



Multiple Perspectives on the Nature of Writing: Typically Developing Writers in Grades 1, 3, 5, and 7 and Students with Writing Disabilities in Grades 4 to 9

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This chapter begins with a brief overview of research on writing development. It continues by making a case for investigating writing development from the multiple perspectives of writing researchers as well as of the developing writers themselves.

Research on assessing writing in developing writers (Jeffery, 2009; Rowe & Wilson, 2015; Saddler & Graham, 2007; Wilcox, Yagelski, & Yu, 2013) and effective instructional approaches for teaching writing to developing children and youths (Graham, Kiu-hara, McKeown, & Harris, 2012; Murphy & Smith, 2015) has advanced knowledge of writing development (Jeffery & Wilcox, 2014; Schleppegrell, 2004; Wilcox & Jeffery, 2015). Much has been learned about how writing changes from preschool to early childhood (Rowe & Wilson, 2015), early childhood to middle childhood to early adolescence (Berninger & Chanquoy, 2012; Christie & Derewianka, 2008—see Table 8.1), early to middle adolescence (Wilcox & Jeffery, 2014), and even through adulthood (Brandt, 2001). Beginning in the preschool years, writing development appears to be dynamic and rarely linear (Rowe &

This chapter is dedicated to the memory of the late Arthur Applebee and his many contributions to the field of writing research and practice.

Wilson, 2015), as is also the case in grades 1 to 7 (Berninger & Hayes, 2012).

Moreover, as instructional practices in writing have changed so have the aspects of the writing development investigated. For example, in the United States only penmanship was emphasized in the nineteenth century, and in the mid-twentieth century composition was taught but not until the middle and upper grades (Applebee, 1981). Only recently, in the twenty-first century, has a balance emerged combining explicit teaching of specific writing skills and engaging children in the writing process from the beginning of schooling (see Applebee, 2000). Indeed, Applebee's vision for alternative models of writing is becoming reality in many schools and influencing the multiple aspects of writing that researchers consider: more emphasis on teaching different genres for a variety of specific writing purposes, integrating oral language with writing instruction, emphasizing writing at different levels of language (syntax, sentence combining, paragraph, and discourse), providing instruction in writing strategies, and viewing writing as participating in social action.

The populations of developing writers studied are also diverse. Both assessment and instructional research on writing have focused on English language learners (ELLs) as well as students for whom English is their first language (de Oliveira & Schleppegrell, 2015; Jeffery, Kieffer, & Matsuda, 2013; Wilcox, 2011; Wilcox & Jeffery, 2014, 2015). In addition, good writers and struggling writers (Lin, Monroe, & Troia, 2007) and students with specific learning disabilities (Graham, Schwartz, & MacArthur, 1993) have been studied.

The role of the self and of the other in writing development has been well recognized. Hayes and Flowers (1986) called attention to the role of the writer in the writing process. Although much writing research is focused on pedagogy (the role of the teacher in learning to write) or audience (writing for others), the developing writer, that is, the self that one brings to the task of learning and refining writing skill, also plays a role in writing development. Prior research has addressed the writer's affect toward the writing process (Jeffery & Wilcox, 2014), lifespan memory of the writing (and reading) acquisition process (Brandt, 2001), writers' perspectives on the role of literacy in their everyday lives and the

sponsors of those literacy activities (Brandt, 1998), and theory of mind relevant to not only expressing one's own perspectives but also perceiving and understanding the perspectives of other (Davidson & Berninger, 2016).

However, research on writing development is also influenced by the diversity of the perspectives of writing researchers (Bazerman, 2013; Bazerman et al., 2010; contributors to this volume). Multiple, diverse perspectives have informed writing research and models specific to writing skills: cognitive (Hayes, 2009; Kellogg, 1994), linguistic (de Oliveira & Schleppegrell, 2015; Schleppegrell, 2004), sensorimotor (James & Li, 2017), social/emotional/motivational (Bazerman, this volume; Hamilton, Nolen, & Abbott, 2013; Nielsen et al., 2017), and attention/executive functions (e.g., for self-regulated writing, Harris, Graham, Mason, & Friedlander, 2008) as well as interdisciplinary (cognitive-linguistic-sensorimotor-social/emotional/motivational and attention/executive function domains) (Berninger, 2015).

Given the multiple perspectives of researchers, not surprisingly, prior research has used diverse methodological approaches to study developing writers' perspectives on writing: interviews of writers (Brandt, 2001; Graham et al., 1993; Wilcox & Jeffery, 2015); a combination of interviews and examination of writing samples (Saddler & Graham, 2007; Wilcox, 2011); a combination of interviews of teachers, student writers, and administrators; surveys; writing samples; and classroom observations (Wilcox, submitted); direct observation of children writing (forms and directional patterns), assessment of content, assignment of meaning to marks, and construction of message (Rowe & Wilson, 2015); and assessment of knowledge of writing by asking children questions about the purpose of writing, the attributes of good writing, and strategies for writing (Graham et al., 1993). Conversational language during the preschool years (Berninger & Garvey, 1981) differs from the formal academic register of writing during the school years (Silliman & Berninger, 2011). However, a longitudinal study from kindergarten to first grade showed that academic oral language as assessed by psychometric tests was related to writing acquisition (Berninger, Proctor, De Bruyn, & Smith, 1988). Also, typically developing writers exhibited normal variation in their writing and reading acquisition

and individual differences in response to the same early literacy instruction (e.g., Berninger & Abbott, 1992). A cross-sectional study conducted with 900 children (50 boys and 50 girls at each grade level—first through ninth) selected to be representative of the US population at the time for ethnicity and mother’s level of education added further understanding of the normal variation across writing development and processes involved. Results also documented interrelationships among writing, reading, and oral language at different levels (units of analysis—subword, word, and syntax), as well as cognitive (planning, translating, reviewing, and revising), sensorimotor (sequential finger movements), and working memory (supervisory attention and executive functions) processes within and across grade levels. Ability at one level of language (word, sentence, or text) did not predict ability at any of the other levels of language within an individual (see Berninger, 1994, 2009).

A series of instructional studies with at-risk students at the low end of normal variation showed that low-achieving writers in kindergarten, first, second, third, or fourth grades in school settings could be brought up to grade level in handwriting, spelling, and composing skills with grade-appropriate writing instruction (for review, see Berninger, 2009). Subsequently, six writing instruction studies conducted at the university provided one-to-one tutoring for participants with specific writing disabilities outside the normal range and were also effective in improving writing skills (see Berninger, 2009; Lessons 11, 13, and 14 in Berninger & Abbott, 2003; and Lesson Sets 2, 3, and 4 in Berninger & Wolf, 2009). Additional genetics and brain research on specific learning disabilities in written language (SLDs-WL) showed the following: (a) dyslexia is not just a reading disability—the persisting problem is spelling; (b) dysgraphia (impaired handwriting) may occur alone or co-occur with dyslexia; (c) oral language may be a strength in dysgraphia and dyslexia but is not in oral and written language learning disability (OWL LD) (impaired syntax in written and/or oral expression) (see Berninger & Richards, 2010).

However, in none of these studies had the perspectives of the developing writers been considered or examined. Therefore the approach applied to the two studies featured in this chapter

was to elicit developing writers' perspectives on writing by asking them to explain to other developing writers what writing is. The goal was to analyze developing writers' explanations of what writing is to gain insight into the perspectives the developing writers themselves bring to the task of learning to write and how these perspectives may or may not change across time or be related to writing disabilities persisting beyond early childhood despite early intervention.

Both studies were informed by the first author's interdisciplinary training and experience as a research psychologist (developmental sociolinguistics, psycholinguistics, cognitive psychology, social cognition, and psychobiology) and a clinical psychologist in pediatric medical settings for children ages birth to three, three to six, grades 1 to 6 and 7 to 12, and adolescents and adults. The first study, a five-year longitudinal study with overlapping cohorts (grades 1 to 5 or 3 to 7), was therefore designed to elicit developing writers' perspectives on writing in the annual assessments. Research findings have supported the contribution of all five domains of development to typical writing development: the cognitive domain (Niedo, Abbott, & Berninger, 2014), the language domain by ear, mouth, eye, and hand at text level, syntax level, and morphophonemic word levels (Abbott, Berninger, & Fayol, 2010; Berninger, Nagy, & Beers, 2011), the sensorimotor domain (Richards et al., 2009), the attention/executive function domain (Berninger, Abbott, Cook, & Nagy, 2017), and the social/emotional domain (Hamilton et al., 2013; Nielsen et al., 2017). Research has also supported the role of these specific writing skills: transcription (Alstad et al., 2015) and translation (Niedo et al., 2014). Relevant to translation, the generative nature of multiple genres in composition has been demonstrated (Davidson & Berninger, 2015). See Berninger (2009, 2015, Chapters 4, 5, and 6 and companion website) for a review of other research on writing development during early childhood, middle childhood, and adolescence. However, the findings specific to the writers' perspectives are reported in this chapter for the first time.

The first study reported in the current chapter is based on the longitudinal study of typical writing development. We coded the themes in the children's explanations of what writing

is; these explanations were conceptualized as one indicator of developing writers' metacognitions about writing, which may in turn influence how they respond to writing instruction, engage in independent writing at school or home or elsewhere in their daily lives, and perform on formal assessments of their writing. The frequency of occurrence of each of the coded themes was tallied and displayed for comparison with writing researchers' perspectives on what writing is. We tested the hypothesis that the developing writers' responses would reflect the five domains of development and specific writing skills, in keeping with what writing researchers have found, but might provide additional insights as well from the perspectives of developing writers. Also of interest was whether developing writers might exhibit the same kind of "motherese" observed for oral language, in which both adults and older children adapt their use of language when interacting with younger children to the younger children's individual developmental levels (Snow, 1972). Thus, we also asked the children to explain writing to both younger children and children in the same grade.

The second study reported in the current chapter is from the University of Washington Multidisciplinary Learning Disabilities Center. One research aim of this interdisciplinary research has been to validate differential diagnoses of persisting specific learning disabilities in written language (SLDs-WL) in grades 4 to 9 despite early intervention in students whose development is otherwise in the normal range (Berninger, Richards, & Abbott, 2015). Another research aim has been to evaluate response to computerized instruction by students with and without SLDs-WL: dysgraphia (impaired handwriting), dyslexia (impaired spelling), and oral and written language learning disability—OWL LD (impaired syntax in written expression). At completion of each session of computerized writing lessons, students were asked questions about their perspectives on writing assessment and instruction. Their responses were coded to analyze, interpret, and synthesize the multiple perspectives of developing writers with and without persisting SLDs-WL.

Study 1

Methods

Each year for five consecutive years participating children completed a half-day annual assessment of multiple writing and related developmental skills. They completed standardized measures, with national norms or researcher-generated norms, of all five domains of development and specific writing skills; engaged in learning activities some of which involved writing and/or other language skills; and took frequent snack, movement, and thinking breaks to rejuvenate and sustain attention and engagement during their once-a-year literacy trek to be university students. It was during the thinking break in years 1 and 5 that children in each cohort were asked to explain what writing is (in grade 1 and again in grade 5 for cohort 1 or in grade 3 and again in grade 7 for cohort 2). The children's explanations were coded to connect with the themes reflected in them about what writing is. See Appendix A for examples of what the children said or wrote for each of the coded themes.

Cohort 1 explanations of what writing is. In grade 1, 78 children (33 boys and 45 girls) explained orally to the graduate student assessor what writing is. After the session the graduate student transcribed the audio recording for coding. Then in grade 5, the 68 children (29 boys and 39 girls) who were still participating in the longitudinal study again explained what writing is—but this time the explanations were provided in writing.

Cohort 2 explanations of what writing is. In grade 3, 77 children (39 boys and 38 girls) explained orally what writing is and the graduate student assessor transcribed the explanation into writing after the session. In grade 7, 72 children (37 boys and 35 girls) who were still participating in the longitudinal study again explained what writing is—but this time the explanations were provided in writing.

Although the children were recruited from a large urban school district in the Pacific Rim where 83 languages are spoken and English was not the only language spoken in the homes of

some of the participating children, English was the first language of all participating children. In addition, parents completed annual questionnaires and annually shared writing samples of their children from school work along with information about the instructional program at school including teacher feedback (see Berninger & Hayes, 2012). Examining these showed that students were generally receiving the kind of balanced writing instruction Applebee (2000) described, which combines explicit instruction in writing skills and engagement in the writing process through varied activities to write across the curriculum. For more details about the longitudinal study, see Abbott et al. (2010).

Results

The coded themes are summarized in Table 5.1 to facilitate for typically developing writers both cross-sectional comparisons from grades 1 to 3 to 5 to 7 and longitudinal comparisons from grade 1 (year 1 cohort 1) to grade 5 (year 5 cohort 1) and from grade 3 (year 1 cohort 2) to grade 7 (year 5 cohort 2). Appendix A provides examples for each coded theme in their explanations.

Initial reading of the explanations of writing—whether transcribed oral transcripts in younger writers or written explanations in the older writers—for the most part did not show variation whether directed to grademates or to younger children (kindergarten in year 1 when students were in first or third grade) or older children (fifth or seventh grade in year 5 when students were asked to explain writing to a kindergartner, a third grader, or a student in the same grade—fifth or seventh) (see Figure 5.1). Thus, the coded themes are based mainly on the explanation of writing at the same grade level as the developing writer providing the explanation. However, two cases were identified in which seventh graders show evidence of adapting their explanations of writing to the grade level of the student for whom they were providing the explanation.

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TABLE 5.1. Mixed Writing Development Model: Cross-Sectional Grades 1, 3, 5, and 7 and Longitudinal Grades 1 to 5 (Cohort 1) and Grades 3 to 7 (Cohort 2) for Themes in Typically Developing Writers' Responses to "Explain What Writing Is"

Coded Theme	Grade 1	Grade 3	Grade 5	Grade 7
I. Developmental Domains				
<i>Sensorimotor Domain</i>				
Tools used	49	19	0	6
Medium	12	2	0	9
Tool-medium (e.g., paper)	0	3	0	4
Tool-function	0	7	0	11
Medium-function	0	7	0	18
Tool-medium-function	0	7	12	10
<i>Language Domain</i>				
Levels of language	0	9	14	79
Cross-language systems relationships				
Writing-oral language	0	0	1	2
Reading-writing	0	2	1	16
<i>Cognition Domain</i>				
Meaning making	1	6	2	13
Flow	0	0	0	2
Creativity	0	0	0	5
Imagination	0	0	0	3
Art form	0	0	3	1
<i>Social/Emotional/Motivational Domain</i>				
Communication with others	7	10	21	38
Easy-difficult dimension	0	0	2	2
Affect toward writing	1	5	4	9
Avoidance versus persistence	0	0	0	4
<i>Attention/Executive-Function Domain</i>				
Planning	0	0	0	2
Setting goals	0	0	0	1
Brainstorming	0	0	0	3
Organizing	0	0	0	10
Reviewing/revising/editing	0	0	0	5
II. Writing Skills				
<i>Transcription</i>				
Likened to drawing	16	6	1	4
Handwriting	0	5	0	2
Spelling	0	0	4	2
Punctuation/capitalization	0	0	1	5
<i>Translation Cognition-Language</i>				
Idea expression	0	1	12	17
Self-expression—opinions and points of view	1	0	11	17
Expressing humor	0	0	0	1
Expressing theories, research, facts	0	0	0	3
<i>Translation Emotion-Language</i>				
Expressing affect/feeling	0	0	2	9

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Table 5.1 continued

<i>Metacognitions about Writing</i>				
Could not define writing	16	2	0	1
Described functions of writing	62 ^a	25	21	70 ^b
Described forms of writing (genres)	0	3	3	51
Provided examples of writing	0	7	4	31
Integrated multiple writing components	0	0	16	14
III. Relationship between Writing and School				
Subject in curriculum	0	2	0	1
Pedagogy—what teachers do	0	1	0	9
School assignments—what students do	0	2	0	0
Supports learning	0	2	0	0
Tests	0	1	0	1
Homework	0	0	0	4
Notes: ^a Most examples about letter writing ($n=29$) or spelling words ($n=16$), that is, transcription.				
^b More diversity (21 functions), of which informing/describing and explaining were most frequent ($n=14$ each).				

In writing explain, to a kindergartener what writing is.

Dear Kindergarten,

Writing is an important in your life you can ex tell people what you think in writing and keep dreams in writing. Or you can write interesting stories you just have to learn how to write. Keep writing out there and i hope to see you've written a book some where in the future.

FIGURE 5.1. Six examples of cohort 1 and cohort 2 students' written explanations of what writing is, directed to grademates or to younger children.

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Figure 5.1 continued

In writing explain, to a third grader what writing is.

Dear third grader,
You've learned that the only thing writing is, is homework and work, but many people have discovered writing is wonderful and you should have find your passion some of yours may be writing. ~~Don't~~ When writing your write you're putting all your ideas down and preserving them silently. Someday I hope one of you writes a book.

In writing explain, to student in the same grade as you are in (5th or 7th) what writing is.

Dear 7th grader,
Writing is a tool that you can express your feelings through silently. Some people love writing and some people don't. No matter what somehow writings always going to be in your life whether you like it or not. You should try to like writing at least a little or become good at it so if you don't like it its not so much a path to do.

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Figure 5.1 continued

In writing explain, to a kindergartener what writing is.

Writing is a way to talk to other people. Like, if I was to write, "D-O-G," what does that tell you?

Dog! If I was to write "C-A-T," what does that tell you? Cat!

Once you get really good at writing, you can write bigger words to people, like "happy," and "angry."

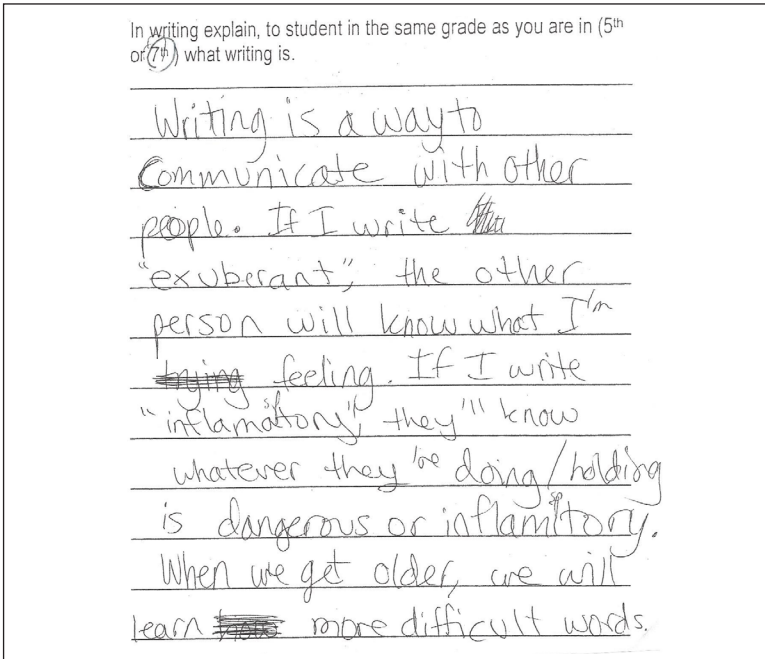
In writing explain, to a third grader what writing is.

Writing is a way to talk to other people. Like if I wrote, "E-X-C-I-T-I-N-G," what does that tell you I'm trying to tell you? Exciting!

If I wrote "A-N-G-R-Y," what does that tell you I'm trying to tell you? Angry!

Once you guys get better at writing, you can write bigger words to people, like "Exuberant" or "Inflammatory."

Figure 5.1 continued



Cross-sectional comparisons of typically developing writers showed the following patterns in the coded themes. First, explanations related to developmental domains were examined. Unexpected was the high frequency of explanations related to tools or medium used in grades 1 and 3, which were not mentioned in grade 5 or less frequently in grade 6. These are included in the sensorimotor domain because both somatosensory and motor feedback from the tool and placement of writing on the medium could influence tool use and medium for writing. In contrast, explanations that *integrated* tool and medium, tool and function, medium and function, or tool, medium, and function were never observed in first grade. A developmental trend was observed in increasing use of multiple levels of language in explaining what writing is—in the first two years of the younger cohort (grades 1 to 2) reference to at least two levels of language and often more than two levels of language from grades 3 to 5, and from grades

3 to 7 in the older cohort reference to multiple languages very frequent across each grade level. Explanations of writing related it to either oral language or reading occurred for the most part only in the seventh grade and rarely before the seventh grade. Likewise, explanations involving cognition occurred most often in seventh grade and rarely before then. In contrast, explanations of writing relating to communication with others or affect toward writing occurred at each grade level, but showed a trend toward greater frequency in the seventh grade. Explanations related to attention and executive functions only occurred in the seventh grade. Overall, the cross-sectional comparisons showed an early focus on tools or media, and an increase across time in explanations that drew on language, social/emotional/motivational, cognitive, and attention/executive functions. See Table 5.1 and Appendix A.

Second, patterns of relationships between explaining what writing is and specific writing skills were examined. Explaining writing on the basis of an analogy to drawing letters occurred mainly in the primary grades and primarily in the first grade. Explaining that writing is related to spelling, punctuation, and capitalization occurred only in the fifth and seventh grades. Translation as idea expression, self-expression of opinions and points of view, and expression of emotions occurred, with rare exceptions, only in the fifth and seventh grades. See Table 5.1 and Appendix A.

Third, other observed patterns related to explaining what writing is appeared to reflect a continuum of metacognition independent of the first two coded themes. At the lower end of this continuum, some developing writers, mainly in first grade but sometimes other primary grades, were unable to define writing. Across the grades explanations were offered that described the functions of writing, but only in the seventh grade did explanations describe the multiple forms of writing. Only in fifth and seventh grade were explanations of writing likely to provide specific examples of writing and integrate multiple component processes or skills. See Table 5.1 and Appendix A.

Finally, patterns related to explaining what writing is related to schooling were observed. Only the older developing writers, not the younger developing writers, explained what writing is with reference to schooling. See Table 5.1 and Appendix A.

Longitudinal comparisons of typically developing writers showed the following patterns in the coded themes. For the set of analyses related to developmental domains, although explanations that integrated tool and medium, tool and function, or medium and function showed a longitudinal trend from third to seventh grade, this longitudinal trend was observed only in cohort 2. The longitudinal trend from first to fifth grade (cohort 1) and from third to seventh grade (cohort 2) was observed across cohorts for integration of tool, medium, and function. Likewise, the longitudinal trends related to language, cognition, and attention/executive function were more evident in cohort 2, from grade 3 to grade 7, than in cohort 1, from grade 1 to grade 5, suggesting that the transition to middle childhood and to adolescence is when changes in these developmental domains in children's explanations of writing are most likely to occur. See Table 5.1 and Appendix A.

For the second set of analyses related to writing skills, only cohort 2 explained writing in terms of handwriting, and more so in third than seventh grade but with low frequency in both grades. Both cohorts showed the developmental trend toward less reference to drawing letters in fifth and seventh grade and more reference, but not frequent reference, to spelling, punctuation, and capitalization in the fifth and seventh grades. Both cohorts showed the longitudinal trend to less focus on handwriting and more focus on spelling, capitalization, punctuation in transcription and idea expression, self-expression of opinions and points of view, and emotions in translations in the fifth and seventh grades than in the primary grades. See Table 5.1 and Appendix A.

For the third set of analyses, the two cohorts did not show the same longitudinal trends for being unable to define writing or the functions of writing. The two cohorts did show the same longitudinal trends for the other indicators of the continuum of metacognitions about writing. See Table 5.1 and Appendix A.

For the fourth set of analyses, cohort 1 never used reference to school in explaining what writing is. In contrast, cohort 2 did. See Table 5.1 and Appendix A.

Study 2

Procedures

Referred children in grades 4 to 9, from the same community near the university as in the longitudinal study, completed comprehensive assessment to evaluate whether they met research criteria based on two decades of interdisciplinary research for dysgraphia, dyslexia, or OWL LD for an SLD in writing (see Berninger et al., 2015). Because these criteria are based on standardized measures with age or grade norms, dysgraphia, dyslexia, and OWL LD could be diagnosed despite the grade range. In fact, sometimes older students were more impaired than younger ones. However, one of the criteria was to document that these were SLDs (specific learning disabilities in that otherwise the developing writer was within the normal range in the cognition, language, sensorimotor, social/emotional, and attention/executive function domains). All of these SLDs impair transcription in some way but not necessarily the same way (see Berninger et al., 2015), and inclusion criteria also took into account histories of persistent written language problems. The parental level of education and the ethnic background of participants were comparable to that of the first study of typical language development.

Children who qualified for (and assented) and whose parents granted informed consent were invited to participate in weekly instructional sessions to complete eighteen computerized lessons. At the completion of many of these sessions, the second author asked the children to explain what writing meant to them through various prompts, similar to how the children in the longitudinal study had been asked. She tested the hypothesis that because of their long-standing difficulties with handwriting and spelling, they might focus exclusively on those skills in explaining what writing is. Some of the specific questions she used included asking them to explain how teachers could help them to become better writers and express their creativity, what styles of writing they liked to use and why, and what kinds of assignments they preferred to write by hand. For each question, students wrote their responses in handwriting on paper.

The third author examined the writing samples produced by students from the same study who also participated in a related brain-imaging study. At the end of the scanning session, the participants were instructed to plan silently before composing and then when they exited the scanner to write the composition they had planned on this topic: “Explain to an astronaut how writing can be used in exploring outer space.” Of interest were the coded transcription and translation variables observed for a common writing topic.

Results

As shown in Appendix B, explanations of what writing is, provided by the students with SLDs in transcription, were diverse, reflecting themes in the typically developing writers’ explanations. The explanations of those with SLDs did not uniformly reflect a narrow understanding of writing restricted to the transcription skills with which they had difficulty. The hypothesis that transcription problems preclude developing a broader view of the writing process was not supported.

Of educational relevance, the students with SLDs explained that they learn more in the years they have teachers who understand and like them, consistent with a sociocultural perspective on writing development that suggests that student-teacher bonding is as important as the nature of the writing instruction during middle childhood and adolescence, just as parent-child bonding is in the early postnatal period. Moreover, when the second author queried the students with SLDs about the styles of writing they enjoyed, that is, with which they experience positive affect, they reported a wide array of writing they enjoyed despite their own transcription problems (see Appendix C).

The third author’s coding of those compositions showed considerable variation in genres for the same topic sentence and in knowledge-telling strategies as well (Wallis, Richards, Boord, Abbott, & Berninger, 2017). The first finding is consistent with recent research by Boscolo, Gelati, and Galvan (2012) and Olinghouse, Santangelo, and Wilson (2012) showing the generativity of genres in typically developing writers. The second finding extends

what Hayes (2011) found for young typically developing writers, and adds genre competency to Hayes's family of strategies. Both findings show that translation, while constrained by transcription, is a separable process from transcription and expresses itself in diverse ways. Also illuminating was the number of students who spontaneously used art along with written language to translate their thoughts for communication with others (Wallis et al., 2017). Translation draws on the hand in expressing ideas in both written language and art, which is why many books are illustrated in art or visual displays that combine linguistic and nonlinguistic portrayal of ideas.

Discussion of Studies 1 and 2

Significance for Writing Research

The perspectives of the typically developing writers reflected an awareness that writing develops over time and across space. As one fifth grader explained: "Writing is something you will do the rest of your life." Other developing writers offered the insight that writing helps you to communicate to more people (as one expressed it, "millions"), across time ("lasts long after you write it"), and across space ("far away readers"). However, the initial model based on prior research did not capture all the perspectives developing writers in the current study brought to the task of learning to write. New categories were also identified (see various items in sections I, II, and III in Table 5.1).

However, the developing writers and the adults who interact with them may be not only at different chronological ages but also at very different stages or places in their own writing development; the latter transcends chronological age and may affect how the adult interacts with the child or adolescent developing writer. Indeed, not only teachers but also parents play an important role in writing development as the annual parent questionnaires collected in the longitudinal study demonstrated (Alston-Abel & Berninger, 2017). A wraparound developmental model acknowledges the cross-development influences on writing

development, which may be both age-related (generational) and skill-related (individual), and as important as the perspectives of the developing writers themselves.

Writing research too, like other research fields, involves cross-generational collaborations. A research mentor guides the new generation in the research they will pursue in the future, but it is that new generation who will carry the research field forward. For example, the second author is engaged in a larger study seeking developing oral and written language learners' advice for teachers on many topics and communicating the students' perspectives gleaned from their advice to teachers in general. Educational theorists who emphasize the constructive processes of the learner have long acknowledged that the teacher and the learner are coparticipants in the learning process. Yet recently the emphasis has been on what the teacher does—evidence-based instruction—and perhaps we are losing sight of the perspectives learners bring to the instruction that can influence their responses to that instruction. The third author is engaged in interdisciplinary research integrating language with STEM and the arts (L'STEAM) and exploring how technology can support learning and instruction for both. In the process he is discovering amazing generativity in the creativity of written language expression and the genres employed, even in students with diagnosed transcription disabilities (Wallis et al., 2017). At the same time, problems in text organization are observed that cannot be fully explained by transcription disabilities.

It is this cross-generational collaboration among seasoned and new-generation adult writing researchers that sustains the continuity of the field of writing research. Just as writing develops across the lifespan, the field of writing research will also evolve developmentally over time as the collective wisdom continually identifies new research topics and methods. Thus, the field of writing research benefits from the multiple perspectives of writing researchers, both from diverse traditions investigating writing across the lifespan and at different time points in their personal career paths.

Limitations

The explanations of writing of the typically developing writers were collected longitudinally from 2001 to 2005, early in the current era of annual state testing yoked to state standards. Furthermore, the focus was on the developing writers' explanations of what writing is—not necessarily all the processes and skills that may affect their writing development and achievement. That is, the findings only reflect developing writers' ability to explain in language their understandings or metacognitions about what writing is.

The explanations of writing of the students with persisting SLDs-WL were collected in writing, which may have limited what they were able to express. As time permitted, the second author was sometimes, but not always, able to interview the student for oral clarification of their perspectives on the question for each lesson. Nevertheless, it was very instructive how many students shared that they learn the best when teachers show an understanding of students and connect with them socially and emotionally. It is not just what teachers teach but how they create relationships with the students they nurture that contributes to writing development.

Future Research Directions

Future research might also use longitudinal designs of typically developing writers as well as a variety of other methods that have been used to assess student's perspectives on what writing is and that were reviewed in the introduction to this chapter. These methods might be applied both alone and in combination to identify the richness and diversity of perspectives that developing writers might bring to the tasks of learning to write and using writing. Some of these findings may inspire future research on the role of metacognitive understandings of writing in learning to write and test hypotheses generated on the basis of the current findings.

Asking children to explain writing to other students who were younger or in the same grade served as a reminder that writing development may be influenced by others at different time points

in their own journeys in writing development. Although we did not find support for a phenomenon like “motherese,” which is well established for oral language learning, we did find evidence that during early adolescence at least some developing writers may be developing abilities to express their metacognitions about what writing is, which are affected by the developmental level of the writer and audience for their explanations. See Figure 5.1 and Table 5.1. Future research might explore effects of this increased meta-awareness about writing in some adolescents on their own writing development. Our introduction also discusses past research on such meta-awareness in adolescent writers.

Conclusions

Both typical writing development and writing development in struggling writers with SLDs-WL are best understood from not only the perspectives of researchers’ methodologies and paradigms but also the perspectives of developing writers. Also relevant are the perspectives of teachers and parents, which deserve additional research attention.

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Appendix A

Examples from Protocols for Coded Themes in Table 5.1

Integrating Multiple Writing Components

Examples from seventh graders; also produced by fifth graders.

1. Use letters of the alphabet to form words to get ideas across and write stories, letters, books, and essays.
2. Writing is an art . . . a form of communication that is made up of symbols for words . . . write for all different types of reasons for fun or required for job or school or any other purpose.
3. Writing is an act of forming letters, words, sentences, and paragraphs, to persuade, explain, describe, or show feeling.
4. Communication that is facilitated through a collection of hieroglyphs or letters or numerals drawn on a piece of paper or smaller materials—you can transfer ideas or concepts to millions of others by recording them on a piece of paper.
5. Express by putting your idea into words with vivid descriptions and compelling words and exciting concepts so other people can understand what they mean, also with certain things an emotional response to writing
6. Putting words on paper in sentences that make a story, there is usually a subject, put your imagination on paper, say whatever you want, have fun, usually boring, you do it a lot
7. Use regular or cursive alphabet letters to form words on paper forming sentences with words in order that makes sense, 5 to 9 sentences into paragraphs, express your thoughts or write stories with different plots or ideas, persuasive, narrative, expository, action, an art like painting
8. Examples for sound to letters, morphology transforms words, homophones and word-specific spellings
9. Types of homework teachers give and expect, good word choice, ideas, organization, and creativity
10. Use pen or pencil to make words on paper, make words into sentences, sentences into a story, think about what you want to say that everyone can read, for school, work, fun, write for many reasons, write a book, type it on a computer
11. Use pen or pencil to tell a story or express self on paper using letters of the alphabet
12. Communicating thoughts to other people through symbols on paper using the alphabet to express whatever you want
13. Putting ideas on paper by “drawing” letters to make words, another way besides saying words to tell somebody something by combining letters to make words and sentences

14. More than a bunch of words “It is creating imagination and knowledge all in one word.”

Appendix B

Responses Explaining What Writing Is by Students with Persisting Writing Disabilities (Spelling Uncorrected)

From the “In Their Voice” Project (Geselowitz)

Student 1 Writing is when you right down words and tell a story

Student 2 Writing is a form of communication which can be preserved and used/read at a later time.

Student 3 Placing words on paper to make stories

Student 4 Putting down information

Student 5 It something you do with your hand and the pencil

Student 6 Writing is a way of communicating with others and it can be records

Student 7 Writing is a form of language

Student 8 I think cause I am reeving to handiting

Student 9 Writing is a form of speaking just on paper. You are writing it not speaking it.

Student 10 doing written work

Student 11 Writing is what you fill and you can write on a piece of paper like I am to tell you what writing is.

Student 12 Writing is makrs or simbles used to communicate

Student 13 Evil, horrible, energy wasting task

Student 14 Putting words on paper.

Student 15 expressing an opionion or docement a time in history

Appendix C

Responses to the Questions “What *kinds* of writing are the most interesting to you? What style do you like to use the most when you

write? Why?” by Students with Persisting Writing Disabilities (Spelling Uncorrected)

From the “In Their Voice” Project (Geselowitz)

<p>“I like essays and stories when I get something to write about. The style of writing that I like depends I like fiction when I’m given something to write about and I like journal entrys about other people.”</p>
<p>“Abvencher beause it is fun to right. My favret righting is advencher because its exiting and you can make the caricter do enything like go throw the fucher or space”</p>
<p>“I like free writing. The free writing that I do is for fun I like to write about things that I’ve done or seen or heard of. I also like to write songs. Rhyming really caches on to me. writing a song you have to be creative and let the words come from the bottom of your heart. They have to truely mean somthing to you or someone else or else you don’t understand what your writing.”</p>
<p>“I really enjoy fiction, no fiction, poems and etc. When I’m writing I like to write the way poems are written but free verse. I don’t really like to rhyme I rather just write my feelings out and not think about what I’m writing or what word rhymes with what. I mostly write about how I feel, sports or just like the weather.”</p>
<p>“foot ball writing. Staf I like. like foot ball.</p>
<p>“I guess creative writing but I love to use dialog. I love it! Mostly because if you ask anyone that is close to me they will say, I like to talk. I think it is super fun to skript out what someone will say. Because sometimes life will be unpredictable so it’s cool to know what they are going to say before they say it.”</p>
<p>“I like narrative writing because I can write about whatever I want to write about and have control on how it ends. But I only like it if I can choose what I want to write about.”</p>
<p>“cursive Beacuse it looks cool. its not realistic. cusive is not realitic, thats why I like it”</p>
<p>“I love to write poems. I don’t know why but I do. Actully I do know why. I love poems because you don’t have to write in full centenses. I really don’t like expressing my self in langhes people understand so I feel free when I write poetry”</p>
<p>“I like writing most about something interesting like a book we read in class or a passage. I like writing inforamational writing the most because it is easiest for me.”</p>

“I am most intriced in mreanbyology. I like riting facts about it that are true! because it is very fun!”

“The kind of writing that is most interesting to me is relalistic Fiction or Fiction. a type of writing I can make anything I want happen in the book or story.

The style of writing I like to use is mostly made op writing. But when I have to do an essay for scholl I do something that happened to me but otherwise I mostly make storys up.”

“Fiction and naritive writing is more interesting to me. I like it when I can write little children’s books and storys. Why? I can let my ideas flow.”

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