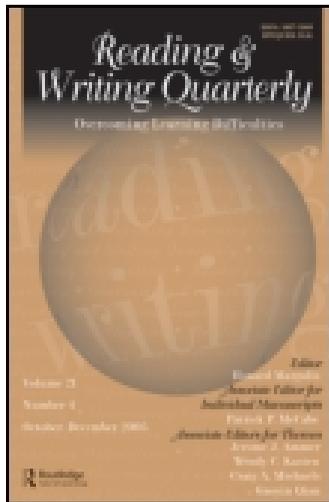


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Publisher: Routledge

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Reading & Writing Quarterly: Overcoming Learning Difficulties

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/urwl20>

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Published online: 26 Dec 2012.

To cite this article: Bruce Saddler & Kristie Asaro-Saddler (2013) Response to Intervention in Writing: A Suggested Framework for Screening, Intervention, and Progress Monitoring, *Reading & Writing Quarterly: Overcoming Learning Difficulties*, 29:1, 20-43, DOI: [10.1080/10573569.2013.741945](https://doi.org/10.1080/10573569.2013.741945)

To link to this article: <http://dx.doi.org/10.1080/10573569.2013.741945>

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Response to Intervention in Writing: A Suggested Framework for Screening, Intervention, and Progress Monitoring

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Writing may be the most complex facet of the language arts. Students need to become competent writers to succeed in school and society; therefore, teaching these skills is an important educational goal. To accomplish this goal, schools must identify students who have writing difficulties early in order to enact effectual interventions. Early screening and intervention is even more important in the current educational climate of response to intervention. In this article we discuss how schools can create a tiered system of screening, intervention, and progress monitoring for writing.

Researchers and teachers have recognized that writing is an intricate endeavor (cf. Bereiter & Scardamalia, 1987; Hillocks, 1986; Scardamalia & Bereiter, 1986). Certainly, the process of writing can be intimidating to even the most skilled writer. Perhaps that is why writing has been thought to be the most complex facet of the language arts (Mercer & Mercer, 1989; Morris & Crump, 1982), one that represents “the summit of the language hierarchy” (Polloway & Smith, 1982, p. 256).

Given the complexity of writing, it is not surprising that many students struggle with written expression. Children with writing disabilities, for example, may produce very short texts that are poorly organized and missing key details or elaborations that could enhance reader enjoyment or understanding. Difficulties with handwriting, grammar, punctuation, and spelling may

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further impact written expression, as could a lack of audience awareness, genre expectations, planning, and effective revising (Newcomer, Nodine, & Barenbaum, 1988; Wong, Wong, Darlington, & Jones, 1991). Children with writing disabilities may also have less positive images of their writing and their ability as writers (Graham & Harris, 1989). Finally, such writers may lack knowledge of metacognitive strategies that could help them navigate the writing process. A skilled writer may use several different strategies for planning, writing, and revising text as needed. However, children with writing disabilities either may lack knowledge of these strategies or may not effectively utilize the strategies they have learned.

Although writing may be difficult for many students, learning these skills is a critical goal in school. Students are often required to display their knowledge in school via writing. Furthermore, writing is often the major instrument that teachers use to evaluate academic performance (Graham, 1982). In addition, the growing emphasis on writing in federal and state-mandated accountability testing and college entrance examinations makes teachers' job of ensuring that all students achieve some level of competence with required writing components even more important.

Unfortunately, indications are that writing instruction is not as effective as it should be. In the latest version of the National Assessment of Educational Progress (Salahu-Din, Persky, & Miller, 2008), 45% of students with disabilities and 8% of students without disabilities could not write above a basic level of proficiency at eighth grade. By Grade 12, the percentage of students who could not write above a basic level of proficiency increased to 56% of students with disabilities and 15% of students without disabilities.

If experts are to improve outcomes for students, they must apply best educational practices to all students upon entering school while identifying and remediating difficulties right away. This concept is supported by the current educational policy push toward evidence-based disability identification, intervention, and remediation as envisioned in the Individuals with Disabilities Education Improvement Act of 2004. This act encouraged states to utilize an alternative method to identify students with learning disabilities while also providing additional academic supports for struggling students. This method, called response to intervention (RTI), has prompted educators to define what adequate instruction means for all learners (Ofiesh, 2006). Thus far, RTI has focused mainly on the identification and remediation of reading difficulties, at least partly because approximately 80% of students who have a learning disability have a reading disability (Lyon, 1995).

Given the number of students with diagnosed reading disabilities, it appears logical for the majority of efforts to be spent on RTI in reading; however, writing should not be neglected. It appears that even with the recent emphasis on validated reading instruction in RTI models, there is a lack of comparable research-validated writing instruction (Berninger et al., 2008).

The increased emphasis on RTI in reading has resulted in little research identifying the most efficacious methods to initiate and implement an RTI framework in writing. There simply has not been an emphasis on early screening and intervention in writing (Berninger et al., 2008). Perhaps because of this lack of emphasis, there is a paucity of articles discussing how to frame writing within an RTI model. This is surprising given the extensive research base in writing that exists apart from RTI. A great deal is known about the components of writing, the characteristics of skilled and less skilled writers, how to identify students with writing difficulty, and how to effectively remediate many aspects of writing. What has not been explored is how best to combine this knowledge under an RTI model. Because very little is known about how writing is best taught in an RTI framework, in this article we make general screening, instructional, and progress monitoring recommendations based on the existing knowledge of RTI and current empirical best practice ideas in writing. Our goal is to help schools structure a preliminary RTI framework in writing.

RTI

The main goals of RTI are to identify students who are struggling with skill acquisition and intervene early, whether the academic area is reading, math, or writing. RTI approaches include assessment and intervention components designed to provide immediate benefits to students (Mesmer & Mesmer, 2008). RTI is a multitiered problem-solving process designed with tiers of support and sustained intervention beginning with a universal core general education program. Three tiers are usually established, with each tier differing in terms of the intensity of the research-based interventions, the degree of instructional individualization, the size of the instructional group, and the demands placed on teacher skill.

Within every RTI model students are universally screened, empirically validated interventions are taught, and progress is systematically monitored (cf. Lembke, Garman, Deno, & Stecker, 2010). A general RTI model would include school-wide or grade level-wide universal screening and initially identify students at risk for future difficulties. Then in Tier 1, all students would be instructed in general education until evidence indicates that they are not responding to the instruction as anticipated. In Tier 2, services would then provide more intense interventions than are typically provided in general education for students who are identified on the screening instrument or who demonstrate weak progress (L. Fuchs et al., 2008). Interventions at this tier, however, would be less individualized than special education (i.e., students might receive small-group instruction targeted toward the development of specific skills). In Tier 3, more intensive interventions are provided for students who fail to progress in Tier 2. These interventions would most

likely include specially designed programmatic education delivered by special education and related personnel. This instruction would include individualized data-based and recursive instruction that is fittingly combined with more generalized educational instruction. Student performance would be carefully monitored and analyzed.

In each of these tiers, systematic progress monitoring of success would occur. Progress monitoring is an important element of RTI, as it is a dynamic assessment of change in a student's learning. Progress monitoring can assist teachers in identifying needs and in designing interventions. Progress monitoring is a critical component of RTI; when practitioners are systematically monitoring progress, diagnostic information is created that helps the practitioners identify children needing a tier change or an adjustment of instruction, curriculum, or materials within tiers (D. Fuchs & Fuchs, 2006).

This type of RTI approach would be consistent with current educational policies (e.g., No Child Left Behind) that emphasize the need to provide evidence-based interventions early on in a student's career, as well as research indicating the efficacy of early identification and intervention (Scanlon, Vellutino, Small, Fanuele, & Sweeney, 2005; Vellutino et al., 1996). In reading, for example, studies have demonstrated the importance of early identification and remediation in reducing achievement gaps between children with disabilities and their regularly achieving peers (see, e.g., Scanlon et al., 2005; Vaughn et al., 2009; Wanzek & Vaughn, 2007). Furthermore, recent reports suggest that the majority of reading failures can be prevented through high-quality primary grade reading instruction (see, e.g., Mathes et al., 2003). When reading interventions commence in first grade, stronger effects are achieved than when interventions are started in later grades. This might be because reading demands increase as children progress to later grades, making significant gains more difficult to achieve (Francis, Shaywitz, Stuebing, Shaywitz, & Fletcher, 1996; Wanzek & Vaughn, 2007).

This model would also be consistent with the premise that instruction for children who are at risk for reading failure must be more explicit, more comprehensive, more supportive, and more intensive than reading instruction required by average readers (Foorman & Torgesen, 2001). Within an RTI model, instructional intensity might be achieved by adding additional reading time to total classroom instruction or through using different grouping arrangements (Foorman & Torgesen, 2001). What is interesting is that the qualities of effective reading instruction are much the same as exemplary writing instruction. Like exemplary reading instruction, exemplary writing instruction can be woven into a tiered approach to identification and intervention.

An RTI Approach to Writing

Although it is challenging to teach and to learn, writing is developmental and teachable. In general, students will grow as writers to the extent that they

receive quality guidance and instruction (Graham, Harris, & Larsen, 2001). In an RTI model, this instruction would differ depending on the tier. Recent reviews of the literature in writing provide many evidence-based suggestions teachers can use to improve the writing abilities of students who struggle with written expression. Unfortunately, however, there is not adequate research available to say with certainty what existing writing instruction would be effective in Tier 1 or what instruction would be best delivered in Tiers 2 and 3 (De La Paz, Espin, & McMaster, 2010). Theoretically speaking, Tier 2 and Tier 3 instruction should be characterized by more increased intensity and individualization. So, for example, general writing instruction delivered twice weekly in Tier 1 would be delivered three times per week in a small group in Tier 2 and perhaps daily and individually in Tier 3. Furthermore, Tier 2 and Tier 3 instruction might include more explicit modeling, differentiated materials, and extended practice sessions. With these instructional characteristics in mind, in the remainder of the article ideas for interventions on each tier are presented based on the existing research.

SCREENING AND PROGRESS MONITORING

For writing instruction to be effective in Tier 1 and beyond, student achievement should first be screened to identify the presence of writing difficulties. Although initial universal screening is a key component of RTI, assessing writing can be difficult and subjective (Hessler & Konrad, 2008). In addition, few scientifically validated assessments of early writing exist that are useful in the identification of writing disabilities (Coker & Ritchey, 2010). For these reasons, evaluating writing for educational decision making requires a multifaceted approach (Tindal & Parker, 1991) that should include both qualitative and quantitative measures (Tindal & Hasbrouck, 1991) of handwriting, spelling, and prose.

Fortunately, there are several screening measures that could possibly be used in an RTI framework, including (a) accurate-legible letter writing, (b) spelling, (c) holistic scoring, (d) primary trait, and (e) curriculum-based measures (CBMs).

Accurate-legible letter writing. Accurate-legible letter writing can be checked by copying or alphabet letter writing tasks (Berninger, 2006). A commercially produced test, the Process Assessment of the Learner (Berninger, 2001), provides a subtest to measure the number of correct, unique letters a child can reproduce. In addition, the Wechsler Individual Achievement Test—Third Edition (Wechsler, 2009) includes subtests to measure letter writing as well as spelling. The Gentry Spelling Grade Level Placement Test (Gentry, 2004) and the Classroom Reading Inventory (Wheelock, Campbell, & Silvaroli, 2008) are also available to use to screen spelling ability.

Holistic scoring. Holistic scoring involves creating an overall impression of a selection. Holistic scoring may not be valid with brief samples and therefore may not be useful with younger writers because of the shortness of their texts (McMaster & Espin, 2007). See Table 1 for an example of a typical holistic scoring guide.

Primary trait scales. Primary trait, or analytic scoring, scales allow teachers to make decisions about the quality of writing based on a number of dimensions (Espin, Weissenburger, & Benson, 2004), including ideas, organization, voice, word choice, sentence fluency, and conventions (Spandel, 2008). Spandel (2008) suggested that when scoring a piece of writing based on a primary trait scale, one should score each trait individually, as an individual's performance may vary across traits. Primary trait rubrics have value in that they assess individual components of a student's writing as opposed to providing one score that represents the overall quality of writing, such as holistic measures (Kozlow & Bellamy, 2004). However, there are limited data on the technical adequacy of these measures (Gansle et al., 2004).

Primary trait provides more information than a holistic score but is likewise more time consuming to implement. Fortunately for teachers, many example rubrics are available that can be easily modified to fit students' individual needs. For sample rubrics, refer to Spandel (2008) and Education Northwest (n.d.). Teachers can also use a Web-based rubric generator such as http://www.teach-nology.com/web_tools/rubrics/

TABLE 1 Description for Holistic Story Quality Anchor Points

High story (7–8)

- A story in the typical sense that has all of the parts (who, what, when, where, why, and emotions)
- Contains extra detail and action
- Many ideas and imagination
- Well organized
- May have some errors (i.e. capitalization, punctuation, verb tense)
- Flows well, but may still be choppy in a few places

Medium story (4–6)

- A story in the typical sense but in part incomplete (missing important parts; e.g., the goal is not resolved)
- Has some organization
- Needs more detail and elaboration
- One idea flows to the next, but it is not well organized

Low story (0–3)

- Not a story in the typical sense—no ending, no real beginning, no time described, no action related
 - Merely a description of a picture
 - No consistent thought flow
 - Choppy sentences
 - Poor sentence structure
 - Lacks imagination
-

CBMs. CBMs can be used to assess academic skills and target instruction (Hessler & Konrad, 2008). In general, CBMs are tied directly to the curriculum, can be sensitive to change in student performance, and are quickly administered (Tindal & Hasbrouck, 1991). They can provide specific data for individualized education program goal development and progress monitoring; in addition, CBMs are considered to provide a stronger link between assessment and instruction than standardized tests. CBMs have been recommended for use as an important source of information in problem-solving models of service delivery and are commonly used in reading and math (Deno, 1985). They may also be useful in informing screening and placement decisions about students (Fewster & MacMillan, 2002).

CBMs can be used as valid measures of written expression through brief writing samples and objective scoring (McMaster & Espin, 2007). When one is assessing writing, CBM administration could involve writing prompts and short, timed periods of writing (Hasbrouck, Woldbeck, Ihnot, & Parker, 1999). These writing samples could then be analyzed using countable indices for many writing components, including handwriting, fluency, spelling, punctuation, grammar/usage, and word choice.

WRITING INDICES

Three types of writing indices exist. These are production-dependent, production-independent, and accurate-production indices (Jewell & Malecki, 2005).

Production-dependent measures. Production-dependent, or fluency, measures depend on the amount of production a writer creates. Fluency can mean different things. Generally speaking, *writing fluency* is the natural flow and the organization of a piece of writing. Fluent prose is easier and more enjoyable to read, as the words are organized in a logical fashion and the overall message of the piece is easy to understand. However, when one is utilizing CBM probes, *fluency* is directly linked to *production*, meaning the number of words produced within a given time period. Fluency measures include the total words written, words spelled correctly, and correct letter sequences. In addition, total punctuation marks, correct punctuation marks, number of simple sentences, and words in complete sentences may be used (Gansle et al., 2004).

A composite of several individual production-dependent indices is a correct writing sequence (CWS; Videen, Deno, & Marston, 1982). A CWS is two adjacent words that are correctly spelled, capitalized, and punctuated and that are grammatically and semantically acceptable to a native language speaker within the context of the sentence. To score CWSs, the examiner must consider how units of writing relate to one another according to the standards of informal American English. To do this, the examiner starts the scoring at the

beginning of the piece and then analyzes each successive pair of writing units (a writing sequence). Words are considered separate writing units, as are punctuation marks. Writing sequences must be correctly spelled and must be grammatically correct for the student to receive credit. In addition, the words in each sequence must make sense within the context of the sentence. A caret (^) is used to indicate a CWS. If the first word of a sentence is capitalized, always mark a CWS in front of the word, and if correct ending punctuation follows the last word of a sentence, always mark a CWS after the final word.

The following scoring rules will aid in determining CWSs:

1. Correctly spelled words make up a CWS (reversed letters are acceptable, so long as they do not lead to a misspelling).
2. Necessary marks of punctuation (excluding commas) are included in CWSs. For example:
 \wedge Is \wedge he \wedge **dating** \wedge the \wedge red \wedge haired \wedge girl \wedge ?
3. Syntactically correct words make up a CWS. For example:
 \wedge Is \wedge he \wedge **dating** \wedge the \wedge red \wedge haired \wedge girl \wedge ?
 \wedge Is \wedge he \wedge **dating** \wedge the \wedge haired red \wedge girl \wedge ?
4. Semantically correct words make up a CWS. For example:
 \wedge Is \wedge he \wedge **dating** \wedge the \wedge red \wedge haired \wedge girl \wedge ?
 \wedge Is \wedge he \wedge **dating** \wedge the \wedge read haired \wedge girl \wedge ?
5. Titles are included in the CWS count. For example:
 \wedge The \wedge Baseball \wedge Player
6. With the exception of dates, numbers written in numeral form are not included in the CWS count. For example:
 \wedge The 9 players \wedge waited \wedge in \wedge the \wedge dugout \wedge .
 \wedge The \wedge game \wedge was \wedge played \wedge in \wedge 2007 \wedge .

Not surprisingly, evaluating a writing probe according to CWSs is a time-consuming method of scoring. However, of all of the production-dependent indices, CWSs yield the most comprehensive information about a student's writing competencies.

Of the other fluency measures, total words written, words spelled correctly, CWS, and correct punctuation may be the most effective indices to use as early screens of writing ability (Deno, Marston, & Mirkin, 1982; Gansle et al., 2004; Parker, Tindal, & Hasbrouck, 1991). However, total words written is not well correlated with writing skill as measured by more standardized tests and should not be used to determine eligibility for special education (Gansle et al., 2004).

Production-independent measures. Production-independent measures examine writing accuracy independent of how much text the writer produces. These measures communicate the level of *accuracy* of the writer rather than just the amount or *fluency* of the writer (Jewell & Malecki, 2005).

Production-independent measures include percentage of legible words, percentage of words correctly spelled, and percentage of words correctly sequenced. Percentage of words correctly spelled and percentage of words correctly sequenced are assessed using a piece the writer has composed. However, percentage of legible words could also be assessed by a copying task in which the writer reproduces a piece of writing.

Accurate-production indices. Accurate-production indices such as correct incorrect writing sequences (CIWSs) are valuable because they are strongly correlated with teachers' holistic ratings of writing quality, particularly in middle school students (Espin, De La Paz, Scieka, & Roelofs, 2005; Espin et al., 2000). Because of this CIWS appears to be a good tool for measuring student progress (Malecki & Jewell, 2003). The scoring of CIWSs follows and extends the scoring from CWSs in that an incorrect word sequence (IWS) is two adjacent words that do not qualify as a CWS. A dot (•) is used to mark each IWS. To calculate the CIWS score, sum CWSs and IWSs separately and subtract IWSs from CWSs. For example:

^One^day^at^•New^Mexico^some^•time^happened^.^There^was^a^sto
rm^coming^to^the^city^.^When^ever^•one^saw^it^the^people^got^s
cared^•There^were^•thunder^and^one^hit^a^tree^and^then^it^got^on
fire.

In this example the CWS is 36 and the IWS is 5; therefore, the CIWS is 31.

Summary on writing indices. Currently, no consensus exists as to which measures to use or for whom these measures work best, although simple, countable indices are more useful for screening. Production-independent scoring and accurate-production indices more closely relate to teachers' holistic ratings than production-dependent scoring indices (Jewell & Malecki, 2005; Tindal & Parker, 1989) and may be more valid (Parker et al., 1991) and better suited for younger writers than production-dependent measures (Malecki & Jewell, 2003). The most viable overall screening measure may be percentage of words spelled correctly, as this is moderately correlated with holistic ratings (Parker et al., 1991).

However, research suggests that the efficacy of these three indices may change as students progress through the grades and that the efficacy may be different for boys and girls, as girls have been found to write more when given a time limit (Malecki & Jewell, 2003). Therefore, it is critical to consider students' gender and grade level when selecting among these indices (Jewell & Malecki, 2005).

Production-dependent indices (total words written, words spelled correctly, CWSs, total punctuation marks, correct punctuation marks, number of simple sentences, words in complete sentences) are best suited for younger

students when writing fluency is the target of assessment or when the assessment goal is to monitor student progress over time.

The suitability of production-independent measures (percentage of legible words, percentage of words correctly spelled, and percentage of words correctly sequenced) for grade levels differs by the element of writing being assessed. For example, the percentage of words spelled correctly may be most suitable for second graders; the percentage of words spelled correctly and percentage of correct word sequences may be most suitable for third graders; and the percentage of words spelled correctly, percentage of correct word sequences, and percentage of legible words written may be more suitable for fourth graders (Parker et al., 1991). Across grades, the percentage of words spelled correctly may be the best screening tool (Parker et al., 1991), with total legible words written and percentage of words spelled correctly becoming less valid as the grade level increases (Jewell & Malecki, 2005).

At the middle school level, Tindal and Parker (1989) and Watkinson and Lee (1992) found that production-independent scores related strongly to teachers' holistic ratings, whereas production-dependent scores related only moderately. Therefore, for older students, production-independent measures should be the primary measures used. Furthermore, for older students overall writing ability may be best measured by the accurate-production index correct minus incorrect writing sequences (Jewell & Malecki, 2005).

In addition to grade and gender differences, teachers must also consider the purpose of the test when choosing an index. If a check of fluency is all that is needed, total words written may be adequate. Percentage indices will give a good, quick check of accuracy in spelling, grammar, punctuation, and syntax, especially for older students (Jewell & Malecki, 2005).

In order to document progress over time, writing samples scored through CBMs can be one component of a writing portfolio. Portfolios are particularly important in writing to provide an authentic assessment of a student's progress in writing over time. Portfolios can also demonstrate a student's writing ability across a variety of writing situations and genres. As a result, they can be a solid representation of a student's writing and are a useful source of data for decision making.

Although many positive reasons for using CBMs exist, continued research is needed to determine measures of writing that have technical adequacy within and across elementary grades (McMaster & Espin, 2007). Furthermore, sensitivity to student progress over time needs to be investigated (Malecki & Jewell, 2003). (For a more in-depth explanation of CBMs, along with scoring guidelines for the different indices, see Hessler & Konrad, 2008.)

Tier 1 (Primary) Instruction

After initial screening to identify students' abilities and areas of need, general evidence-based instruction would be provided to all children beginning in

the primary grades. Early intervention may maximize the writing development of all children, lessen the number of students who develop writing problems from poor instruction, and diminish the difficulties children with writing disabilities experience (Graham & Harris, 2002). Early intervention would look different depending on the tier of implementation.

In Tier 1, teachers must ensure that the students are given the opportunity to develop as writers. To receive the tools they need, teachers should receive extensive, ongoing in-service training in screening, intervention, and progress monitoring. Furthermore, they should learn to use instruction characterized as highly interactive and individualized and directed to help students improve transcription skills (writing or word processing), conventions of print, sentence construction, and genre requirements (Graham & Perin, 2007). In addition, according to Graham and Perin (2007), students should write across content areas via a collaborative process approach in which they attempt personally meaningful writing tasks while engaging in a series of organized routines (prewriting/planning, drafting, revising, and publishing). Students should receive frequent feedback from peers and teachers. Clear and specific goals should be set for assignments, and inquiry activities should be implemented to create data that could be used for content. Finally, students should be taught how to create written summaries of reading selections.

The first major step in establishing a quality writing program that includes these components is to schedule time for writing. Children will not progress as writers unless opportunities to apply and develop their craft are provided. A predictable 45 to 60 min daily of writing routines that encourage students to think, reflect, and revise is recommended (Graham et al., 2001). However, although time to write is a necessary component, time alone is not sufficient to improve writing. Effective instruction that helps students learn to write by developing explicit knowledge about the characteristics of good writing, and how skilled writers write, must be coupled with time.

SPELLING

Spelling should be taught along with handwriting and should focus on the most needed skills (Graham & Harris, 1988). This instruction should include common patterns, frequently used words, strategies for studying new words, the application of spelling knowledge (e.g., spelling by analogy), and proof-reading (Graham, Harris, & Loynachan, 1996).

SENTENCE CONSTRUCTION

In addition to handwriting and spelling, students need to be taught how to create a variety of sentences. One method for teaching sentence construction skills is sentence combining. Sentence combining provides direct practice in

arranging and rearranging basic sentences into more syntactically varied structures (cf. Saddler, 2009; Saddler & Asaro-Saddler, 2010; Saddler & Preschern, 2007). Sentence run-ons and fragments can also be corrected via sentence combining practice. If sentence combining practice is presented systematically over time, it will improve young writers' stories and increase the amount and quality of revisions (cf. Saddler, Behforooz, & Asaro, 2008; Saddler & Graham, 2005). Sentence combining skills could be taught to the entire class in Tier 1, as students continue to grow in terms of syntactical ability through college, and therefore all students could likely benefit from such practice. Sentence combining may also be used more systematically in Tiers 2 and 3 to help ameliorate more severe sentence construction difficulties.

CLASSROOM ENVIRONMENT

Along with handwriting, spelling, and sentence construction, teachers need to consider the overall environment of their classroom. Effective Tier 1 instruction would be delivered within an environment in which writers would work together to create pieces and receive praise and encouragement for completed works. In this environment, writing would be valued and used as a worthwhile means of expression, communication, or elaboration (Boscolo & Gelati, 2007). This environment would also include peer writing, self-pacing, unique writing situations, and individualized interpretations of teacher-assigned topics. A supportive writing environment such as this could increase motivation to write (Boscolo & Gelati, 2007; Graham & Harris, 1989).

MODELING

Modeling is another important element of effective writing instruction. Modeling of the writing process should include the thought processes involved in topic selection and goal setting, problem solving, and perseverance. Modeling should also include analyzing the work of authors. For example, while reading a print source, discuss how the author develops a character, creates a realistic setting, or varies his or her sentences to create a certain rhythm or style. Select well-written pieces in different genres to help students appreciate the unique requirements of a newspaper letter to the editor versus a magazine article, for example.

Along with modeling, assignments should be created that have (a) a real purpose, (b) clearly defined goals/objectives, and (c) an authentic audience. Initially, these assignments should be carefully designed by the teacher, gradually moving to more open-ended, self-selected assignments in which the students identify the topic, audience, goals, and genre as their skills improve. Monitor self-selected tasks vigilantly, however, as children may

consistently choose to write about topics based on their personal experiences; this induces little self-regulatory behavior, as content is readily accessible and organized in memory (Graham & Harris, 1994, 1997; Scardamalia & Bereiter, 1986).

Computer-aided instruction has become increasingly popular as a tool for teaching literacy (Gunning, 2010). The National Commission on Writing (2006) reported that technology should be included as part of an effective writing program. Computer-aided instruction is important in writing because computers can help the writer gain interest in the writing task while increasing motivation to write. Technology may be useful in improving written products (Swan, van't Hooft, Kratcoski, & Unger, 2005). Word processing software can be also be used to help students who have difficulty with transcription skills or to assist during the revising process (MacArthur, 2009). Simple tools such as Microsoft Word™ spell checker and speech-to-text software can be used as Tier 1 interventions. Students can also use software such as Kidspiration® and Inspiration® (Inspiration Software, 2010) to make graphic organizers to aid in the planning and content-generating stages of writing.

Tier 2 (Secondary) and Tier 3 (Tertiary) Instruction

The success of RTI as a form of intervention and identification relies on school personnel determining which students need secondary and tertiary intervention after they are exposed to effective general or primary instruction in Tier 1. To identify students who may need instruction in Tier 2 and beyond, one needs to carefully monitor progress in Tier 1 using frequent CBM probes of critical writing skills.

Likely what many teachers will find when collecting data is that despite being provided with Tier 1 supports, some students will have writing problems that need more intensive support (Berninger et al., 2008). For those children, supplementary evidence-based writing instruction that is explicit, comprehensive, and intense would be provided in Tier 2 and Tier 3.

TIER 2 (SECONDARY INTERVENTION)

Tier 2 instruction differs from Tier 1 in that it relies on small-group, adult-led tutoring using empirically validated interventions (D. Fuchs & Fuchs, 2009) with the goal of providing a more tailored, individualized educational program for the student. Unfortunately, what is not known is which writing interventions are the most effective candidates for inclusion in these individually tailored programs. Just as there is a lack of research on which interventions are best suited for Tier 1, there is not adequate support for placing interventions in Tier 2 and Tier 3 (De La Paz et al., 2010).

However, recommendations do exist for making the interventions presented in Tier 1 more explicit, comprehensive, and intense. According to D. Fuchs and Fuchs (2009), secondary prevention would be presented in small-group (4–8 students) tutoring sessions with clearly articulated durations (generally 10–15 weeks of 20- to 40-min sessions) and frequencies (generally several times per week). This increase in the frequency of instruction would net a student many more minutes of focused small-group instruction on a daily basis than in Tier 1 (Haager, Klingner, & Vaughn, 2007; Joseph, 2008). Instruction might also be provided as extended day or summer school to help struggling students.

Tier 2 instruction would use empirically validated interventions, such as the interventions for writing presented earlier, taught by adults who use explicit (often scripted) tutoring protocols. Two types of protocols theoretically exist: a standard treatment protocol in which each student who needs Tier 2 services receives the same instructional plan that targets the same skills, or a problem-solving protocol that considers the individual needs of the student by providing an individualized instructional plan synched to meet those needs (Barnes & Harlacher, 2008).

Most students are expected to benefit from this instruction if the interventions are presented with fidelity by the teacher. To discover if the instruction is beneficial, practitioners should carefully and frequently monitor progress in Tier 2 using multiple outcome measures.

Once a tutoring protocol has been delivered, practitioners must evaluate to what degree the student responds or does not respond. Responders demonstrate progress after tutoring; nonresponders do not or respond to a lesser degree. Responders are seen as typical disability-free learners, whereas nonresponders require a more intensive, individualized, tertiary intervention (Reschly, 2005; Vaughn & Fuchs, 2003). Unfortunately, there is no research support to indicate what progress in writing looks like on grade-by-grade basis.

IDENTIFYING NONRESPONDERS

One method of possibly identifying nonresponders was envisioned by D. Fuchs and Deschler (2007), who recommended operationalizing responsiveness and nonresponsiveness on the slope of the students' data (slope discrepancy method). In this method, students are measured periodically; a slope of academic improvement is computed; and students above a normative cut point, referenced to the classroom, school, district, or nation, are deemed responsive, and others are designated nonresponsive.

Those who do not benefit as evidenced by the progress monitoring data (i.e., nonresponders) likely require the most intensive, nonstandard instruction available in the RTI framework, or Tier 3 (tertiary) intervention.

These are students who have demonstrated a substantial and sustained need for additional support to achieve critical goals (Joseph, 2008; Tilly, 2008).

TIER 3 (TERTIARY) INTERVENTION

Tier 3 instruction is characterized by small instructional groupings of from one to four students and is implemented for a longer time period than instruction in Tier 2 (Vaughn, Linan-Thompson, & Hickman-Davis, 2003). Instruction is more explicit and intense and is highly individualized to meet the unique needs of each student (Harn, Kame'enui, & Simmons, 2007). School personnel with extensive training in working with students with severe learning difficulties are often responsible for Tier 3 instruction.

At this level, teachers establish individual long-term learning goals with materials that coincide with the level of the child. This means that material may differ from the students' grade level, if necessary. The instructional methods might be more intensive versions (meaning longer sessions and smaller groups) of the tutoring program used in Tier 1 and Tier 2. However, the assumption is that because the student encountered difficulty during Tier 1 and Tier 2, Tier 3 instruction may not automatically meet the student's needs without modifications based on the continuous monitoring of student performance (D. Fuchs & Fuchs, 2009). Time, grouping size, goals, and materials, along with the following instructional factors, could be manipulated to intensify (or individualize) an instructional method for Tier 3: (a) additional repetitions of a skill, (b) an increase in praise-to-corrective feedback (Harlacher, Walker, & Sanford, 2010), and (c) criterion- versus time-based instruction to allow students the opportunity to acquire a skill or strategy at their own pace.

Similar to reading instruction, the more intense support provided in Tier 3 assumes that early strategic intervention yields more powerful benefits than efforts aimed at remediating writing difficulties in later grades (Graham et al., 2001). Therefore, the instructional goal in Tier 3 would be to help struggling students catch up with their peers before difficulties become more intractable (Saddler, Moran, Graham, & Harris, 2004). This is an important goal because some students have persistent problems with writing and may need explicit writing instruction through the middle school years and potentially in high school even with Tier 1 and Tier 2 writing intervention. In fact, even if reading difficulties are resolved, writing difficulties may persist (Chenault, Thomson, Abbott, & Berninger, 2006). Therefore, Tier 3 instruction would best be provided as early as possible to prevent or reduce subsequent writing difficulties. This view would necessitate allowing the struggling writer only a short period of time to improve his or her skills with Tier 2 interventions before administering Tier 3 interventions. To be equipped to teach more intensive interventions, school personnel would receive

further in-service training. This training should include specific interventions in handwriting, sentence construction, and metacognitive learning strategies.

Handwriting instruction. If a child needs handwriting instruction in Tier 3, generally that child could not automatize the letter-writing process by simply practicing letter formation and generating letters. These students may need more specialized instruction. For teaching transcription skills in Tier 3, Berninger (2006) recommended Dr. Fry's spelling (Fry, 1996) and typing (Fry, 1993) programs along with lessons from the Process Assessment of the Learner (Berninger & Abbott, 2003) intervention guide.

Computer-assisted instruction. Computer-assisted instruction can also be very valuable for writers in Tier 3 (MacArthur, 2009). Englert, Zhao, Dunsmore, Collings, and Wolbers (2007), for example, recommended the use of technology-assistance devices to enhance a writer's ability to organize information and stage his or her ideas. However, the students' use of the computer in this tier would need to be carefully modeled and supported by the teacher to ensure that the valuable time spent on the computer is directed at specific needs in writing (e.g., spelling, punctuation, planning, organizing, revising). One of the greatest benefits of computer instruction is that it can be used in tandem with strategy instruction.

Strategy instruction. Generally speaking, strategy instruction involves explicitly and systematically teaching steps that guide writing processes while also providing structure that helps organize writing behavior. This instruction would help students think strategically about their writing by effectively using metacognitive strategies to manage the writing process (Graham & Harris, 1989; Harris & Graham, 1996b; MacArthur, Graham, Schwartz, & Schafer, 1995). Strategy instruction is especially valuable for students with learning problems, who often have inefficient or ineffective approaches to academic tasks (Harris, 1982).

Strategic writing instruction should include explicit development of basic skills and knowledge of effective writing practices through extensive teacher modeling and coaching (MacArthur, Graham, & Schwartz, 1993; Saddler et al., 2004). In addition, effective strategy instruction programs teach procedures that help develop self-regulation and motivation, as research has suggested that an important skill in writing is the ability to monitor the composing process through self-regulation (Hayes & Flower, 1986).

Cognitive strategy instruction. One research-based writing strategy methodology is cognitive strategy instruction in writing (CSIW; Raphael & Englert, 1990). CSIW utilizes text structures to develop writing ability.

Modeling, coaching, discussion, and think-alouds are used alongside “think sheets” to make the cognitive aspects of the writing process visible. Instruction focuses on topic selection, purpose, audience awareness, brainstorming, structure, organization of ideas, wording, revising, editing, and publishing. Instruction moves through four phases: (a) text analysis, (b) writing process modeling, (c) guided practice, and (d) independent writing. Throughout these phases, think sheets are used to prompt particular writing behaviors. Planning and organizing sheets can be used to help writers consider what to include in the first draft. Self-editing and revision think sheets, in tandem with peer editing, help writers improve the draft. The most effective element of CSIW is the modeling and guidance provided by the teacher supported by the guided sharing the students receive when they discuss their writing with their peers. This coupled with the scaffolding provided by the think sheets makes CSIW an effective writing strategy.

Self-regulated strategy instruction. Another well-validated method for teaching strategies is self-regulated strategy development (SRSD) instruction (Graham & Harris, 1993). In SRSD students learn strategies and procedures for regulating these strategies and the writing process (Harris, Graham, Mason, & Saddler, 2002). SRSD was developed with the premise that skilled writers use self-regulation procedures, including goal setting, planning, self-monitoring, self-assessment, self-instruction, and self-reinforcement, to guide the way they think and feel during writing (Harris & Graham, 1996a).

Graham and Harris (1993) recommended several instruction stages when using SRSD to teach a strategy: (a) development of background knowledge, (b) discussion of the strategy, (c) modeling of the strategy/self-instructions, (d) memorization of the strategy, (e) support/collaborative practice, and (f) independent practice of the strategy. These stages serve as a guide, and teachers should modify them to meet their students' needs. In each stage teachers should provide appropriate scaffolding and frequent feedback while integrating maintenance and generalization procedures. This assistance is gradually withdrawn as students become increasingly independent with the strategy. In addition, students should move through each instructional stage at their own rate and not move on to the next stage until they have satisfactorily reached the criteria for the previous step.

SRSD is practical, is easy to implement, and requires limited time commitment. As a result, teachers can easily include this successful model in their tiered writing instruction to teach many writing skills. SRSD has been used to teach a variety of writing skills, including planning, semantic webbing, goal setting, production monitoring, peer response to revising, and revision. Furthermore, SRSD has been used beginning in the early elementary grades through middle school grades to teach story writing and persuasion to students with various disabilities, including learning disabilities, emotion disorders, attention-deficit disorder, and autism spectrum disorders. A recent

meta-analysis of SRSD attested to the efficacy of this writing intervention (Baker, Chard, Ketterlin-Geller, Apichatabutra, & Doabler, 2009). For a summary of the research base for SRSD, see Rogers and Graham (2008) and Baker et al. (2009). See Harris, Graham, Mason, and Friedlander (2008) and Harris, Graham, and Mason (2006) for detailed lesson plans and instructional materials. For sample lessons utilizing the SRSD approach to teaching writing, please see <http://kc.vanderbilt.edu/casl/srsd.html>.

CONCLUSIONS

Certainly the latest data from the National Assessment of Educational Progress assessment (Salahu-Din et al., 2008) suggest that schools should enact more comprehensive and systematic programs of writing instruction. To improve outcomes for students, experts must identify writing disabilities early enough to remediate, apply appropriate interventions in the most efficacious manner, and track student progress effectively. Schools would be well advised to begin effective instruction programs in the early elementary years in Tier 1 for all students while also providing progress monitoring of writing followed by more intensive instruction in Tiers 2 and 3 for students who do not respond adequately. Schools will need to consider (a) what types of interventions should be implemented, (b) how long to administer the intervention, (c) who should provide the instruction, and (d) whether a more standardized approach to instruction should be provided to all struggling students or whether instruction should be individualized in more of a problem-solving approach (Reschly, 2005). Although recommendations for a writing program that will strengthen general writing instruction exist, few validated writing interventions could be utilized in an RTI framework. Future research needs to be directed at identifying and validating interventions for each tier.

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