Westby, 2002). Research has demonstrated that students with LLD are relatively less competent with discourse regulation, particularly (a) topic maintenance and organization (e.g., Botting, 2002; Norbury & Bishop, 2003), (b) successful use of strategies to avoid misunderstanding such as paraphrasing to simplify information, repeating an important idea for emphasis, and elaborating on a novel word or idea (e.g., Adams & Bishop, 1989; Brinton & Fujiki, 1982), (c) grammatical cohesion via appropriate use of anaphoric and cataphoric reference, substitution, ellipsis, and clausal conjoining and embedding characteristic of the genre (e.g., Lapadat, 1991); and lexical cohesion created through use of synonyms, antonyms, hyponyms, repetition, and colloca-

tion. Consequently, and because the reader's response to written text is often not available during the production of that text, students with LLD are likely to produce short pieces of writing bereft of detail and lacking polished organization that fail to adequately attend to genre conventions and reader needs.

A final aspect of pragmatics with which children with LLD may struggle is figurative language. Figurative language comprehension and use is important for communication success because nearly two thirds of spoken English is figurative in nature (Arnold & Hornett, 1990). In addition, approximately a third of teachers' utterances contain multiple meaning words (the foundation of figurative expressions) or idiomatic expressions and about 7% of reading materials used in elementary schools contains idioms (Lazar, Warr-Leeper, Beel-Nicholson, & Johnson, 1989). Figurative language understanding and usage is critical both to academic success via comprehension of instructional and conversational language as well as social success (e.g., understanding and using humor to engage with peers). Students with LLD demonstrate problems interpreting and using figurative expressions (idioms, proverbs, metaphors, and similes) and slang (Gerber & Bryen, 1981; Nippold, 2007; Rice, 1993; Rice, Sell, & Hadley, 1991), as well as using figurative language in writing to achieve personification, allusion, and symbolism (e.g., Nippold, 2007). In a related vein, students with LLD likely will experience trouble using humor intentionally and successfully in their writing because it often relies on competence with multiple meaning words and figurative language. Figurative language helps authors craft texts that creatively illustrate complex relationships between ideas, people, and things in novel or authentic ways. Use of figurative expressions in writing permits students to fully participate in their social worlds via credible means and is essential to some genres, such as poetry. Children and adolescents with LLD who cannot incorporate nonliteral language into their writing will not be able to display the full range of communicative functions of writing.

Likewise, when students with LLD are expected to fulfill multiple communicative functions with a single composition (e.g., informative, heuristic, and imaginative functions for a report on novel approaches to curbing greenhouse emissions), they may fall short because research has demonstrated that these students use the full array of language functions less frequently than their nondisabled peers (e.g., Lapadat, 1991; Spekman, 1984).

In the following sections, an attempt is made to identify how certain characteristics of these students' writing might be tied to pragmatic difficulties. Then, research related to the writing difficulties of students with LLD is presented. This research has excluded an explicit focus on the contributions of oral language problems in general and pragmatic difficulties in particular to the writing performance of students with LLD. A subsequent section presents a sociocognitive model of writing in which the role of pragmatics is highlighted that may guide research and intervention efforts.

CONNECTIONS BETWEEN PRAGMATIC LANGUAGE PROBLEMS AND WRITING PROBLEMS

The myriad problems with pragmatic language use encountered by children and youth with LLD have far-reaching social and academic consequences. For instance, the parents of children with language impairments engage in literacy-related language interactions (e.g., shared storybook reading, reciting rhymes, storytelling) less frequently than parents of children with other kinds of disabilities (Marvin & Wright, 1997), possibly because of their children's limited linguistic competence. These limited opportunities not only affect the children's exposure to literacy practices, but also to social practices such as turn-taking. The social problems of children with LLD may limit their ability to participate in literacy-related peer interactions as well, and thus reduce their development of reading and writing skills. Likewise, when children receive special services for their learning difficulties, they may be perceived as different and may miss out on the social fabric of literacy in a classroom (Brinton & Fujiki, 2004). Also, their social deficits can influence their motivation for learning to read and write.

Later I review the written language problems of children with LLD. The reader is reminded that in virtually every study cited, researchers have not evaluated the participants' pragmatic language skills or social skills in conjunction with their writing performance; therefore, one cannot draw any conclusions about the degree to which writing problems are related to deficits in these areas.

Compared to the texts of their nondisabled peers, papers written by writers with LLD are shorter, incomplete, poorly organized, replete with errors in the basic conventions of written English, and weaker in overall quality (Bishop & Clarkson, 2003; Carlisle, 1996; Dockrell et al., 2007; Englert & Raphael, 1988; Gillam & Johnston, 1992; Graham, 1990; Lewis & Freebairn, 1992; MacArthur & Graham, 1987; Mackie & Dockrell, 2004; Nodine, Barenbaum, & Newcomer, 1985; Scott & Windsor, 2000; Thomas, Englert, & Gregg, 1987; Treiman, 1991; Windsor, Scott, & Street, 2000). These problems may be attributed, in part, to difficulties in executing and regulating the processes underlying proficient writing, including planning, content generation, revising, and text transcription (e.g., Graham, Harris, & Troia, 1998). Each of these processes is considered later in greater detail . One must be mindful that research also suggests oral language abilities, in particular vocabulary knowledge and grammatical competence, are correlates of writing performance (Dockrell et al., 2007).

Planning

Planning behavior, especially the amount of time spent planning, is a critical part of the composing process and is linked to the quality of written papers (Bereiter & Scardamalia, 1987; Hayes & Flower, 1980). Planning involves three subprocesses: (1) formulating, prioritizing, and modifying both abstract and highly delineated goals and

subgoals to address task and genre demands and perceived audience needs; (2) generating ideas; and (3) selecting and organizing valuable ideas for accomplishing established goals (Hayes & Flower, 1980). Many expert writers engage in planning while they are producing text rather than beforehand, pausing up to 70% of the total time they spend writing, especially during the initial phases of composing (Hayes & Flower, 1980; Gould, 1980). However, planning in advance of writing may help circumvent potential attention and memory disruptions when composing tasks require the satisfaction of both content and structural demands (Hayes & Flower, 1980; Kellogg, 1986). Conversely, advance planning may restrict exploration of new ideas and organizational schemes that arise while drafting and may be counterproductive unless the writer already knows what ideas should be included in the text (Elbow, 1981; Torrance, Thomas, & Robinson, 1991). Regardless of when it might be best to plan, students with LLD do very little planning spontaneously or even when prompted (MacArthur & Graham, 1987).

Why do struggling writers frequently bypass planning? Research evidence suggests that students with LLD tend to rely on a knowledge-telling tactic for many writing tasks, generating content in an associative, linear fashion (Bereiter & Scardamalia, 1987; Gould, 1980; Hayes & Flower, 1980; McCutchen, 1988, 1995). They start to write immediately after being given a writing assignment and pause perhaps only briefly (typically less than a minute) to formulate their first sentence so that it is related to the topic and conforms to the requirements of the genre, but they do not appear to consider broader rhetorical or personal goals for their compositions and the constraints imposed by the topic and text structure (Bereiter & Scardamalia, 1987; Graham, 1990; McCutchen, 1988). They may use this retrieve-and-write process because of at least three different reasons: (1) they are overwhelmed by the demands of text transcription (Graham, 1990; Graham & Harris, 1997; Graham

et al., 1998; McCutchen, 1988, 1996); (2) they are frequently asked to complete writing assignments that do not necessitate overt planning of content because the tasks entail a familiar genre and common format; and (3) they do not adequately account for the needs of the reader and establish corresponding rhetorical and personal goals to address those needs.

When poor writers do allocate time for planning, they typically list potential content in a first draft format, one that hinders the elaboration and exploration of ideas. More adept writers, however, plan extensively and recursively to organize, develop, and reflect on their thoughts at a more abstracted level of representation within a framework that meets specific task and audience demands and personal goals (Bereiter & Scardamalia, 1987). When explicitly taught, a number of planning strategies are effective in improving the schematic structure, length, and quality of papers written by students with LLD, including (a) brainstorming words and ideas (e.g., Troia, Graham, & Harris, 1999); (b) generating and organizing content with text structure prompts prior to writing (e.g., De La Paz & Graham, 1997; Sawyer, Graham, & Harris, 1992; Wong, Butler, Ficzere, & Kuperis, 1996, 1997); (c) setting planning goals to address audience needs and task demands (e.g., De La Paz, 1999; Page-Voth & Graham, 1999); and (d) discussing a topic with others before writing about it to identify alternative perspectives and others' informational needs (e.g., Wong et al., 1996, 1997).

Content generation

Students with LLD frequently generate less content for their papers than other students of the same age while simultaneously including more superfluous or nonfunctional material in their texts (Graham, 1990; MacArthur & Graham, 1987; Thomas et al., 1987). They may do so because (a) they are less capable of sustaining their memory search for topic-relevant material (Englert & Raphael, 1988); (b) their topic knowledge is incomplete or fragmented (Bos & Anders,

1990; Graham & Harris, 1997); (c) they are less knowledgeable about text structures for particular genre patterns such as narration and persuasion and thus have difficulty regulating discourse in these genres (Englert & Raphael, 1988; Graham, 1990; Roth, 1986; Roth & Spekman, 1984; Roth et al., 1995; Thomas et al., 1987); or (d) they fail to presuppose the right amount of shared referential information between themselves and their reader. For example, Graham and Harris (1989) found that fifth- and sixth-grade students with LLD excluded several important text structure elements from their written stories and persuasive essays. Often, the omitted elements included the setting of a story and the premise of an essay, suggesting that these students were insensitive to the reader's perspective. Likewise, Nodine et al. (1985) reported that upper elementary school-aged students with LLD were less proficient than their normally achieving peers in writing narratives that included a basic plot; nearly half of the students with LLD provided simple descriptions of picture prompts.

Simply asking students with LLD to write more or providing them with text frames to help them organize the retrieval of content does increase the length, organization, and quality of their papers. Graham (1990), for instance, found that students with LLD typically spent 6–7 min writing argumentative essays, but when asked to write more they generated up to four times more content, half of which was new and useful. Teaching students with learning difficulties to establish goals concerning the length of their papers and to self-monitor their productivity also can increase the amount and quality of their writing (e.g., Harris, Graham, Reid, McElroy, & Hamby, 1994). These findings suggest that poor writers have access to more information to include in their papers (Englert & Raphael, 1988; Graham, 1990; Graham & Harris, 1989), though the information may still be inadequate for meeting the expectations of the reader unless the writer has a clear awareness of the audience's thoughts and feelings regarding the topic. If a student with LLD

is made aware of the mind of the reader, he or she may be able to sustain an interesting, relevant, and cohesive conversational turn on the topic (with the written text) and avoid unnecessary confusion.

Revising

Revising is difficult, especially for struggling writers, for at least five reasons. (1) Students often make inaccurate presuppositions regarding shared understandings between themselves and their audience, which leads to generally egocentric texts that require the reader to infer far too much from too few details (Bereiter & Scardamalia, 1987; Sperling, 1996). For example, Bartlett (1982) reported that elementary students are better able to detect problems and correct errors when reading a paper written by someone else than when reading their own work. Young authors and those less competent in writing thus seem to have difficulty taking the reader's perspective, which obscures the need to revise. (2) When students do revise, they tend to focus on localized and superficial issues rather than discourse-level concerns (Graham, 1997; MacArthur & Graham, 1987; McCutchen, 1995). These minor revisions have little impact on the quality of students' texts (e.g., Bereiter & Scardamalia, 1987; MacArthur & Graham, 1987). In fact, less than 20% of the revisions made by students with LLD are substantive (Graham, 1997; MacArthur & Graham, 1987). (3) They frequently miss inaccuracies and confusing spots in their texts (i.e., dissonance location) and/or do not know how to make an adequate change when a problem is detected (i.e., dissonance resolution). In some cases this is because of poor reading skills, in others because students fail to adequately monitor their writing output (Beal, 1987; Fitzgerald, 1987). (4) Many children and adolescents have difficulty managing revision along with the other cognitive, linguistic, physical, and motivational operations involved with composing text. (5) Poor writers in particular feel too wedded to their written text because so much effort was invested in creating what exists because of

their difficulties with text transcription (see below). If students do not possess accurate and fluent text transcription skills, the time and effort they need to produce a draft will be considerable and undermine their willingness to abandon text produced with "blood, sweat, and tears" and to spend more time and effort transcribing additional text.

Text transcription

Struggling writers' lower-level text production skills often are not fully developed and automatic (e.g., Fulk & Stormont-Spurgin, 1995; Graham & Weintraub, 1996). For example, the compositions written by students with LLD are fraught with more spelling, capitalization, and punctuation errors than those written by their typically developing peers (e.g., Carlisle, 1987; Fulk & Stormont-Spurgin, 1995; Hauerwas & Walker, 2003). In addition, the handwriting of students with LLD is slow and uneven (Graham & Weintraub, 1996) and their papers are less legible than those written by normally achieving students (MacArthur & Graham, 1987). These disruptions in lower-level text production skills hobble students' ability to engage in higher-order composing behaviors (Graham, 1990; Graham & Harris, 1997). When students with writing difficulties have to devote substantial cognitive resources to spelling and handwriting, often with limited success, attention to content, organization, and style becomes minimized (Berninger, 1999; Berninger & Winn, 2006; McCutchen, 1996; Swanson & Berninger, 1996). It is little wonder then that handwriting and spelling performance account for two thirds of the variance in writing fluency and one fourth of the variance in writing quality for children in the primary grades and about 40% of the variance in written output for students in the intermediate grades (e.g., Graham, Berninger, Abbott, Abbott, & Whitaker, 1997). Students with LLD who struggle with pragmatics might experience difficulty using correct punctuation not only because of underdeveloped knowledge of punctuation rules and marks, but also be-

cause they lack a deep understanding of how punctuation relates to communicative intentions.

MODEL OF WRITING AND THE ROLE OF PRAGMATICS

Figure 1 displays a sociocognitive model of writing in which cognitive-linguistic components associated with writing processes are included, as are the social components of the writing task environment, and the interactions between them. This model is based largely on Hayes' (1996) model, but also incorporates elements from those proposed by Kellogg (1994) and Horning (2002). To illustrate the connections between the model's components with a special emphasis on interactions with pragmatic language competence, the poetic genre is used because poetry's many linguistic and cognitive demands and the sheer variety of poetic forms make it a very challenging genre for students (Wilson, 2007).

Much of what follows is speculative. Researchers in writing need to begin to use reliable and valid techniques to measure the pragmatic and social skills of their study samples to link these characteristics to the writing processes and products the children and adolescents display to validate relationships between model components. Such efforts would yield a more informed perspective on the linguistic as well as academic profiles of students with LLD and extend current efforts to map specific language and learning characteristics onto specific writing problem profiles (e.g., Berninger, Garcia, & Abbott, 2009; Nagy, Berninger, & Abbott, 2006). A number of informal checklists are available that might assist researchers and teachers in their efforts to link oral language characteristics and social skills with written expression (e.g., *Pragmatic Language Skills Inventory* by Gilliam & Miller, 2006; *The Learning Clinic Pragmatic Skills Checklist* by DuCharme, 2006), as is the widely used norm-referenced *Test of Pragmatic Language* (Phelps-Terasaki & Phelps-Gunn, 2007).
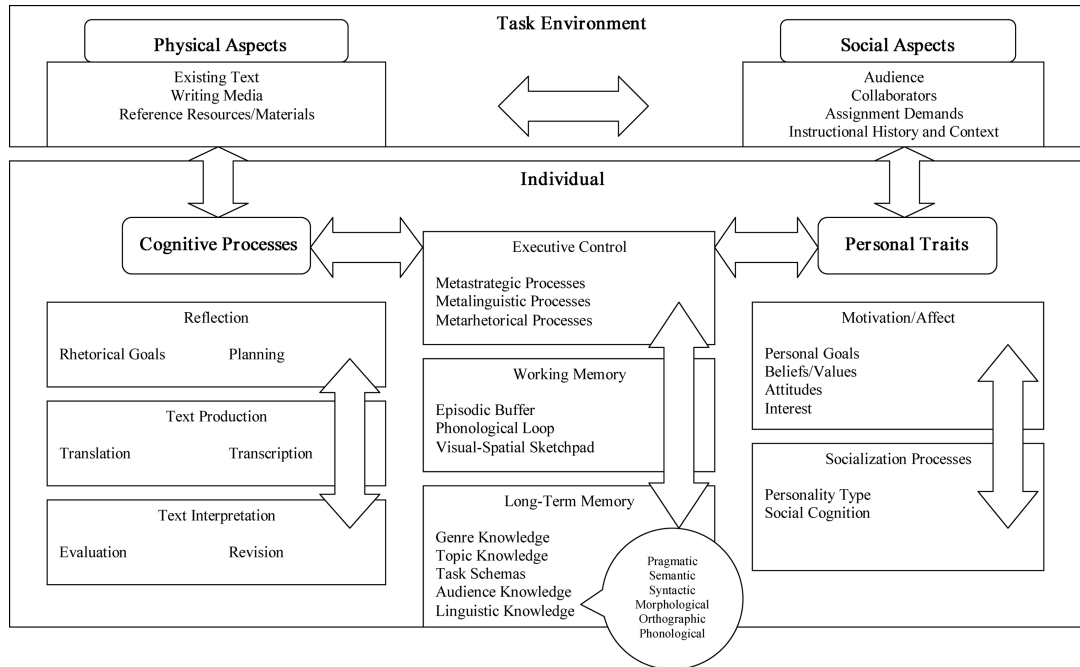
Figure 1. Sociocognitive model of writing (based on Hayes, 1996; Horning, 2002; Kellogg, 1994).

Poetry writing and pragmatics

Poetry has been defined as literary language used to create a virtual experience for the reader of the author's real or imagined experiences (Britton, Burgess, Martin, McLeod, & Rosen, 1975). Poetry can be both linguistic and artistic in nature—poets can write (or speak) a poem, but also can read, recite, or perform the poem with or without integration with other media or genres (Certo, Apol, Wibbens, & Yoon, 2010; Chapman, 1999). Regardless of the form of poetry, writers must attend to textural (word choice and imagery), register (mood and tone), and structural (line and stanza length, overall shape, and meter) features of a poem with an eye toward conservation of expression (Certo et al., 2010; Tannen, 1989). Thus, a precise knowledge of multiple meaning vocabulary, mental state verbs, and figurative expressions is necessary to express oneself poetically. Typically developing students, especially beyond Grade 4, show explicit control over metaphoric language use in their poetry (Steinbergh, 1999); students

with pragmatic difficulties would be anticipated to exhibit tremendous difficulty with metaphors and other such textural features of poetry. Likewise, lexical and grammatical cohesion comes to the fore in poetry (they also are important in other writing genres, though genre affects to what extent; Pellegrini, Galda, & Rubin, 1984). This relates to the necessity for conservation and intentional use of various poetic features to provide the reader with a coherent text that reads and sounds like poetry. Because children and adolescents with LLD often struggle with this aspect of discourse regulation, they would be expected to write poetry that is inadequate in terms of requisite textural and structural elements.

Presuppositional abilities are prominent in the writing of poetry to communicate in a meaningful register suitable for the topic, the author's perspective, and the audience's likely interpretation. The student with LLD will likely be disadvantaged in this respect. Finally, the use of punctuation, line breaks, and spacing to communicate ideas with

conventional poetic structures will probably pose a challenge for students with LLD who display pragmatic weaknesses.

Model components and poetry

Research has demonstrated that both the physical and social aspects of the task environment play a critical role to the development of poetry writing. Students who are immersed in varied forms of poetry assimilate elements of poems they have heard and read (Dowker, 1989; Dyson, 2003; Kamberelis, 1998; Schnoor, 2004). Likewise, students borrow ideas from their peers and others in their social worlds, as well as their experiences and imagination, as topics for their poetry (Apol & Harris, 1999; Dyson, 2003; Kovalcik & Certo, 2007). Of course, this is where the linkages between the social aspects of task environment, particularly instructional history and context, collaborators, and audience, and the physical aspects, particularly reference resources (e.g., poetry guides) and materials (e.g., mentor texts) and writing media (e.g., blogs) become most evident. A risk-free context in which collaborative writing—not just conferring, but actual group and peer-mediated poetry writing—is valued and communication with authentic audiences (aside from the teacher or even immediate peers) is expected is key to a supportive task environment. Such an environment also will include genre-based activities in which mentor texts and guides are frequently consulted over an extended period of time and used as scaffolds to support the development of the linguistic and artistic modes of poetic expression in both oral and written forms (Russell, 1997; Troia, Lin, Monroe, & Cohen, 2009). Environments that lack these opportunities likely will not support the development of adequate pragmatic language knowledge and skills, but rather disadvantage students with and without LLD (e.g., Cazden, 2001; McGill-Franzen & Allington, 1991).

As displayed in Figure 1, the task environment elements interact with the individual writer's characteristics in complex ways. In the poetry genre, the social demands of the task environment will potentially exceed the cognitive processing resources and personal resources of the individual with LLD, whose deficits in social cognition (when pragmatic difficulties exist) and linguistic knowledge (the latter is situated in long-term memory and recruited by working memory while engaged in other cognitive operations) create serious impediments to executing reflection, text production, and text interpretation. Simultaneously, the need for deliberate meta-level processes in poetry writing—poetry goes beyond simply writing what one knows, rather, it invokes using language content and form in novel ways to express ideas both profound and mundane—may present particular difficulty for students with LLD.

CONCLUDING REMARKS

At least some children and adolescents with LLD will have problems with the pragmatic aspects of language use, as well as knowledge deficiencies in phonology, morphology, and orthography that negatively affect their memory operations and text generation, reviewing, and reflection for writing. Problems with negotiating the social aspects of the writing task environment, particularly addressing audience and assignment demands and working in a collaborative framework for accomplishing a writing task, are likely to occur in association with their social inadequacies arising from pragmatic difficulties. In addition, their poor knowledge of genre may hobble their ability to generate text that conforms to particular discourse demands at multiple levels (e.g., punctuation, figurative language use). It might be assumed that these additional constraints on these children's writing could result in even more pronounced writing problems, though this hypothesis requires empirical testing. It also is important to consider the pragmatic differences between mainstream instructional contexts and the communicative patterns of students from culturally and linguistically diverse backgrounds (e.g., limited topic initiation), as these will compound

the challenges faced by students with LLD in writing.

It is entirely likely that a small proportion of students with LLD who do not possess weaknesses in phonology or morphology (and consequently can read and spell successfully) will exhibit deficits in semantics and pragmatics and thus display writing difficulties not because they have difficulty with text production, but because their higher-order language problems interfere with successfully planning and revising texts that adequately address the task environment. This is similar to those children who exhibit poor reading comprehension but good word recognition because of underlying weaknesses in semantics, morphosyntax, and pragmatics (e.g., Nation, Clarke, Marshall, & Durand, 2004). Future research efforts should explore the possibility that pragmatic language weaknesses characterize a subgroup of students with disorders in written expression.

Practitioners should consider ways to address the pragmatic language deficits of those children and adolescents with LLD who possess such problems and target both oral and written modes of communication. For instance, activities to identify the most appropriate communicative functions of discourse for specific audiences using a specific genre and what expectations these audiences might hold can be incorporated into planning tools and revising checklists commonly used in writing instruction, as well as planning for oral presentations often demanded in classroom contexts. Students with LLD will require targeted intervention in using deictic terms correctly, especially when writing, because the marking of spatial, temporal, and personal relationships is critical to unambiguous compositions. In addition, explicit instruction in multiple-meaning vocabulary and nonliteral uses of language to enhance communicative effectiveness should prove beneficial.

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