

## Common Core State Standards, Writing, and Students with LD: Recommendations

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This article examines the Common Core State Standards as they apply to writing and students with learning disabilities (LD). We first consider why the implementation of these standards is advantageous to writing instruction for students with LD as well as the challenges in implementing them. Next, we make the following four recommendations in terms of their implementation: (1) increase general and special education teachers' knowledge about writing development; (2) create a writing environment in which students with LD can thrive; (3) employ evidence-based writing practices in general education classes (where most students with LD are taught); and (4) use evidence-based writing practices effective with students with LD. We conclude by considering research that still needs to be undertaken to help educators maximize the probability that students with and without LD meet the writing benchmarks proposed in these Standards.

During the past several decades, efforts to improve the teaching of writing have played a minor role in the multiple attempts to reform and improve K-12 education in the United States. With the creation of the *Common Core State Standards* (CCSS, 2010; (<http://www.corestandards.org/the-standards/english-language-arts-standards>), an effort led by the National Governors Association Center for Best Practices and the Council of Chief State Schools Officers, this situation changed dramatically. For the 45 states that adopted CCSS, writing is now a central player in their efforts to improve education. Students in these states (approximately 87 percent of all public school students in the United States) must now learn to craft text that skillfully persuade, inform, and narrate imagined or real experiences. They must become adept at using these different types of writing as a tool to help them analyze and think about the text they read, the information presented in class, and their individual and collective efforts with classmates as they build and present knowledge through research. This includes using writing as a tool for learning in social studies, science, and technical subjects in middle and high school. They must move beyond pen and paper, and learn to apply 21st century writing tools.

CCSS emphasizes four basic applications of writing skills. These are: (1) learning to write for multiple purposes (Text Types and Purposes); (2) producing and publishing well-organized text appropriate to task and purpose by planning, revising, editing, and collaborating with others (Production and Distribution of Writing); (3) using writing to recall, organize, analyze, interpret, and build knowledge about a topic or materials read (Research to Build and Present Knowledge); and (4) applying both extended and shorter writing tasks to

facilitate learning in a range of discipline-specific subjects and across purposes and audiences (Range of Writing). Each of these applications is presented in greater detail in Table 1. These applications are not independent, but overlapping. The skillful execution of each application depends on students' facility and mastery of a range of other writing skills, including handwriting (or typing), spelling, conventions, grammar, word choice, and sentence construction. These skills make it possible for the writer to transcribe, sculpt, and convey their meanings and intentions (Graham, in press). Standards for these foundational writing skills are included in the Language section of CCSS.

In an analysis of the application of CCSS with students with special needs (this would include students with learning disabilities [LD]), the International Center for Leadership in Education (ICLE; McNulty & Gloeckler, 2011) argues that the standards apply to all students, allowing students with special needs an opportunity to acquire the skills and knowledge needed for a successful future as well as providing them with access to the assessment system used to assess the standards. This position echoes language in the single CCSS document on the common core website that addresses this issue (<http://www.corestandards.org/assets/application-to-students-with-disabilities.pdf>). This document indicates that students with disabilities must be challenged to excel in the general curriculum so they are prepared for postsecondary success. In effect, it is expected that students with LD will meet the Common Core standards in writing. Although ICLE recognized that some students with disabilities will not meet these new and rigorous academic standards, they indicate this “is not a reason to stop providing support to help them achieve at high level of learning” and claim further that, “Many more students can reach standards than schools have imagined” (p. 7). We generally agree with this analysis and think that is important that we set high expectations for what students

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TABLE 1  
General Focus of CCSS in Writing in K-12

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**Text Type and Purposes:**

- Write supported opinions on specific topics or text
- Write informative and explanatory text that clearly and correctly conveys information about the selected topic(s)
- Write narratives to develop imagined and real events or experiences

**Production and Distribution of Writing:**

- Produce writing in which the development and organization of ideas and information is appropriate to the writer's task, purpose, and audience
- Develop and strengthen writing through the flexible use of planning, revising, editing, and rewriting processes and strategies
- Use technology (including the internet) to produce, collaborate, publish, and share writing with others
- Developing the keyboard skills needed to produce 1–2 pages of text in a single setting

**Research to Build and Present Knowledge:**

- Use writing to conduct short research projects designed to build knowledge about a topic
- Use writing to facilitate the recall and understanding of information from experiences as well as print and digital text
- Use writing to draw information or evidence from different types of texts to support analysis, reflection, and research (grades 4 and 5 only)

**Range of Writing:**

- Routinely use both shorter and extended writing tasks and activities to facilitate content area learning, including learning in the language arts
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with LD can achieve in writing. Nevertheless, the application of *CCSS* in writing with students with LD requires a more nuanced analysis in order to determine its benefits and challenges when applied with these learners.

### ADVANTAGES OF CCSS IN WRITING

An important advantage of *CCSS* is that there is considerable emphasis on teaching students how to be better writers and how to use writing to enhance comprehension of text and facilitate learning of content materials. So why is this important? At school, students' writing influences the grades they receive on exams assessing their knowledge of content information (Graham, Harris, & Hebert, 2011a); learning subject matter material is enhanced by writing about it (Bangert-Drowns, Hurley, & Wilkinson, 2004; Graham & Perin, 2007a); reading skills are improved through the teaching of writing and writing about text makes it more comprehensible (Graham & Hebert, 2011). At work, employers indicate that writing plays a role in hiring and promoting white-collar workers, and most blue-collar workers now report writing is part of their job (National Commission on Writing, 2004). At home, e-mailing, blogging, texting, and other forms of electronic writing have become a common means for communicating with family, friends, and even those who are not known to the writer. Throughout the day, whether at home, school, or work, people use writing and reading together

to accomplish a variety of different types of tasks. In other words, writing is a basic part of the fabric of life in the United States and other industrialized countries. As a result, students who are poor writers, which include most students with LD (Graham, Harris, MacArthur, & Schwartz, 1991), are at a serious disadvantage in succeeding at school, successfully pursuing some form of higher education, securing a job that pays a living wage, or participating fully in social and civic activities. By placing greater emphasis on the teaching of writing and how to apply it, *CCSS* increases the likelihood that students with LD will acquire these critical skills.

A second advantage of *CCSS* is that it offers a needed roadmap for writing instruction. It provides benchmarks for a wide variety of writing skills and applications students are expected to master at each grade and across grades. Although it is generally silent about how to teach writing, the benchmarks provide an orderly progression for thinking about what students need to acquire at each grade level. They are also constructed so that students will develop increasing sophistication in applying the writing skills and applications embodied in *CCSS* from one grade to the next. It is reasonably assumed that such mastery and increased sophistication will fuel students' growth as writers and their skills in using writing as a tool for learning (Graham, in press). While the benchmarks are not perfect (more about this later), they are superior in coverage, coherence, and clarity to the many state standards for writing we have reviewed.

For students with LD (and most other students for that matter), the writing benchmarks for *CCSS* present a broader and more rigorous vision for the role of writing in schooling. Writing is not viewed simply as a skill to be learned during English or the writing period. Instead, writing is viewed as a tool that works in unison with reading, thinking, and content to promote learning. This emphasis on writing to learn makes writing instruction a school-wide responsibility, as writing differs from one discipline to the next. Each discipline employs unique forms of writing, such as writing a log to describe what happened in a scientific experiment and why, or writing a historical argument to advocate for a particular interpretation of events. This requires that teachers across the disciplines must teach the writing forms, traditions, tools, and standards specific to their subject (Shanahan & Shanahan, 2012).

This is a much more ambitious role for writing than is evident in most schools today, where writing and writing instruction is mostly limited to the language arts or English, and even in these classes writing typically receives little attention (Applebee & Langer, 2011; Gilbert & Graham, 2010; Kiuahara, Graham, & Hawken, 2009). A potential by-product of *CCSS* for writing is that teachers (both general and special) will set higher expectations for what students with LD can achieve. (Our experience in working with teachers in many different schools is that what these youngsters can achieve is underestimated.) Of course, this value of higher expectations depends on whether there is a reasonable chance, through good instruction and student effort, that the writing benchmarks can be achieved.

Although the assessments for *CCSS* are still under development, another potential advantage of this reform effort is that it will increase the use of performance assessment

procedures. Recently, the two consortia developing the exams for CCSS shared a range of sample test items, providing insight into the tests that are set to emerge in 2014–2015 (Gewertz, 2012). For example, one of these items asked 11th graders to read an excerpt from a speech by Susan B. Anthony on women's rights and a treatise on civil government by John Locke, and then in writing to identify the ideas common to both pieces and discuss how Locke's ideas support Anthony's claims, citing evidence from each to support their position. Test items such as these increase the likelihood that writing in fact will be used (in conjunction with reading and thing) to support content learning.

The consortia are reportedly developing formative assessment procedures that teachers can use to enhance their instruction. The use of such procedures has been shown to improve the writing of students with disabilities, including those with LD (Graham, Harris, & Hebert, 2011b). In our view, performance and formative writing assessments are a welcomed addition. Writing assessment has for the past several decades been dominated by state and district writing tests. Multiple reviews of such assessments (e.g., Graham, Hebert, & Harris, 2011; Hillocks, 2002; Jeffrey, 2009) have raised serious concerns about the impact and validity of these assessments. In many instances, they are often: (1) narrowly conceptualized focusing on a single writing genre; (2) disconnected from subject-matter learning; (3) provide little useful information for classroom instruction (e.g., scores are often not available until the end of the school year), and (4) fail to meet basic standards for test validity (e.g., tests are not reliable enough to make decisions about individual students or provide an adequate measure of writing achievement).

A final advantage we would like to mention is that a set of common writing standards makes it easier for a student with LD to move from one school, district, or state to another (Shah, 2012). Although instruction may differ from one school to the next, the basic goals at each grade level will remain the same, potentially reducing the disruption of such a transition.

## CHALLENGES

In a recent issue of *Education Week* (Sawchuk, 2012), David Saba the chief executive officer of Laying the Foundation and a partner with PARCC (one of CCSS assessment consortia) was quoted as saying, "Common core is causing serious angst in your states, your districts, and your schools" (p. 6). A teacher quoted in the same article declared: "It will really change how they teach . . . It will be outside their comfort zone" (p. 6). This is especially true for writing, as CCSS requires a radical shift in how writing is taught in most classrooms.

In a series of surveys designed to capture what writing instruction looks like nationally in elementary and secondary grades (Cutler & Graham, 2008; Gilbert & Graham, 2010; Kiuahara et al., 2009), teachers reported that students spend little time actually writing at school. Teachers reported that elementary students spend only about 20–25 minutes a day writing text, whereas much of the writing done by secondary

students involved tasks, such as filling out worksheets, making lists, writing one sentence responses to homework questions, and composing a brief summary of material read. Writing was not particularly common in English classes, and even less so in content subjects, such as science and history.

These surveys (Cutler & Graham, 2008; Gilbert & Graham, 2010; Kiuahara et al., 2009) also revealed that students received little instruction in writing after 3rd grade. In grades 4–6, teachers reported spending only 15 minutes a day to teach writing. While secondary teachers reported that they taught writing, instruction occurred infrequently, especially outside of the English period. Furthermore, across the grades, instructional adaptations for weaker writers were uncommon in many classrooms (see also Graham, Harris, MacArthur, & Fink-Chorzempa, 2003). Teachers reported practices in these surveys are similar to the observations drawn by Applebee and Langer (2011) in their study of writing practices in schools in the United States. It must further be noted that the findings from these studies provide an apt description of how writing is taught to students with LD, as they generally received all or almost all of their writing instruction in the general classroom (Graham & Harris, 2011).

These portraits of contemporary writing stand in stark contrast to the demands of CCSS, where students are expected to learn how to write skillfully in multiple genres; routinely use shorter as well as extended writing applications to conduct research in subject matter courses; and apply writing as tool for analyzing, understanding, and recalling information from text and classroom experiences. CCSS further emphasizes students' mastery of a variety of writing skills (e.g., handwriting, spelling, typing, and good vocabulary choice), processes (e.g., planning, editing, and revising), and digital tools. Consequently, many teachers and schools will need to redesign what they do, if their students are to meet the CCSS writing benchmarks.

Take, for example, the following writing standard from grade 5 for Research to Build and Present Knowledge: Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources. For students to meet this benchmark, they will need to learn how to (1) locate relevant print and digital information, (2) take notes, (3) summarize information from multiple sources, (4) integrate such information into a larger text, and (5) correctly cite sources. Most teachers in the Gilbert and Graham (2010) survey, however, reported that they rarely taught students strategies for conducting an inquiry/writing a research report.

Redesigning writing instruction to meet CCSS standards is hampered by a capacity problem—many teachers indicate that they are not well prepared to teach writing (Gilbert & Graham, 2010; Kiuahara et al., 2009), and it seems reasonable to infer that this lack of preparation applies to teaching writing to students with LD too. Likewise, it is unlikely that most special education teachers would claim special expertise in teaching writing, as their college preparation programs rarely involve a course in this area. It is doubtful that the hoped-for transformative effect of CCSS (i.e., better student writing and the use of writing as a tool to support reading, thinking, and learning in the disciplines) will be realized without a great

deal of work on the part of schools on how to implement it (Murphy & Regenstein, 2012). Because of the capacity issue and the complexity of the standards, well-designed, concerted, and ongoing professional development will be needed for virtually all teachers in a school if the students are to meet the writing benchmarks. It is not clear who will provide such professional development (or if states can afford to pay for it; see Murphy & Regenstein), and the whole enterprise might eventually be much ado about nothing.

As noted earlier, *CCSS* provides benchmarks for writing skills and applications that students are expected to master and apply at each grade. As with all maps of this nature, it is important to be familiar with the problems that potentially limit the impact of such a map (Graham, in press). One concern is that many of the writing benchmarks are simply educated guesses as to what students' should be able to achieve at particular grades. Despite the claims of the developers of *CCSS*, these benchmarks lack precision and accuracy, and encourage the belief that the same standards are appropriate for all students at each grade. We contend that this viewpoint is misguided, as some standards will be too hard and others too easy, depending upon the veracity of the benchmark and the competence of the student. A slavish reliance on the accuracy and precision of such objectives is likely to result in situations where students underachieve because the standard was too easy or fail to achieve because the standard was unrealistic. Thus, the value of *CCSS* as a roadmap for teachers, especially for students with LD, will be limited if the teachers do not understand how writing develops and what contributes to its development.

This can be illustrated, at least in part, by considering the writing challenges faced by students with LD. In a recent meta-analysis (Graham, Collins, & Rigby-Wills, 2012), where we examined descriptive studies that compared the writing of normally achieving students and students with LD, we found that students with LD evidenced lower levels of performance than their typically developing classmates on every aspect of writing assessed. In comparison to their peers, they possess less knowledgeable about writing, are less positive about writing and their capabilities as writers; and are not as planful when writing. On every single dimension measured (i.e., quality, ideation, organization, vocabulary, sentence fluency, spelling, grammar, handwriting, and genre elements) their writing was less developed than their classmates, with some areas such as writing conventions (e.g., spelling, handwriting, grammar, and usage) and ideation being especially problematic.

There are a number of mismatches between the writing difficulties experienced by students with LD and the *CCSS* writing benchmarks. For example, benchmarks for handwriting end at grade 1, but handwriting difficulties bedevil many students with LD throughout school (Graham & Weintraub, 1996). While it might be argued that handwriting difficulties will no longer be an issue several years down the road, as each child will have a computer at school, this is clearly not the case now and the sheer cost of such an undertaking may make it unlikely in the near future.

Other writing challenges for students with LD, such as motivation and sentence construction and fluency (although a lot of attention is given to grammar) are not mentioned at

all in *CCSS*. Failure to consider the role of these two factors in writing development is unfortunate. To illustrate, motivation is central to writing, as affective factors such as beliefs, attitudes, efficacy influence critical writing behaviors such as engagement and persistence (Hayes, 1996; Zimmerman & Risemberg, 1997). As we noted earlier, students with LD in comparison to their typically developing classmates are less positive about writing and less confident about their capabilities as writers (Graham et al., 2012).

In addition, benchmarks for vocabulary in *CCSS* are quite common but mainly apply to reading and content learning. Benchmarks for other writing skill such as spelling are typically too vague (e.g., "Spell grade appropriate words correctly") to be of much instructional value. While we applaud the focus that *CCSS* places on writing processes (planning, editing, and revising), the benchmarks are relatively quiet on the planning, editing, and revising strategies students need to develop from one grade to the next. As a result, teachers may emphasize that students engage in these processes, but spend very little time teaching them—something that is common in current writing instruction (see, e.g., Gilbert & Graham, 2010).

In the previous section, we indicated *CCSS* offers a needed roadmap for writing instruction. We still stand by that assessment, but our analysis illustrates some of the limitations of this roadmap. It is not complete, too vague in some places, and too precise and even inaccurate in others. Our advice is that teachers treat this roadmap as providing a general set of directions that must be updated, expanded, and viewed critically when designing writing instruction for students in general and youngsters with LD specifically. It is also important that teachers not treat the standards as a one-size-fits-all approach, but develop differentiated goals for students who are writing below-grade level (which includes most students with LD) and above-grade level.

According to the *CCSS* website, the standards do not tell teachers how to teach, but help teachers build the best lessons and environment for their class by specifying the knowledge and skills students need to acquire (*CCSS*, 2010). For students with disabilities, however, language in *CCSS* recognizes that: (1) how these students are taught is critical and (2) achieving the established benchmarks requires that students with LD receive services to meet their special needs, an individual education plan (IEP) to facilitate attainment of grade-level standards, and highly qualified teachers to deliver such instruction and accomplish the goals established in the IEP. We agree that instruction, individualized goals, and well-prepared general and special education teachers are essential if students with LD are to meet the writing benchmarks, but this will require that these teachers possess considerable knowledge about writing development, effective writing practices, and how to differentiate instruction to meet individual student's writing needs. In effect, the success of *CCSS* in writing depends on high-quality professional development, as most teachers do not typically possess such knowledge or regularly engage in these practices (Cutler & Graham, 2008; Gilbert & Graham, 2010; Kiuahara et al., 2009).

Language in *CCSS* further indicates that three additional supports are needed if students with disabilities are to be successful (*CCSS*, 2010). These include applying

universal design for learning principles (see Vu & Hall, 2012 for applications in writing), making accommodation (including changes in materials and instructional procedures), and using assistive technology. Again we agree, but the application of these procedures will require considerable planning and work on the part of schools, the purchase of assistive tools and services, and professional development in how to apply them with students with LD.

Finally, the developers of *CCSS* recognized that the success of the standards for students with disabilities depends on the effective implementation of research-based instructional practices (*CCSS*, 2010). While the application of evidence-based procedures does not guarantee that students' writing will be better, the advantage of applying such procedures is that they have repeatedly produced a consistent desired impact (e.g., improved writing quality) across multiple contexts (students, classrooms, and situations). For students who are often behind right from the start, and acquire knowledge and skills at a slower rate, this may help (at least in part) to level the playing field. We suspect it will not be enough if students with LD do not receive extra assistance designed to help them to meet the *CCSS* writing benchmarks. This issue is not adequately addressed in *CCSS*.

## RECOMMENDATIONS

*CCSS* is a complex and ambitious tool for reforming K-12 education in the United States. It has the potential to transform how writing and other subjects are taught, but its success is not guaranteed because it will take considerable will, intelligent planning, financial resources, professional development, and dedication from the profession to overcome the momentum of doing the same old thing (with relatively minor adjustments). With writing, this is going to be particularly challenging, as writing instruction in most general and special education classrooms is in need of a serious upgrade. For many students with LD, this will also be a challenge as their writing is typically impoverished.

We do not pretend that we possess all of the solutions that will ensure that *CCSS* in writing is a success for students with LD, but we do offer four recommendations: increase how much teachers know about writing and writing development; develop a writing environment where students with LD can thrive; implement evidence-based writing practices for all students in the general classroom; and implement evidence-based writing practices that have been shown to work with students with LD. We examine each of these recommendations next.

### **Recommendation 1: Increase General and Special Education Teachers' Knowledge about Writing Development**

It would be impossible to cover all that is known about writing development in a single journal article. Our goal is more modest. We examine five important catalysts that fuel writing development, in the hope that it will provide a general framework for thinking about the strengths and limitations

of the *CCSS* writing benchmarks and wet reader's appetite to gain even more knowledge.

Presently, our understanding of how writing develops is not complete, but we know enough to be certain that the road from novice to competent writer is influenced by the context in which writing takes place and changes in students' writing skills, strategies, knowledge, and motivation (Graham, 2006a). Fundamentally, writing is a social activity involving an implicit or explicit dialogue between writer and reader (the writer is also a reader of his/her work). The purposes and meaning of writing are not static, but shaped by cultural, societal, and historical factors. For instance, writing differs considerably from what students are expected to write at school versus the writing that occurs when a group of friends tweet each other (Nystrand, 2006).

Writing is also a cognitive activity, requiring the application of a variety of mental and affective processes. It is goal-directed and self-sustaining, involving the skillful management of the writing environment; the constraints imposed by the writing topic; the intentions of the writer(s); and the processes, knowledge, and skills involved in composing (Zimmerman & Reiserberg, 1997). Writers must master and juggle a commanding array of skills, knowledge, and processes. This includes strategies for planning, drafting, revising, editing, and publishing text; knowledge about topic and genre; and the skills needed to craft and transcribe ideas into sentences that convey the author's intended meaning. The development of digital writing tools has added the need to develop additional skills, knowledge, and processes, as writing now includes symbolic as well as visual and auditory information.

Consistent with these conceptualizations, two basic approaches have dominated much of research about how writing develops. One approach concentrates on how context shapes writing development (Russell, 1997), whereas the other focuses mostly on the role of cognition and motivation in writing (Hayes, 1996). Scholars of writing typically align themselves with one view or the other. This is a mistake in our opinion, as writing development cannot be adequately understood without considering both conceptualizations.

Russell (1997) developed a model that we draw upon to illustrate the contextual view of writing development. One basic structure in this model is the activity system. This describes how actors (a student, pair of students, student and teacher, or class—perceived in social terms and taking into account the history of their involvement in the activity system) use concrete tools, such as paper and pencil or word processing, to accomplish an action leading to an outcome, such as writing an essay. The outcome occurs in a problem space where the actors use writing tools in an ongoing interaction with others (peers and teachers) to shape the composition that is being produced over time in a shared direction.

Another basic structure in Russell's model (1997) is the concept of genre, which is defined as "typified ways of purposefully interacting in and among some activity system(s)" (p. 513). These typified ways of interacting become stabilized through repeated use among and by students, creating generally predictable approaches for writing within a classroom (this might take the form of following a general approach to composing involving the following steps: selecting a topic,

planning, drafting, revising, editing, and publishing). These genres are conceived as temporarily stabilized structures, however, they are subject to change depending upon the context. For instance, a new student entering a class with an established genre for writing may apply some of the routinized tools used by his classmates, such as creating a semantic web for organizing writing ideas before drafting a paper. In turn, the new student may disrupt current patterns of writing in the class, as other students adapt unfamiliar routines applied by their new classmate, such as “free writing” ideas about the topic before creating a first draft of the paper.

In contrast, the cognitive/motivational view of writing development focuses on the individual writer and the mental and affective processes involved in writing. We illustrate this approach via a model of skilled writing developed by Hayes (1996). In his model, Hayes identifies the mental moves and motivational resources writers draw on as they write. This includes the mental operations of text interpretation, reflection, and text production. Writers draw on these processes to create a representation of the writing task, develop a plan to complete it, draw conclusions about the audience and possible writing content, use cues from the writing plan or text produced so far to retrieve needed information from memory; turn these ideas and information into written sentences, and evaluate plans and text and modify them as needed. The model also details the interplay between other cognitive processes when writing, including long-term memory (knowledge of the writing topic and audience as well as vocabulary, linguistic, morphological, and genre knowledge, including schemas for carrying out particular writing tasks), working memory (which serves as an interface between cognitive processes, motivation, and memory, providing a mental place for holding information and ideas for writing as well as carrying out mental operations that require the writer’s conscious attention), and motivation (the goals, predispositions, beliefs, and attitudes that influence the writer and the writing process). Not explicitly identified in Hayes’s model, but important nevertheless, are the skills and abilities writers use to transform ideas into sentences that are then translated into text through handwriting, typing, and spelling.

Hayes (1996) and Russell’s (1997) models provide essential information (complementing and extending *CCSS*) on what needs to be attended to when designing a writing program for students with and without LD. It is important to create a writing environment where students’ development as writers can thrive and to make sure they acquire the skills, strategies, knowledge, and will needed to become competent writers.

### **Recommendation 2: Create a Writing Environment in Which Students with LD Can Thrive**

It is especially important to create a positive and supportive writing environment for students with LD, as most of them dislike writing and view themselves as less competent than their classmates (Graham et al., 2012), many are not certain about how to carry out the basic process involved in writing

TABLE 2  
Activities for Establishing an Environment Where Students with LD Thrive

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1. Create a positive and enthusiastic environment, where accomplishments are rewarded and students with LD are constantly encouraged to try hard, believe that the writing skills and strategies they are learning will permit them to write well, and attribute success to effort and the tactics they are learning.
  2. Set high expectations for students with LD, encouraging them to surpass their previous efforts or accomplishments.
  3. Treat writing as a process, where students plan, draft, revise, edit, and share their work (this includes students working together in positive ways to support these processes).
  4. Keep students with LD engaged by involving them in thoughtful activities (such as planning their composition) versus activities that do not require thoughtfulness (such as completing a workbook page that can be finished quickly, leaving many students unengaged).
  5. Provide just enough support so students with LD can successfully carry out writing tasks and processes, but encourage students to act in a self-directed manner, doing as much as they can on their own.
  6. Adapt writing instruction and assignments to meet the needs of individual students.
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(Graham et al., 1991), and many teachers set low expectations for what students with LD can do. The writing applications embodied in the *CCSS* writing benchmarks involve the use of complex and demanding mental activities. This includes writing to inform, persuade, and entertain; writing in a planful, thoughtful, reflective, and collaborative manner; and writing to support the analysis and learning of content material from multiple sources. Students with LD are more likely to master these skills in writing environments where process is emphasized and a pleasant, engaging, and supportive atmosphere is created. The writing practices of highly effective literacy teachers provide an excellent model for creating such an environment. Table 2 presents six practices these teachers commonly employ (Graham, 2010). These practices should be evident in all environments where students with LD write, both general and special.

### **Recommendation 3: Employ Evidence-Based Writing Practices in General Education Classes**

Students, especially those with LD, are more likely to meet the *CCSS* writing benchmarks if exemplary writing instruction is provided right from the start, beginning when students start school. An additional advantage of this approach is that it should prevent or at least slow the development of writing difficulties in students with LD. A useful approach for identifying best practices for the general classroom is to draw on findings from scientific studies testing the effectiveness of specific writing practices. This provides a relatively trustworthy approach for identifying potentially effective practices, as such testing provides evidence on whether a procedure improved students’ writing or writing enhanced learning and understanding of content material.

Table 3 identifies evidence-based practices that were tested in at least four or more scientific studies. For each

TABLE 3  
Evidenced-Based Writing Practices Found to be Effective in the General Classroom

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**Have Students Write:**

- Increase how much students write.  
(*ES* = 0.30 for writing quality, grades 2–6, 5 studies; Graham, Kiuahara et al., in press)

**Teach Students Strategies for Planning, Drafting, Editing, Revising, and Publishing Their Written Work**

- Teach students strategies for planning, revising, and/or editing text.  
(*ES* = 1.15 for writing quality, grades 2–10, 20 studies; Graham, 2006b)  
(*ES* = 1.02 for writing quality, grades 2–6, 20 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.82 for writing quality, grades 4–10, 20 studies; Graham & Perin, 2007a)
- Implement the process approach to writing instruction. This involves extended opportunities for writing; engaging in cycles of planning, translating, and reviewing; writing for real audiences; personal responsibility and ownership for writing; high levels of student interactions; evaluations and self-reflection about the writing process.  
(*ES* = 0.34 for writing quality, grades 1–12, 29 studies; Sandmel & Graham, 2011)  
(*ES* = 0.40 for writing quality, grades 1–6, 16 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.32 for writing quality, grades 4–12, 21 studies; Graham & Perin, 2007b)

**Increase Students' Knowledge about Writing:**

- Teach students the basic building structure of different types of text (e.g., persuasive text has a premise, reasons to support the premise, and so forth).  
(*ES* = 0.55 for writing quality, grades 2–6, 8 studies; Graham, Kiuahara et al., in press)
- Provide students with exemplary models of specific types of text and ask them to emulate them in their own writing.  
(*ES* = 0.25 for writing quality, grades 4–12, 6 studies; Graham & Perin, 2007b)

**Teach Basic Writing Skills:**

- Teach handwriting, typing, and spelling.  
(*ES* = 0.55 for writing quality, grades 1–3, 8 studies; Graham, Kiuahara et al., in press)
- Teach sentence construction using sentence-combining procedures (i.e., teacher models how to combine simpler sentences into more complex ones; students practice combining such sentences).  
(*ES* = 0.50 for writing quality, grades 4–9, 5 studies; Graham & Perin, 2007b)

**Scaffold Writing So Students Succeed:**

- Have students work together to plan, draft, and/or revise their compositions.  
(*ES* = 0.89 for writing quality, grades 2–6, 4 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.75 for writing quality, grades 4–12, 7 studies; Graham & Perin, 2007b)
- Set specific goals for the writing students are to complete (e.g., a goal to include specific text elements, goals to add 3 new ideas while revising).  
(*ES* = 0.76 for writing quality, grades 4–6, 7 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.70 for writing quality, grades 4–12, 5 studies; Graham & Perin, 2007b)
- Engage students engaging in prewriting activities (such as using a graphic organizer) to help them obtain, generate, or organize ideas for their composition.  
(*ES* = 0.54 for writing quality, grades 2–6, 8 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.32 for writing quality, grades 4–9, 5 studies; Graham & Perin, 2007b)
- Provide students with feedback about their writing or their progress learning-specific writing skills (see <http://www.jimwrightonline.com/pdfdocs/cbaManual.pdf> for progress monitoring assessments in writing).  
(*ES* = 0.77 for writing quality, grades 2–9, 16 studies; Graham et al., 2011)
- Teach students to assess their own writing.  
(*ES* = 0.46 for writing quality, grades 3–12, 7 studies; Graham et al., 2011)
- Have students use word processing as their primary writing tool.  
(*ES* = 0.47 for writing quality, grades 1–6, 10 studies; Graham, Kiuahara et al., in press)  
(*ES* = 0.55 for writing quality, grades 4–12, 18 studies; Graham & Perin, 2007b)

**Use Writing to Support Comprehension of Text and Learning**

- Ask students to answer questions about text or generate and answer their own written questions.  
(*ES* = 0.27 for reading comprehension, grades 6–12, 8 studies; Graham & Hebert, 2011)
  - Have students take written notes about text read.  
(*ES* = 0.45 for reading comprehension, grades 3–12, 25 studies; Graham & Hebert, 2011)
  - Ask students to write written summaries of text read.  
(*ES* = 0.54 for reading comprehension, grades 3–12, 19 studies; Graham & Hebert, 2011)
  - Have students write extended responses analyzing text (e.g., indicating how information from text can be applied, personalizing information in text, defending a point of view about ideas presented in text).  
(*ES* = 0.68 for reading comprehension, grades 2–12, 9 studies; Graham & Hebert, 2011)
  - Ask students to write about the content they are learning in class.  
(*ES* = 0.23 for learning/recall, grades 4–12, 26 studies; Graham & Perin, 2007a)
-

practice, we describe it briefly, identify the outcome measure, provide the average effect of the procedure, the number of studies testing it, and the grades in which it was tested. The data supporting each of the identified practices were taken from meta-analyses we conducted (Graham, 2006b; Graham et al., 2011b; Graham, Kiuahara, McKeown, & Harris, in press; Graham & Perin, 2007a, 2007b; Graham & Hebert, 2011; Sandmel & Graham, 2011) and represent the work of a host of writing researchers from both regular and special education including Virginia Berninger, Charles MacArthur, Ralph Ferretti, Carol Sue Englert, Jill Fitzgerald, Marlene Scardamalia, and Carl Bereiter, to name a few of the contributors to this database. Data from multiple reviews are cited for many of the practices. More complete descriptions of specific interventions can be found in Graham, MacArthur, and Fitzgerald (2007, in press).

It is important to note that the scientific testing of instructional practices is not without its own limitations. Just because a scientifically validated practice was effective in multiple research studies does not guarantee that it will be effective in all other situations. There is rarely a perfect match between the conditions under which a procedure was implemented in a scientific study and the conditions in which it will subsequently be applied in the classroom. The safest course of action is to monitor the effects of any evidence-based practice identified in Table 3 to be sure it works in the classroom(s) where it is applied. Furthermore, general and education teachers should work together to ensure that the types of best practices identified in Table 3 are implemented with integrity in general education classrooms.

#### **Recommendation 4: Use Evidence-Based Writing Practices Effective with Students with LD**

If students with LD are to achieve CCSS writing benchmarks, teachers need to tailor instruction that is responsive to their individual needs, using evidence-based practices that are specifically effective with them. Because these students' are less adept at writing than their general education classmates and may acquire needed writing skills, strategies, and knowledge more slowly, they will require extra help to meet grade-level standards. Such help can be provided by general education teachers (e.g., in small groups in the classroom), the special education teachers (individually or in small groups within and outside general education classes), or both conjointly. If such extra help is to be maximized, we advise that the efforts of general and special educators are coordinated.

To identify evidence-based practices with students with LD, we undertook three meta-analyses. One focused on instructional practices tested with students with LD using true-experiments or quasi-experiments (Gillespie & Graham, 2012). A second review involved studies testing the impact of word processing programs with struggling writers (many with LD) using true-experiments, quasi-experiments, and subject as own control group designs (Morphy & Graham, 2012). The third review concentrated on studies testing the effectiveness of a specific type of strategy instruction in writing: Self-Regulated Strategy Development

(SRSD; Graham, Harris, & McKeown, in press). Each meta-analysis and resulting evidence-based writing practices for students with LD are presented below.

The analysis by Gillespie and Graham identified the following four practices as effective (in at least four studies) in improving the quality of writing produced by students with LD: teaching strategies for planning, revising, and self-regulation ( $ES = 1.09$ , 15 studies, grades 4–10); establishing goals for students' writing ( $ES = 0.57$ ; four studies; grades 4–8); dictation to another person or into a tape recorder ( $ES = 0.55$ , six studies, grades 2–8); process writing instruction ( $ES = 0.43$ , four studies, grades 1–5). With the exception of dictation, these practices are also effective with students in general (see Table 3). The findings for dictation provide further evidence that the writing of students with LD is adversely influenced by their difficulties with handwriting and spelling, as once these are removed, their writing is improved. We recommend the interested reader access Graham (1999) for more information on effective practices for teaching these skills.

In an analysis of 27 studies assessing the effects of word processing, Morphy and Graham (2012) found that struggling writers in grades 2–11 who used this mode of composing saw the following gains in their writing: 0.52  $ES$  for writing quality; 0.66  $ES$  for ideation/organization, 0.48  $ES$  for paper length; 0.57  $ES$  for mechanical correctness, and 1.42  $ES$  for motivation. Moreover, word processing programs with added software allowing students to receive text-specific feedback and/or support with writing vocabulary, planning, and editing produced an average gain of 1.46  $ES$  for writing quality. Consequently, no student with LD should head to school in the morning without a computer to write on. The one caveat here is that students need to develop fluent and accurate typing skills and know how to use the computer to write.

The third and final meta-analysis examined the impact of SRSD on the writing of a variety of different types of students (Graham et al., in press). With SRSD, students are explicitly taught specific writing strategies for planning and revising, the knowledge needed to use these strategies, and procedures for regulating these strategies, the writing process, and their behavior. Instruction promotes students' ownership and independent use of writing and self-regulation strategies (see Harris, Graham, Mason, & Friedlander, 2008 for lessons plans for teaching various strategies). Students are treated as active collaborators during instruction and the role of student effort is emphasized. The level and type of feedback and instructional support provided as students learn the target strategies are adjusted to be responsive to students' needs, gradually shifting responsibility for strategy use from teacher to student. Instruction is also criterion- rather than time-based.

Across different types of writers in 28 true- and quasi-experiments (grade 2–high school), SRSD produced an  $ES$  of 1.75 for writing quality, 2.24  $ES$  for structural elements, and 0.47  $ES$  for length (Graham et al., in press). For the most part, statistically significant gains were maintained across time and generalized to genres other than the ones instructed. For students with LD, the  $ES$  for writing quality in six studies (grade 4–high school) was 2.37.

## CONCLUDING COMMENTS

It will be years before we know if *CCSS* and its implementation make a difference in the improving education in the United States and more specifically the writing of students with and without LD. If states maintain their commitment to *CCSS*, there are a number of research initiatives that we encourage IES, NIH, OSEP, and other federal agencies to enact. First, we need to develop a better understanding of how writing develops and how this development varies among different groups of students, such as those with LD. This information would make it possible to update, expand, and fine-tune the writing benchmarks based on actual observations of students writing development over time (as opposed to what are mostly educated guesses at this point).

Second, if evidence-based writing practices are to be a central component in the implementation of *CCSS*, we need to have a better understanding as well as more sophisticated models for how to prepare teachers to judiciously and intelligently implement such procedures and sustain their use. This includes additional research examining how to effectively combine various evidence-based practices into a single writing program. Even more importantly, we need to focus our research efforts on professional development. Researchers have identified a variety of evidence-based writing practices for students with and without LD. Unfortunately, we have conducted little research to develop and test various models for helping teachers learn to acquire and sustain their use of such practices (see Harris et al., 2012 for an example of such research).

Third, the research literature testing instructional procedures in writing is very thin. We need additional research to test a variety of writing practices for improving the writing of all students, including those with LD. Instructional research in reading and math have clearly been privileged over writing by federal funding agencies. We would like to call out directly IES, NIH, and OSEP to increase the amount of intervention research they fund in writing. This is absolutely necessary if students with LD (and many other writers too) are to meet *CCSS* writing benchmarks. It is also justified by the accumulated evidence showing that writing enhances reading (Graham & Hebert, 2011) and content learning (Graham & Perin, 2007a).

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