Middle School Matters Field Guide:
Research-Based Principles, Practices, and Tools

Chapter 1: Research-Based Instruction
Writing and Writing Interventions

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Writing and Writing Intervention

To be effective writers in the middle grades, students must understand that writing is a tool to support learning in all content areas. Students must master writing processes, knowledge, and skills to improve their effectiveness as writers. What follows is a description of seven important principles to help middle grades students develop their skills as writers and their use of writing to support their learning.

The first principle for Writing and Writing Interventions describes research- and evidence-based practices for using writing in all content areas. These practices include taking notes, summarizing what is learned, writing for specific purposes, and answering questions. The second principle defines the characteristics of a good writer, describes the writing and revision process, and provides specific examples of strategies to help writers improve. The third principle provides research- and evidence-based strategies for writing with a word processor and for developing keyboarding skills. The fourth principle provides practical ways to assess student writing that provide feedback to improve their writing and opportunities for them to assess their own writing and the writing of other students. The fourth principle also stresses the importance of assessing writing to identify students with writing difficulties who will need extra, intensive writing instruction.

The fifth principle describes methods for providing more intensive writing instruction to students who are in need of writing intervention because of difficulties in this area. The sixth principle cautions against traditional approaches to teaching grammar skills. Finally, the seventh principle examines ways to improve how writing is taught through professional development and opportunities for teachers to work together to contribute to the success of the middle grades writing program. Each principle is described and accompanied by specific practices and examples for schools to follow.

Principle 1:

Establish consistent school wide practices for using writing as a tool to support student learning in all content areas.

Writing about material read and presented in content classes improves students' learning and understanding.[1, 2, 3, 4] Writing about ideas presented in a class or classroom text enhances learning because it affords greater opportunities for students to think about the ideas; requires them to organize and integrate the ideas into a coherent whole; fosters explicitness; facilitates reflection; encourages personal involvement with the concepts to be learned; and involves students transforming ideas into their own words.[5] Moreover, when students paraphrase and convert text into their own words, they are not simply engaged in rote learning—a shallow form of learning.[6,7,8,9] To ensure that writing to learn occurs in all content areas, it needs to be a school wide goal.

Practice 1: *Ask students to analyze, interpret, or personalize in writing information that has been read or presented.*

When students write analyses, interpretations, and personal responses to reading and material presented in class, they develop broader and better understanding of that material. Examples of writing activities that encompass analysis and interpretation include: (1) analyzing and interpreting the motivations of a character in a novel; (2) writing a paper to show how to apply ideas presented in a science or mathematics class; and (3) analyzing material presented in a social studies class to develop a particular point of view. Examples of personal responses include writing a personal reaction to a historical event or writing about a personal experience related to material read or presented.

Practice 2: *Ask students to provide written summaries of material read or presented in class.*

Written summaries of material read or presented in class require students to consider the fundamental essence of the material. Students need to make decisions about which material is most important and how ideas are related one to another. The permanence of a written summary creates an external record of this synopsis that can be readily critiqued and reworked. As a result, summary writing improves comprehension of the material being summarized.

Practice 3: *Ask students to take written notes about material read or presented in class.*

Taking written notes about material read or presented in class enhances understanding. Note taking involves determining which information is most relevant and then transforming and reducing the substance of these ideas into written phrases or key words. Note taking requires students to organize the abstracted material in some way and connect one idea to another. They can then blend new information with their own knowledge to come to new and deeper understandings.

Practice 4: *Ask students to answer questions in writing about material read or presented in class.*

Answering questions about text or material presented in class can be done verbally, but there is greater benefit from answering questions in writing. Recording answers makes them more memorable, as writing an answer provides a second form of rehearsal. Written answers can then be available for review, re-evaluation, and reconstruction at a later date. In addition, having students create their own written questions to answer in writing can improve understanding because it requires students to think about what information is most important.

PRACTICE 1 EXAMPLE APPLICATION: Analyzing, Interpreting, or Personalizing in Writing Information Read or Presented in Class

Before, during, and/or after reading material for a class or participating in a classroom activity, students are asked to use writing to analyze, interpret, and/or personalize ideas. For example, before completing a science experiment, students are asked to write their predictions and rationale for each prediction. During the experiment, they are asked to revisit their predictions and justifications and revise as necessary. Once the experiment is completed, students revise their written predictions as needed and explain in writing the reasons for these changes. At each point, students' written predictions and justifications or explanations are used to foster discussion about students' beliefs, as well as their misconceptions about the topic of the science experiment.

Other examples of analyzing, interpreting, and personalizing writing activities that content teachers can use to promote student learning are listed below. Each of these activities can be used as a springboard for class discussion about the topic.

- **Guided journal writing:** As students read a short story for their language arts class, they keep a journal where they respond to it by answering one or more open-ended questions. For example, they can be asked to analyze why they think a character acted as he or she did and indicate what they would do in a similar situation and why.

- **Analytic essay:** After a classroom presentation about the causes of the American Revolution, students might be asked to write an essay in which they identify what they think are the three main causes of the conflict and explain the contribution of each.

- **Application essay:** After studying the principles underlying the operation of an inclined plane, students are asked to indicate in writing how they would use this principle to climb a hill, design a ramp to move material from a lower spot to a higher one, or design a plow.

PRACTICE 2 EXAMPLE APPLICATION: How to Teach Students to Summarize Material Read or Presented in Class

Students can be directly taught the following rules for how to write a summary:

- Identify or select the main information.

- Delete trivial information.

- Delete redundant information.

- Write a short synopsis of the main idea and supporting information for each paragraph.

A good starting point for teaching these rules is to begin with a paragraph of text. The teacher first explains each summary rule and its purposes. Use of the rules is then modeled as the teacher applies them to producing a summary of the paragraph. Modeling continues until students are ready to summarize paragraphs with teacher assistance. Guided practice continues until students can effectively apply the rules to summarize paragraphs by themselves. The teacher and class then begin to apply the rules to longer text, as well as class lectures.

Students can be directly taught how to write a summary using an outline as the starting point of the summary.

With this approach, summarizing centers on the creation of a skeleton outline of the material. For example, when summarizing text, students begin by creating a skeleton outline, starting with a thesis statement for the passage. Next, they generate main idea subheadings for each section of the text and add two or three important details for each main idea. They then convert their outline into a written summary of the whole text. As with the example of teaching summarization rules above, instruction begins with the teacher explaining the skeleton outline procedure and its purpose, modeling how to apply it, providing guided practices until students can apply it independently, and expanding its use to different types of text and classroom presentations.

PRACTICE 3 EXAMPLE APPLICATION: Structured Note-taking Procedures

Structured note taking involves creating a written organizational structure for material read or presented in class.

The Cornell Note-Taking Method

1. With this note-taking system, students divide their paper into two columns: a note-taking column on the right and a question and/or key word column on the left. The bottom two inches of the page are left blank and are not divided by the line between the two sections. This will later serve as a summary section for the notes.

2. Notes from class or from reading material are written in the right-hand column (i.e., note-taking column). These notes are paraphrased from the main ideas of the text or lecture. In addition to text, symbols and abbreviations can also be used to record information.

3. Relevant questions or key words that will help with future study are written in the left-hand column.

4. After notes have been completed, students can write a brief summary on the bottom two inches of the page. When using the notes as a study aid, students can cover up the note-taking column to answer questions or define key words on the left side of the page.

5. The Cornell note-taking method needs to be explicitly taught, with teachers describing the procedure and its rationale, modeling how to apply it, and providing guided practice in its use.

Concept Mapping

Concept mapping is another approach for helping students organize their notes about material read or presented in class. Students place each important concept in a circle and then show how the concepts link together using words and lines. One way of teaching this strategy is to first present a model of an *expert concept map* for a particular reading. After discussing this map, students then practice completing other *expert maps* that are incomplete, moving from more to less complete maps, until they can create their own map for material read.

1. Students are introduced to expert-created models.

2. Students complete partially filled in expert models.

3. Students are given word lists and concept links to help them create their own concept maps.

4. Students create concept maps independently.

PRATICE 4 EXAMPLE APPLICATION: Answering Questions in Writing and Teaching Students to Generate Their Own Written Questions

Answering questions in writing involves writing responses to questions given at specific points during a classroom activity (before, during, or after) or questions inserted into text or presented at the end of it. For example, students may be asked to write short answers in full sentences to four questions (one detail, two inferences, and one main idea) after reading a segment of text, after which they check and correct their responses before reading the next segment of text.

Generating questions in writing is a strategy in which students create written questions about information presented in class or material read. For instance, when teaching students to write and answer questions about material read, they are first taught the difference between a good and bad question. They then practice generating and answering their own questions about text. If they cannot answer one of their questions, they generate a new one that can be answered. A sequence for teaching this question-generation strategy is presented below:

1. Students are given models of questions written by the teacher.

2. Students identify good and poor questions, indicating why each is good or poor.

3. Students are taught to identify main ideas that serve as the core of the questions they will generate.

4. The teacher models how to generate good questions.

5. Students practice generating questions with teacher assistance until they can do so effectively.

Principle 2:

Explicitly and systematically teach students the processes, knowledge, and skills of effective writing.

To write effectively and use writing as a tool to support learning, students must master basic writing processes, knowledge, and skills.[10] Students must be knowledgeable about the characteristics of good writing and the features of specific types of text (e.g., persuasive writing), and they must possess effective strategies for planning, drafting, revising, editing, and sharing such texts. Students must be able to construct sentences that are grammatically correct and accurately express their intended meaning and purpose. Basic writing skills, such as spelling, must be mastered so that they do not interfere with other writing processes. Because writing tasks are contextually bound (e.g., the nature of persuasive writing differs across disciplines), teachers in each discipline must take responsibility for teaching students how to use writing in their discipline, and such efforts need to be coordinated across departments within a school.

Practice 1: *Analyze and emulate model text to discover the characteristics of good writing and the features of specific types of text.*

Students' writing is influenced by their knowledge of the characteristics of good writing and of the specific text type they are creating.[11, 12] Students can acquire this knowledge by analyzing and emulating exemplary models.[3, 13, 14] Research suggests that the use of models is an effective strategy for providing middle grades students with illustrations of genre-specific features, such as the essential elements of a persuasive argument, as well as for developing their awareness of more general aspects of good writing, such as word choice and sentence construction. Having students analyze model text also provides teachers with an authentic segue into another beneficial strategy: establishing specific product goals.[15, 16] Given the relative ease and demonstrated efficacy

associated with using models and product goals, teachers should consider using these two procedures with each type of writing they expect from their students.

To realize the benefits of using models, teachers should first clarify exactly what they want students to learn. For instance, a social studies teacher who will be teaching students how to write a persuasive argument might begin by reviewing the relevant grade-level standards. With that framework in mind, the teacher would next select several model texts that effectively illustrate those criteria. Several kinds of texts can serve as models, including compositions that teachers write specifically for the purpose of modeling, writing samples from students themselves, and authentic texts. Many middle grades teachers find that authentic texts related to topics students find personally relevant and interesting work well as initial models. The social studies teacher might, therefore, select several recent newspaper editorials about potential cuts in school funding because students have expressed sincere interest and concern about how this reduction affects them.

As noted previously, teachers can readily pair the use of models with another strategy shown to improve middle grades student writing—establishing product goals.[14] Research suggests that goals are most effective when they are specific and at a level of difficulty that is challenging, yet attainable.[13] Given that students in most middle grades classrooms represent a range of writing proficiency levels, it is often necessary and beneficial to use a combination of common goals (i.e., features and qualities of writing that apply to all students in the class) and individualized goals (i.e., features and qualities of writing that are selected based on each student's strengths and needs).

Using the previous persuasive writing example, the class-developed list of "Must Haves!" could serve as the framework for common goals. Collaboratively, the teacher and each student (or, in some instances, the teacher and a small group of students who have similar writing strengths and needs) would identify additional individualized goals. As students' writing skills develop, their goals should be

revised to ensure they remain appropriately challenging. As will be described in Principle 4, specific product goals can be used as a guide for assessing student growth.

PRACTICE 1 EXAMPLE APPLICATION: Model Texts

To initiate students' analysis of model texts, the social studies teacher could interactively think aloud and pose questions that direct students' attention to the targeted text elements and qualities.

I see the author started with a series of questions. Why do you think that is? What does the author do in this section to convince us of her position? How do the content and format of this author's conclusion compare and contrast with the others we've examined?

Once students develop a basic understanding of the criteria in question, the teacher could then facilitate a class discussion that results in the development of a list of essential features (or what students might refer to as "Must Haves!") for persuasive arguments based on the analysis of the newspaper editorials. For example, they might generate the following five features:

1. An introduction that gives the position.

2. Multiple reasons that make sense and have details.

3. Evidence and examples for each reason.

4. Possible arguments against the position.

5. A convincing conclusion.

Working in pairs or small groups, students could next analyze other model texts. What follows is an example of how the teacher could guide and support students during this activity by breaking it down into a two-step process.

Step #1: As you read the text, use colored pencils to underline each "Must Have!" for a persuasive argument.

-   An introduction that gives the position. RED

-   Multiple reasons that make sense and have details. BLUE (Number each R1, R2, R3...etc.)

-   Evidence and examples for each reason. GREEN (Number each R1-D1, R1-D2...etc.)

-   Possible arguments against the position. PURPLE

-   A convincing conclusion. BROWN

Step #2: Look back at the text and answer the following questions:

1. Did the author include all of the "Must Haves!"? If not, what was missing?

2. What do you think the author did well?

3. What recommendations would you offer to the author to improve the text?

PRACTICE 1 EXAMPLE APPLICATION: Establishing Product Goals

Below are examples of persuasive argument goals for two students. Each reflects the common goals established by the social studies class (i.e., "Must Haves") but is individualized to meet the students' unique needs.

Aida.
Aida includes few, if any, of the necessary elements in her persuasive writing and expresses herself using very simplistic language. Therefore, her goals are:

- Include an introduction that gives my position.

- Include at least three reasons that make sense and have details.

- Include evidence and examples for each reason.

- Include a possible argument against my position.

- Include a convincing conclusion.

- Use exciting, interesting, "come to life" words to make my argument more convincing.

Miguel.
Miguel's persuasive arguments already include most of the key elements, but his sentence structure tends to be repetitive and he does not include transitions between ideas or paragraphs. Therefore, his goals are:

1. Include an "attention grabber" introduction that gives my position.

2. Include at least five reasons that make sense and have vivid details.

3. Include evidence and examples for each reason.

4. Include at least two arguments against my position.

5. Include a "hit it home" convincing conclusion.

6. Use different kinds of sentences—including questions—throughout the text.

7. Use transition words to guide the reader.

Practice 2: *Model and teach strategies for planning, drafting, revising, editing, and publishing written work.*

In order to write effectively, students need to learn a variety of strategies for carrying out the various processes involved in writing.[10] Strategies for planning, drafting, revising, editing, and publishing text are among the key elements that students must learn. Students also need to learn to use these strategies flexibly, selecting the right strategy for a specific task and effectively adapting selected strategies as needed. Teachers should employ a gradual-release model when teaching writing strategies, where the strategy and its rationale are described and discussed, the strategy is modeled by the teacher, guided practice in applying the strategy is provided, and deciding when and how to apply the strategy in new writing situations is emphasized.

Explicitly teaching middle grades students how to use writing strategies has a dramatic effect on multiple aspects of writing, including overall quality, length, number of genre elements, and time spent planning.[3, 11, 18, 19] Teachers interested in helping their students become strategic writers need to first identify what strategy or strategies would be appropriate and beneficial for students to learn. For instance, different strategies would need to be selected for situations in which one or two students experience difficulty brainstorming and organizing their ideas, versus a small group of students struggling to accomplish a specific writing task, versus an entire class finding it extremely difficult to revise writing in meaningful ways.

Along with considering the strategy that should be taught, teachers need to decide which instructional approach is most likely to help students learn to independently apply the strategy. A substantial body of empirical research shows that one specific instructional model, Self-Regulated Strategy Development (SRSD), is particularly effective with diverse populations of students, including those who are in middle school.[3, 11, 13, 17, 19, 20] SRSD uses explicit and systematic instruction to help students learn strategies for planning, drafting, and revising text, as well

as strategies for accomplishing specific writing tasks, such as writing a persuasive argument or expository essay. With SRSD, students increase their writing knowledge and learn to use the same self-regulation procedures that skilled writers rely on to manage the writing process (e.g., goal setting, self-monitoring, self-instruction, self-reinforcement). Other noteworthy characteristics of SRSD include individualized instruction, criterion-based rather than time-based learning, authentic writing tasks, a positive classroom environment, and collaboration among teachers and students. SRSD instruction occurs in six flexible, recursive stages:

1. **Develop Background Knowledge**: Students are taught relevant background knowledge they will need to understand and use the strategy successfully.

2. **Discuss It**: The strategy is introduced and its purpose and benefits are described and discussed.

3. **Model It**: Teacher, peer, and/or collaborative modeling are employed to show how the strategy is used.

4. **Memorize It**: Students engage in a variety of activities to learn the steps of the strategy.

5. **Support It**: The students practice using the strategy in a series of scaffolded composing activities.

6. **Independent Use**: Students independently apply the strategy in appropriate contexts.

Many SRSD strategies include mnemonics to help students remember and apply the steps. An example of one SRSD strategy to improve middle grades students' expository writing is shown in Figure 1 (additional SRSD examples are described in Practice 5 and can be found in the work of Graham, Harris, and colleagues).[17, 21]

Three excellent Web-based resources for learning more about SRSD follow:

Project Write
http://www.kc.vanderbilt.edu/projectwrite

The Iris Center: Self-Regulated Strategy Development (SRSD)
http://iris.peabody.vanderbilt.edu/module/srs/

The Iris Center: Improving Writing Performance
http://iris.peabody.vanderbilt.edu/module/pow/

Resources for implementing this practice can be found at the Middle School Matters Institute website:

*   **Writing Strategies and Self-Regulated Strategy Development Toolkit**
    https://greatmiddleschools.org/toolkits/writing/writing-strategies-and-srsd/

PLAN & WRITE: A Strategy for Planning and Drafting Expository Essays

How do you plan a good essay? Follow steps in **PLAN***:*	
Pay Attention to the Prompt	Read the prompt. Decide what you are being asked to write about and how you will develop your essay.
List Main Ideas	Brainstorm possible responses to the prompt. Decide on one topic and then brainstorm at least ___ main ideas for the development of your essay.
Add Supporting Ideas	Think of details, examples, or elaborations that support your main ideas.
Number Your Ideas	Number major points in the order you will use them.
How do you plan more as you go? Follow steps in **WRITE**:	
Work from your plan to develop a thesis statement.	
Remember your goals.	
Include transition words for each paragraph.	
Try to use different kinds of sentences.	
Exciting, interesting, million-dollar words should be used.	

FIGURE 1. Example of Self-Regulated Strategy Development Strategy.[22, 23, 24, 25]

Practice 3: *Teach students how to construct more complex sentences.*

A basic skill is crafting ideas into sentences that accurately express the writer's meaning and intention.[10] This skill requires being able to use a variety of different types of sentences, ranging from simple to complex, to create text that is clear and can be read fluidly. Strategies for teaching sentence construction skills include teaching students how to combine simpler sentences into more complex ones; deconstructing complex sentences into simpler ones; and expanding sentences by including additional details in an existing sentence. One benefit of these strategies is that usage and grammar skills are acquired as a byproduct of combining, deconstructing, and expanding sentences.[25, 26] Teachers should employ a gradual-release model in which the sentence construction skill is modeled and students are provided guided practice in applying it, as it is essential that instruction include students applying the taught skill to their own writing in order for them to truly grasp the concept.[27]

Resources for implementing this practice can be found at the Middle School Matters Institute website:

• **Sentence Combining Toolkit**
   https://greatmiddleschools.org/toolkits/writing/sentence-combining/

PRACTICE 3 EXAMPLE APPLICATION: Sentence Combining Skills Instruction

Targeted sentence skill: Constructing a sentence with an adverbial clause, using a connecting word (*because*, *after*, *until*, and *when*).

Sentence combining involves teaching students to construct more complex and sophisticated sentences through exercises in which two or more basic sentences are combined into a single sentence. To teach students how to write a complex sentence with an adverbial clause using a connecting word, the teacher first models how to combine two smaller sentences that allow such a construction. Modeling may involve a single connecting word (e.g., *because*) or provide several connecting words from which the teacher makes a choice (e.g., *because*, *until*, *when*).

Model combining: "My friends went to the fair."

"My friends wanted to have fun." (because)

Into one sentence: "My friends went to the fair because they wanted to have fun."

The teacher should continue to model combining such sentences, but ask the students for help. Once students have mastered the basic idea through teacher modeling, they should practice combining similar small sentences into a single complex sentence with an adverbial clause. This practice can be done independently, in small groups, or both. Teachers should provide students with needed assistance and feedback on the correctness of their combinations. Very importantly, students should be asked to apply what they learned in their writing. This can be done by asking them to revise a prior piece of writing so that they combine smaller sentences into a complex sentence with an adverbial clause using connected words, or by asking them to write new text where they demonstrate the use of this skill. This basic teaching format (Figure 2) can be used to teach a variety of different kind of sentences.

Teaching Format	Action
Model	Demonstrate the skill and establish why it is important.
Guided Practice	Provide students with assistance until they can apply the skill correctly and independently.
Application	Ask students to apply the skill when they write (monitor performance and provide individualized support, as needed).

FIGURE 2. Sample Teaching Format for Teaching Different Kinds of Sentences

Practice 4: *Refine students' spelling, grammar, and usage skills.*

Judgments about the quality of a student's writing are influenced by factors other than the quality and organization of their ideas. Papers with spelling, grammar, and usage errors are judged more harshly than papers without such miscues.[28, 29] Such judgments are even less favorable for typed papers than they are for handwritten ones.[30] In addition, needing to devote conscious attention to grammar and spelling may disrupt students' other writing processes. For example, having to think about how to spell a word while in the middle of writing a sentence may cause the student to forget the rest of the sentence.[31, 32] Given the relationship between foundational skills and writing processes, it should not come as a surprise to learn that when middle grades students are provided with opportunities to improve their foundational skills (such as spelling and handwriting), the quality of their compositions improves.[33]

PRACTICE 4 EXAMPLE APPLICATION: Connecting Word Meaning to Spelling

One way to refine middle grades students' spelling skills is to teach them how word meanings and spelling skills are connected. A first step in this process is to teach students the meaning and spelling of common Greek and Latin roots, along with common prefixes and suffixes.

One way to introduce common prefixes or suffixes is to start with a word-sorting activity in which two or more patterns are contrasted (e.g., words ending in *-able* and *-ible*). With word sorting, a master word is established for each spelling *(debatable, edible).* The teacher then takes other *-able* and *-ible* words and sorts them into the appropriate category, providing clues about the meaning of the two suffixes (i.e., "able to do, or fit to do") and how to tell when to use each (i.e., when *-able* is removed from the word, a complete word is usually left, whereas a complete word is not typically left when *-ible* is removed). The teacher solicits student help in sorting the words until the class can define the meaning of the two suffixes and the basic rule for spelling them. Students can then generate their own *-able* and *-ible* words, identifying exceptions to the rule (e.g., *accessible*). In addition to word sorting, students can be asked to study the spelling of specific *-able* and *-ible* words and generate permissible words by adding *-able* to Old French and Anglo-Saxon words (e.g., *lament*) or *-ible* to common Latin roots (e.g., *aud*).

Another activity for refining middle grades students' spelling words involves having them add prefixes and suffixes to common Greek and Latin roots (e.g., *meter, tele, oper*) to make as many permissible words as possible. For this exercise, students should also define each word.

Principle 3:

Establish word processing as the common medium for student writing.

Word processing makes the writing process easier.[34] It is easy to change, add, delete, and move electronic text produced on a word processor. Word processers include software—such as spelling and grammar checkers—that assist writers, and printed electronic text is neat and easy to read. Word processors can be connected to other electronic sources (such as the Internet), where information about writing topics can be located. Students who use word processing as their primary medium for writing make greater progress over time than those who rely on paper and pencil.[3, 13, 34, 35] Thus, middle grades students must be taught computer skills if they have not already acquired them.

Practice 1: Make enough word processors available in the school so that all students can use them to complete writing assignments.

Today, students do most of their writing outside school on computers or other electronic devices. Students need to use the same writing tools at school as they use at home—tools that they will eventually use at work. The available evidence also indicates that students who use word processing (versus pen or paper) as their primary means of composing at school show greater improvements in the overall quality of their writing.[3, 13, 34, 35]

Access To Computers

Most middle grades classrooms have one or two computers—not nearly enough for students to use word processing as their primary tool for writing in the classroom. While the eventual goal should be that each class has enough computers so students can do most or all of their writing via word processing, many middle grades schools likely need to build capacity over time. One starting point is to create word processing labs where

students or classes can work on their writing. Another starting approach is to have rolling word processing labs where computers are stored on a cart and brought directly to the classroom. In either case, schools will need to add additional computer capacity and mechanisms for maintaining equipment if middle grades students are to use word processing as their primary writing tool in all content classes.

Practice 2: Teach keyboarding skills and how to use word processing programs and software.

The positive benefits of word processing are limited or negated for students with little word processing experience or poor typing skills. These students typically produce better compositions when writing by hand than they do when composing via word processing.[32] Consequently, students need to become fluent typists and learn how to use word processing and software designed to support their writing.

Instruction In Word Processing

Typing instruction is not part of most middle grades schools' curriculum anymore. Learning how to touch type and use a word processor should be offered as an elective or embedded within a specific content class. Such instruction should be limited to those students who need it, however, because many middle grades students will already have good typing and word processing skills.

Principle 4:

Assess and monitor student writing to improve instruction and identify students who require more intensive writing instruction.

Assessing student progress in writing provides teachers with needed information for adjusting classroom instruction.[30, 37] Assessments also provide a mechanism for identifying students who need more intensive assistance with writing or writing instruction.[38] In addition, teaching students how to evaluate their own writing and establishing procedures for them to provide and receive feedback about their writing from their peers helps students improve their writing.[14]

Practice 1: *Monitor students' progress as writers.*

When teachers assess or monitor a student's writing progress, it has a positive impact on the student's overall progress as a writer.[36, 37] Such assessments range from frequently (weekly) assessing student classroom writing in terms of ideas, organization, voice, word choice, sentence fluency, and usage/conventions, to judging (at least yearly or more often) student performance on more formal and standardized writing measures. Such assessments provide teachers with information on the effectiveness of their writing instruction and whether they need to make changes in what they are doing. These assessments also provide mechanisms for identifying students who need more intensive assistance and instruction in learning to write.

The complexity of writing necessitates that assessments be multi-faceted and target both writing processes (i.e., planning, drafting, revising, editing, publishing) and products (the texts students produce in response to a writing task).

Observations.

Although there is limited research on validated ways to assess student writing processes, many teachers find it beneficial to gather data by carefully observing students while they compose and examining their written work for relevant information.

For example, teachers can seek answers to questions such as:

1. How long does the student spend planning before actually writing?

2. Does the student use any tools or techniques to organize ideas before drafting (e.g., graphic organizers or outlines)?

3. When the student revises and edits his or her work, are meaningful improvements made to the text?

Teachers can also have conversations with students to learn about their writing knowledge and attitudes.[39, 40] Examples of questions that could be used for this purpose include the following:

1. What are some of the ways good writers plan what they want to say before they begin writing?

2. When you revise your writing, how do you go about doing so?

3. What kinds of writing do you enjoy?

4. How do you think writing relates to your future goals?

5. What do you think are your writing strengths?

6. What do you think would help you become a better writer?

Rubrics

To assess the quality of students' writing products, many middle grades teachers use analytic and/or primary trait rubrics. An analytic rubric is a criterion-referenced scoring guide that targets characteristics that are generally associated with good writing. A commonly used example is the *6+1® Trait Rubric* which targets ideas, organization, voice, word choice, sentence fluency, conventions, and presentation.41 There is a 5- and 6-point version of the *6+1® Trait Rubric* for middle grades students.

These rubrics can be downloaded for free at http://educationnorthwest.org/resource/464

Analytic rubrics can be beneficial for identifying a student's relative strengths and needs, monitoring a student's writing development over time, and planning and differentiating instruction.

In contrast with analytic rubrics, primary trait rubrics are developed for specific writing genres or tasks. Primary trait rubrics can be used to evaluate the overarching goals and purpose(s) of a particular writing task (e.g., present a clear, convincing argument) and/or specific text features

(e.g., thesis statement, supporting reasons with details, conclusion). Because primary trait rubrics are more closely aligned with writing tasks, many middle grades teachers find them helpful for assessing and developing student content-area writing skills (e.g., a historical narrative, a science lab report). Teachers who want to create a primary trait rubric often begin by consulting the relevant grade-level standards to identify appropriate criteria for the targeted writing task. Figure 3 presents an example of a simple primary trait rubric an eighth grade teacher in Texas might develop using the five criteria for imaginative stories found in the state's English language arts and reading standards.[42] To develop a more sophisticated version of this rubric, the teacher could expand the scoring scale (e.g., 0–4) and write performance descriptors that correspond to each score for each element.

Although rubrics may have potential benefits, it is recommended that middle grades teachers use them in combination with other assessment practices—such as feedback from adults and peers and self-evaluation—that research suggests will produce positive and consistent improvements in students' writing.[28, 37, 43]

Name:		Story Title:		
Elements	**0** **Not Evident**	**1** **Evident, but Would** **Benefit from Further** **Attention**		**2** **Evident and** **Well-Developed**
Sustains reader interest				
Includes well-paced action and an engaging story line				
Creates specific, believable setting through the use of sensory details				
Develops interesting characters				
Uses a range of literary strategies and devices to enhance the style and tone				
Comments:				

FIGURE 3. Sample Primary Trait Rubric for an Imaginative Story

Curriculum Based Measurement

Another research-validated form of assessment for writing products is writing curriculum based measurement (W-CBM).44 W-CBM can be used to identify students who are experiencing writing difficulties (screening) and monitor students' writing progress over time (progress monitoring). With W-CBM, teachers administer short probes at regular intervals to quantify a student's level of writing proficiency.45 W-CBM is appropriate for use with all middle grades students but is recommended, in particular, for students who are experiencing writing difficulties because it is highly sensitive to small increments of progress. Middle grades students should be given 30 seconds to think about and plan their text and 7 minutes to write. The prompts used for W-CBM probes can be narrative or expository, as appropriate for a particular student and subject area.

Scoring W-CBM:

The recommended scoring procedure for W-CBM is correct minus incorrect word sequences (CIWS). CIWS is calculated by subtracting the number of incorrect word sequences from the number of correct word sequences, which is described as follows:

- **Correct Word Sequences (CWS):** The total number of adjacent, correctly spelled words that are syntactically and semantically correct within the context of the sample. When scoring for CWS, a vertical line is first placed where a sentence should end and then all incorrect words are underlined. Correct word sequences are marked by putting an upward-facing (blue) caret above the two words.

- **Incorrect Word Sequences (IWS)** are marked by putting a downward-facing (red) caret below the two words. Carets are also placed at the beginning of each sentence to score for correct/incorrect capitalization and at the end of each sentence to score for correct/incorrect punctuation.

- **Correct Minus Incorrect Word Sequences (CIWS):** The number of IWS (final count of downward facing [red] carets), subtracted from the number of CWS (final count of upward facing [blue] carets).

Although there are other scoring options for W-CBM (e.g., total words written and words spelled correctly), they demonstrate less technical adequacy than CIWS with middle grades students.[46, 47, 48] Figure 4 is a W-CBM sample produced by a sixth grade student scored using CIWS (Figure 5). In this instance, the student was given a choice of several story starter prompts, such as:

1. *One day, we were playing outside the school and…*

2. *I was talking with my friends when all of a sudden…*

3. *It was a dark and stormy night…*

4. *I found a note under my pillow that said…*

5. *One day I went to school but nobody was there except me…*

An important step with W-CBM is graphing the data; the visual representation helps both teachers and students monitor progress over time. To identify students who have, or are at risk for, writing difficulties, it is recommended that both rate of growth (slope) and level of performance be considered (i.e., compared to the average of the class).

The following Web-based resources are recommended as a starting point for readers interested in learning more about W-CBM:

Procedures for Scoring Writing Samples
http://www.progressmonitoring.org/pdf/RIPM_Writng_Scoring.pdf

Using CBM for Progress Monitoring in Written Expression and Spelling
http://www.studentprogress.org/summer_institute/2007/Written/Writing_Manual_2007.pdf

> **It was a dark and stormy night. . . .**
>
> It was a dark and stormy night. Paige and her friend Mallory were walking back home from school, when they began to heard mysterious noises. Rather than fleeing in terror, the two girls eagerly jogged towards the sounds. They found the soure in a alleyway, where they saw slimy, green creatures with large purple teeth. The creatures advance upon the girls, and tried to coaxe them towards there bonfire. Mallory, the pretty, but not too bright girl shuffle toward the fire. Paige, the smart, pretty girl pulled her away. They dashed into to the night, chased by the squeeling aliens. What the girls didn't know was that the aliens had a special recipe for female human adolescants, broiled with a dash of salt, and a sprinkle of Mrs. Dash.

FIGURE 4. Middle Grades Student's W-CBM Narrative Writing Sample

USING CIWS, THE SCORE FOR THIS PROBE WOULD BE: 92

([CWS = 115] – [IWS = 23] = 92 CIWS)

The explanation for each Incorrect Word Sequence (IWS) is as follows:

1. Incorrect tense (should be *hear*)

2. Incorrect spelling (should be *eagerly*)

3. Incorrect spelling (should be *source*)

4. Incorrect word choice (should be *an*)

5. Incorrect tense (should be *advanced*)

6. Incorrect spelling (should be *coax*)

7. Incorrect word choice (should be *there*)

8. Incorrect tense (should be *shuffled*)

9. Missing end punctuation (should have a *period after fire*)

10. Repeated phrase (*to* is not necessary)

11. Incorrect spelling (should be *squealing*)

12. Incorrect spelling (should be *adolescents*)

FIGURE 5. CIWS Scoring for Student Writing Sample

Practice 2: *Provide students with feedback about their writing.*

A long-term staple of writing instruction is for teachers to provide students with feedback about one or more aspects of their writing. Such feedback can range from written comments that identify writing strengths and aspects of a composition that need revision (and why), to observations on the student's progress in learning specific writing strategies, knowledge, and skills. Feedback can also include conferencing with students to determine what they are trying to accomplish, and providing them with supportive and constructive feedback about these efforts and the resulting written product.

It is important for middle grades teachers to remember that feedback should at once inspire and support students' development as writers. We next highlight several characteristics of feedback that are most likely to meet those important aims.[49, 50, 51, 52]

- Teacher feedback does not need to be given on everything students write, nor does it need to be extensive. For example, constructively highlighting a limited number of things a student needs to work on is more effective than identifying everything that could be improved.

- Clear and appropriate criteria should be the foundation for feedback, and students should be aware of these criteria before they begin writing. For example, Aida and Miguel's persuasive argument goals (described in Principle 2, Practice 1) could serve as the framework for feedback the teacher provides to each student.

- Feedback should be clear, specific, and explanatory, such as: *Laura, you might want to spend some time further developing your setting. As I read, I found myself wanting to know more about where and when the story took place.* Generic feedback (e.g., *Nice job*, *Revise*, or *Setting needs work*) is not perceived by students as helpful and is unlikely to promote improvement in their writing.

- Always include affirmation, reinforcement, and praise as part of feedback to students. When offering constructive criticism, be sure the tone is positive and encouraging. Provide comments that will help students think critically and creatively about possibilities for revision, rather than specifically directing or requiring a particular change. Thus, a teacher might write: *I think this idea is really interesting. Can you expand it so we better understand how it relates to the other parts of your text?*

- Offer feedback that helps students understand how their writing is experienced by the reader. Providing the reader's point of view can be achieved through the use of techniques such as providing personal reactions (e.g., *Wow! I was not expecting that to happen!* or *This section made me really understand a new aspect of your character*.), posing questions (e.g., *Did you intend for your reader to wonder if the protagonist was still alive? If so, it certainly worked with me!*), and offering suggestions (e.g., *In this paragraph, is there a way you can really emphasize how the experience made you feel? I think that would really help the reader understand what you went through*.).

- Ensure feedback is appropriate, given a student's current level of development and writing proficiency. Accordingly, teachers can ask themselves:

  - Will the student be able to understand and successfully respond to the comments I offer?

- If it is anticipated that a student might have difficulty with revisions, support and resources can be provided by including comments such as:

  - Why don't you sign up for a conference later this week and we'll work on this together?

  - Check your text book on p. 79 to see a couple of examples of this pattern.

- Jamal has become really good at using dialogue in his writing and he said he'd be happy to show you some of the ways he does it. Why don't you talk with him and then come share what you learned with me?

- Provide students with feedback at multiple points during the composing process, not just after they submit the final draft. Feedback given during planning, drafting, and revising should target writing strategies, substantive text elements and qualities, and subject-matter content. Feedback related to writing conventions (e.g., spelling, punctuation, usage) and the overall appearance of the text (e.g., handwriting, spacing) is best left for the editing and publishing stages.

- Help students understand and appreciate that feedback is offered to help them become better writers, not just to improve their grade—which is what many middle grades students believe. Teachers can do this by focusing on students' effort and persistence, along with highlighting subsequent opportunities for learning and improvement. For instance, a teacher might comment:

  - I'm not sure this essay represents your best effort. Let's work together tomorrow to identify what to change to make something you are proud of.

- Create opportunities that increase the likelihood students will carefully read and use the feedback offered to them. For example, after handing back a draft with comments, teachers can have brief conversations with each student and pose questions, such as:
  - What did you think the strengths of your paper were?

  - Based on my feedback, what do you think I saw as the strengths?

- What are your goals for the next draft?

- Another strategy is to have students attach an "Author Memo" when they return a revised version of their work. This memo should summarize how they responded to feedback.

Practice 3: *Teach students how to give one another feedback about their writing.*

When students give feedback to their peers on what they write and, in turn, receive feedback from their fellow students, it has a positive impact on writing performance.[49, 50, 51, 52] Peer feedback is also advantageous because it (a) provides another audience for student writing beyond the teacher, (b) helps students internalize the criteria for good writing, and (c) reduces the amount of feedback teachers need to provide.

Middle grades teachers have found that both peer partners and peer groups can be successful. The former has the advantage of being a bit more time efficient (students have to read and respond to the writing of only one other person), whereas the latter offers students a broader perspective and response to their writing. In some instances, teachers separate peer revision from peer editing to increase the likelihood that students will offer each other substantive feedback related to writing features and qualities (revising), rather than just commenting on surface-level issues, such as conventions and appearance (editing).

Research suggests that incorporating peer feedback into the writing process is most effective when teachers provide students with appropriate training in providing feedback and structure the peer feedback process. Examples of what middle grades students need to learn to successfully participate in and contribute to peer feedback experiences include providing a peer with helpful (i.e., specific and descriptive) feedback, offering recommendations in a non-judgmental way, accepting constructive criticism from others in appropriate ways, and

demonstrating the skills that are essential for all successful cooperative learning experiences (e.g., active listening, respecting confidentiality). Although training and structure are important for the success of peer feedback with students of all ages, they are particularly salient for middle grades students because of these students' heightened sensitivity to social interactions, strong desire for peer acceptance, and tendency to be self-conscious.

An example of a strategy to structure the feedback process is shown in Figure 6. During the first step, pairs of students provide each other with feedback targeting writing features and qualities (revising). During the second step, the focus shifts to writing conventions (editing). To help students provide meaningful feedback to their peers, specific criteria (e.g., a rubric, a set of goals, a series of prompting questions) are used in both steps. This strategy for peer editing is flexible and could be adapted by teachers to meet the unique needs of their students and the targeted writing task.

Some middle grades teachers find it beneficial to initially discuss and model the peer feedback process by sharing a piece of their own writing with students and facilitating a discussion about how a peer might review and respond to the text. Within that context, students can be guided to consider the kinds of feedback that would and would not be helpful to an author. Students might also generate sentence starters that can be used to help structure the feedback they provide to their peers:

* *When I read this part, I thought about…*

* *This sentence is really effective because…*

* *I was a bit confused by ___ because…*

* *I don't quite understand ___. Did you consider....?*

The teacher can also model appropriate ways to receive constructive criticism and manage emotions:

* *I worked really hard on that part, so it's disappointing that you didn't understand what I was trying to say. But, thanks for pointing it out. I'll see if I can make it better.*

Fishbowl observations[a] and role-play can also be used to develop students' understanding of how they can make the process successful.

Finally, teachers are likely to find peer feedback most effective when it is used in combination with instruction and strategies that target revision. If students do not know how to effectively revise a piece of text, they are unlikely to be able to offer meaningful feedback to another author, nor will they be able to respond to the suggestions provided by a peer.

_____
[a] *Fishbowl observations consist of some students participating in role-play while others analyze and observe their behavior. Then there is a whole-group discussion about the observations of the participants and the observing students.*

Sample Peer Feedback Strategy	
Step 1: REVISING	**Step 2: EDITING**
- Listen carefully and follow along as the author reads aloud. - Tell the author what you liked about the paper. Remember to be specific and to explain why you liked something. - Switch authors and repeat the steps above. - Carefully reread the paper to yourself. - Use the assignment rubric to offer helpful comments and suggestions. Make notes on the draft. - Discuss your feedback with the author.	- Discuss the revisions you made. - Carefully reread the revised paper to yourself. - Use the editing questions to offer helpful comments and suggestions. Make notes on the draft. - Discuss your feedback with the author.

Source: Adapted from MacArthur, Schwartz, and Graham (1991)[53] and Stoddard and MacArthur (1993).[54]

FIGURE 6. Sample Peer Feedback Strategy

Practice 4: *Teach students how to assess the quality of their own writing.*

To become skilled writers students must develop the ability to accurately assess the strengths and weaknesses of their own writing in order to better direct how specific papers are revised, as well as set goals for aspects of their writing that are in need of more general improvement.[14, 37] Self-evaluation procedures range from teaching students to use a rubric to assess the merits of specific features of their writing (e.g., ideation, organization, voice, vocabulary, sentence formation, and conventions), to teaching specific strategies for evaluating a first draft of a paper for substantive (e.g., clarity) or mechanical (e.g., misspelled words) lapses, to teaching students how to detect mismatches between what they intended to say and what was written. Teaching such self-assessment procedures has the added benefit of helping students learn the characteristics of good writing while providing another avenue for writing feedback (albeit a personal one).

Although some middle grades students may already demonstrate proficiency with self-assessment, most need to be taught the purpose and process of evaluating their own writing. One way to help students develop the ability to reflect upon and critique their own writing is to pair self-assessment with self-recording—that is, recording the information learned as a result of self-evaluation.[17] Self-recording can be done in a variety of ways, such as marking a response on a rubric and/or visually representing data on a graph or chart. The method selected should be relatively quick and easy to use and be perceived by the student as acceptable and beneficial. What follows (Figure 7) is an example of how the goals established for a particular assignment (and in this case, also a particular student, as previously described in Principle 2, Practice 2) can be used as the basis for self-assessment and self-recording. The questionnaire focuses Aida's attention on comparing her writing with each of her goals and also serves to guide her subsequent revisions. Graphing the number of goals met before and after revision helps Aida see improvement over time (Figure 8).

As with teacher and peer feedback (Practices 2 and 3), students must be able to make meaningful revisions in response to information gleaned through self-evaluation. In other words, it would be doing Aida a disservice to have her evaluate and record her use of exciting, interesting, "come to life" words if she didn't know what they were or how to integrate them effectively into text.

An excellent Web-based resource for learning more about self-assessment and other forms of self-regulation (e.g., goal-setting, self-instructions, self-reinforcement) is http://cehs.unl.edu/secd/self-regulation/

Aida's Self-Evaluation Questionnaire		
Questions to Ask Myself	**YES** **Kudos to me!**	**NO** **Focus here during revision.**
Did I include an introduction that gives my position?		
Did I include at least three reasons that make sense and have details?	R1: R2: R3:	R1: R2: R3:
Did I include evidence and examples for each reason?	R1: R2: R3:	R1: R2: R3:
Did I include a possible argument against my position?		
Did I include a convincing conclusion?		
Did I use exciting, interesting, "come to life" words to make my argument more convincing?		
Total	**_____ out of 10**	**Summarize Revision Goals Below**
My revision goals:		

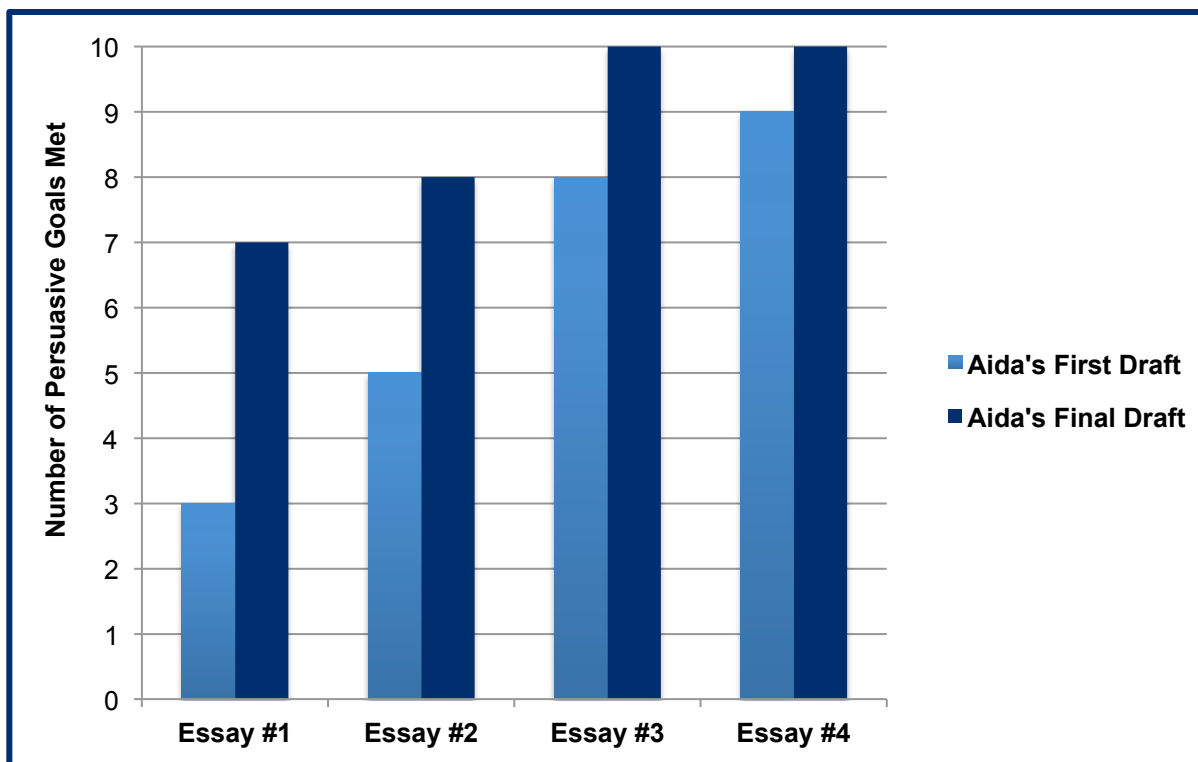**FIGURE 7. Sample Self-Evaluation Questionnaire**

FIGURE 8. Sample Graph of Student Goals Met Before and After Revisions

Principle 5:

Provide extra assistance and instruction to students who experience difficulty learning to write.

Students who experience difficulty effectively using writing as a tool for learning, communication, and self-expression will require extra support to become effective and skilled writers. Schools need to develop procedures for identifying these students and providing them with explicit instruction in developing basic knowledge, strategies, and writing skills.

Practice 1: *Provide students with intensive and extra instruction to acquire the strategies, knowledge, and writing skills that still need to be mastered.*

Even when schools and teachers apply the most effective writing methods available, some students will nonetheless experience difficulty learning to write.[55] If these students are to become skilled writers who can use writing as an effective tool for learning, communication, and self-expression, they require extra instructional assistance to acquire essential writing strategies, skills, and knowledge. To provide effective instruction, schools must have methods in place for identifying students who need extra assistance, and for determining the type of extra assistance each student needs. Then, intensive instruction can be focused on the particular skills and strategies that require additional attention.[56]

Identify Struggling Writers.
The writing assessments described in Principle 4, Practice 1 can help educators identify students who have, or are at risk for developing, writing difficulties. For example, with W-CBM, a student's rate of growth (slope) and level of performance can be compared with the average slope and average level of performance for students in a particular class or grade-level.

Norm-referenced writing assessments can also be beneficial for identifying students who need extra assistance because these assessments allow educators to compare a student's level of writing proficiency to a normative sample. Norm-referenced tests help educators answer questions, such as the following:

1. Is the student's current level of writing achievement within the expected range for his or her current age and/or grade-level?

2. How does the student's writing proficiency compare with his or her achievement in other academic areas (e.g., reading, mathematics)?

3. How do the students' writing-related skills (e.g., spelling, grammar) compare with each other?[39]

Two examples of comprehensive norm-referenced tests that are commonly used with middle grades students are the *Woodcock-Johnson Tests of Achievement—Third Edition* (WJ-III) and the *Wechsler Individual Achievement Test—Third Edition* (WIAT-III).[57, 58] The WJ-III includes six subtests that target written language: Spelling, Writing Fluency, Writing Samples, Editing, Sounds of Spelling, and Punctuation and Capitalization. The WJ–III also includes a Handwriting Legibility Scale that can be used to analyze the handwriting a student produces in conjunction with the Writing Samples subtest, or any other written product. The WIAT–III includes three writing-related subtests that are appropriate for middle grades students: Spelling, Sentence Composition, and Essay Composition. Whereas the WJ–III and WIAT–III can be used to assess achievement in multiple academic areas, the *Test of Written Language— Fourth Edition* (TOWL-4) is a norm-referenced instrument designed specifically for the purpose of assessing various facets of written language.[59] The TOWL-4 includes seven subtests: Vocabulary, Spelling, Punctuation, Logical Sentences, Sentence Combining, Contextual Conventions, and Story Composition.

Diagnostic assessments that target a particular domain of writing can also be beneficial for identifying students who need extra assistance and for gathering information about a student's unique strengths and areas of need—which is essential to plan an appropriate intervention.[39] For

example, if a student is having difficulty with spelling, educators might elect to gather data with an assessment such as the *Spelling Performance Evaluation for Language and Literacy* (SPELL-2).[60] SPELL-2 is individually administered via a multimedia CD-ROM computer program. After a student completes the SPELL-2 assessment, the program generates a detailed report that summarizes the student's strengths and needs, suggests appropriate learning objectives, and identifies relevant word study lessons in the corresponding curriculum, SPELL–Links to Reading and Writing.

Readers interested in learning more about SPELL-2 are encouraged to see the descriptions and case studies presented in works by Apel, Masterson, and Hart and visit http://www.learningbydesign.com/.[61, 62]

Provide Appropriate Intervention.
Once a student's writing needs are identified, an appropriate evidence-based intervention must be selected and implemented. Although there are instances when struggling writers require support that is not generally used with typically developing writers (e.g., speech to text software), the majority of practices shown to be effective for most struggling writers are not radically different from those recommended for all middle grades students. To illustrate, there are practices that have a moderate or strong positive impact[63] with students who experience writing difficulties (i.e., struggling writers with and without learning disabilities), and among them were:

- Teach students strategies for planning, revising, and editing their compositions.

- Have students work cooperatively with other struggling writers to plan, draft, revise, and edit their compositions.

- Set clear and specific goals for what students are to accomplish in their writing.

- Use word processing and related software as a primary tool for writing.

- Teach text transcription skills (handwriting, spelling, and typing).

There is significant overlap between these recommendations and those presented in Principles 1–4. Students who struggle with writing in particular need instruction that is more intensive, explicit, systematic, and individualized.[64, 65] A large body of research documents that intensive, explicit, systematic, and individualized instruction has a strong positive impact on the quality of writing produced by all middle grades students. The effect is particularly robust for students who struggle with writing, including those with disabilities.

Self-Regulated Strategy Development (SRSD; described previously in Principle 2, Practice 2) is an evidence-based approach that was developed specifically to meet the needs of students who experience difficulty with writing.[17, 18, 20, 64, 66] Intensive, explicit, systematic, and individualized, SRSD instruction helps students gain relevant writing and genre knowledge; learn strategies that guide the basic steps in the writing process (e.g., planning, drafting, revising, and editing); learn strategies for accomplishing specific writing tasks (e.g., a personal narrative, a persuasive argument, an expository essay); learn procedures for regulating the writing process (e.g., goal-setting, self-monitoring, self-instructions, self-reinforcement); and develop positive attitudes towards writing. What follows is an example of how SRSD instruction could be used as a supplemental intervention to address the needs of middle grades students who struggle with writing.

PRACTICE 1 EXAMPLE APPLICATION: Writing Intervention with Self-Regulated Strategy Development

A team of eighth-grade teachers uses assessment results to determine that several students are experiencing significant difficulty revising their writing. In their content-area classes, the students receive feedback on their writing from their teachers and participate in peer revising groups (as described in Principle 4, Practices 2 and 3). However, an examination of students' revision attempts provides clear evidence that they are not responding successfully to feedback. Nearly all the changes they make target writing conventions—in other words, they are editing, not revising. At a grade-level team meeting, it is decided that the students will participate in a supplemental intervention to increase their knowledge of how writers can effectively revise their compositions (e.g., adding, deleting, and re-organizing text; expanding on ideas) and learn a strategy that will guide them through the process of revision.

The SRSD instructional model is used for the intervention, which consists of 30 minute sessions that occur twice a week in the school library. Instruction begins with the teacher leading a discussion about the ways authors meaningfully revise their work. Students are introduced to the strategy (represented by the mnemonic REVISE, shown in Figure 9), and the teacher interactively models its use several times. The students also learn how a word processor can be used to facilitate revision. The teacher then supports students while they practice using the strategy to guide their revision of content-area writing assignments. Because SRSD instruction is criterion-based, the intervention ends for each student when he or she is able to independently and successfully apply the strategy to revise compositions assigned by the content area teachers.

REVISE: A Strategy for Revising Text	
Students are provided with two sets of cue cards (6 Evaluate cards and 4 Verbalize cards) that guide and prompt their use of the strategy. Prior to using the strategy, they establish one or two goals for themselves (e.g., add more details and examples so my paper is more convincing to the reader).	
Read Your Essay	Read your essay aloud softly. Highlight places where you think changes should be made and ask yourself if you need more ideas. Use a caret ^ to indicate where you will add something.
Evaluate the Problems	Evaluate the problems. *Use the Evaluate Cards.* 1. This doesn't sound quite right. 2. Part of the essay is not in the right order. 3. People may not understand what I mean. 4. I am getting away from my main point. 5. This is a weak or incomplete idea. 6. The problem is _____.
Verbalize What You Will Do	Verbalize what you are going to do to fix the problems. *Use the Verbalize Cards.* • ADD: Include more information, examples, details, etc. • DELETE: Take something (a word, phrase, or sentence) out. • REWRITE: Say it (a word, phrase, or sentence) in a different way. • MOVE: Arrange information (a word, phrase, or sentence) in a different way.
Implement the Changes	Implement the changes.
Self-Check Your Goals	Self-check the goals you set for yourself. Make other revisions based on these goals.
End by Rereading and Making More Changes	End by rereading your revisions. Make any additional changes that will improve the writing.

Sources: *De La Paz, Swanson, & Graham (1998)[67]; Harris et al. (2008).[17]*

FIGURE 9. Sample Strategy for Revising Text

Practice 2: *Teach students how to use word processing programs and software that provide assistance for targeted writing strategies and skills.*

Some middle grades students continue to experience difficulty with specific aspects of writing (such as spelling, handwriting, planning, or evaluation), despite strong efforts by teachers and schools to teach these writing skills and processes. For these students, schools should teach students how to use word processing programs and software that provide students with assistance with these challenges.[35] For example, word prediction programs reduce the number of key strokes needed to write individual words, addressing the needs of students who experience continued difficulties with the motor aspects of typing. Planning software provides students with help in organizing their ideas for writing, whereas automated computer-scoring programs now provide feedback on what students write.

Using Word Processing Software With Students

Students need to be taught how to use word processing programs and software that provide them with specific assistance in carrying out targeted writing strategies and skills. This includes explaining the purpose of the program or software and how it works. Teachers should model how to apply a program or software and then provide guided practice until students can use it independently and effectively.

Practice 3: *Provide to students experiencing difficulties intensive and extra instruction in using writing as a tool to support content learning.*

While all writers benefit from using writing as a tool for learning, students who are experiencing difficulties learning to write often need extra instruction in how to use these tools effectively.[1, 2, 13, 68] Writing to learn strategies, such as note taking, summarizing, and analyzing/interpreting, are complex learning tools. Many less-skilled writers will need to be taught these writing procedures through a gradual-release model in which the technique is described, modeled (possibly repeatedly), and practiced on real learning tasks with assistance and feedback from the teachers until students can apply the model successfully and independently.[69] The Pathway Project provides an exemplary illustration of how this type of instruction can be used to successfully teach analytic writing skills to middle grades students who are English language learners.

Readers interested in learning more about the Pathway Project cognitive strategies approach to reading and writing instruction are encouraged to see the research published by Olson and colleagues and visit http://www.nwp.org/cs/public/print/resource/2487.[70, 71, 72, 73]

Principle 6:

Discontinue using practices that are NOT associated with improved outcomes for students.

Teachers and principals must make decisions about student learning and behavior each day. While it is preferable to rely on evidence-based practices when teaching writing, determining what constitutes evidence-based practice can be a confusing and difficult process. In addition, teachers may currently use teaching practices that are ineffective, such as the traditional approach to teaching grammar. With the traditional method, a grammar skill is defined and practiced in a decontextualized manner (e.g., selecting the right tense for a verb in a sentence from three options) or practices such as sentence diagramming are employed.[3, 13] There are, however, effective practices for improving student grammar in writing, such as contextualized grammar instruction with scaffolded authentic practice and sentence combining instruction (See Principle 2, Practice 3.).[74]

Practice 1: *Take stock of all of the instructional practices and models currently implemented and determine whether they are necessary and associated with improved outcomes for students.*

It is important to identify classroom practices and determine whether there is evidence to support them. Examining the results of published, empirical studies is the preferred way to determine whether a particular practice is validated by sound research. Because there is a relatively large—and growing—body of literature related to adolescent writing, reviewing all the available research would be a daunting and impractical endeavor. To make the process more efficient, educators are encouraged to first consult several recent meta-analyses related to writing. These offer a systematic and succinct summary of the literature and report the effectiveness (i.e., strength and consistency) of multiple practices.[3, 11, 13, 19, 25, 34, 37, 75, 76, 77]

What follows are other text and web-based resources that summarize relevant research and offer recommendations for practice.

Four recommended books that summarize high quality writing research and—based on that research—describe recommendations for classroom practice:

Applebee, A. N., & Langer, J. A. (2013). *Writing instruction that works. Proven methods for middle and high school classrooms.* New York, NY: Teachers College Press.[78]

Graham, S., MacArthur, C., & Fitzgerald, J. (2013). *Best practices in writing instruction* (2nd ed.)*.* New York, NY: Guilford.[79]

MacArthur, C., Graham, S., & Fitzgerald, J. (2015). *Handbook of writing research* (2nd ed.). New York, NY: Guilford.[80]

Olson, C. B. (2010). *The reading/writing connection: Strategies for teaching and learning in the secondary classroom* (3rd ed.). New York, NY: Pearson.[81]

Two recommended journal articles that summarize research-based recommendations for writing instruction and assessment with students who experience difficulties with writing:

Olinghouse, N. G., & Santangelo, T. (2010). Assessing the writing of struggling learners. *Focus on Exceptional Children, 43*(4), 1-27.[39]

Santangelo, T., & Olinghouse, N. G. (2009). Effective instruction for students who have writing difficulties. *Focus on Exceptional Children, 42*(4), 1-20.[40]

Recommended websites for information about effective adolescent literacy practices:

1. What Works Clearinghouse:
   http://ies.ed.gov/ncee/wwc/

2. Best Evidence Encyclopedia:
   http://www.bestevidence.org/

3. Teaching LD Current Practice Alerts:
   http://teachingld.org/alerts

4. Center on Response to Intervention:
   http://www.rti4success.org/

5. The IRIS Center's Resource Locator:
   http://www.iris.peabody.vanderbilt.edu/resources.html

6. The Carnegie Council for Advancing Adolescent Literature: https://www.carnegie.org/about/our-history/past-programs-initiatives/#literacy

7. National Center for Learning Disabilities:
   http://www.ncld.org/

8. AdLit.org: All About Adolescent Literacy:
   http://www.adlit.org/

9. The National Council of the Teachers of English:
   http://www.ncte.org/

After determining there is adequate research evidence to support the use of a particular writing practice or model, an important second step is reviewing school-based data (e.g., results from state or national writing tests, W-CBM, other forms of assessment) to verify that the positive outcomes reported in the literature are being realized with the students in a particular middle grades setting. If they are not, it is essential to investigate why the discrepancy is occurring, make appropriate modifications, and monitor the impact of the changes. For example, there is considerable research showing SRSD produces meaningful

improvements in middle grades students' writing. If a school adopted the SRSD model as part of its writing curriculum, but students were not showing the expected gains, questions such as the following might be considered:

- *Did teachers receive adequate professional development?*

- *Are appropriate strategies being selected and taught?*

- *Are the instructional stages being implemented with high fidelity?*

Finally, where there is an absence of published research supporting the efficacy of a writing practice currently being implemented, educators must use school-based data to systematically evaluate whether that practice results in positive outcomes. Moreover, because writing curriculum and instruction can have a differential effect with diverse populations (e.g., students with disabilities, English language learners, students with varying levels of writing proficiency), data should be disaggregated and carefully analyzed.[82]

Principle 7:

Improve teacher capacity to teach writing and use it as a tool for learning.

Many middle grades teachers are not adequately prepared to teach writing. The reasons for this range from teacher preparation programs that do not emphasize how to teach writing to a lack of in-service preparation by the school or district on writing instruction. Lack of preparation is especially problematic for teachers in science, social studies, and mathematics.[83] If middle grades students are to learn to write effectively and use writing as a tool to support learning of content material, their teachers must become more knowledgeable about effective writing practices.

Practice 1: *Provide ongoing in-service professional development to all teachers to increase their capacity to teach writing.*

Many teachers receive little to no preparation in college in how to teach writing to middle grades students.[83, 84] This lack of preparation is unnecessary as a variety of evidence-based practices for teaching writing have been identified.[3, 11, 13, 19, 25, 34, 37, 75, 76, 77] To ensure that teachers are familiar with effective writing practices, ongoing in-service preparation should be provided by the school or school district. School leaders should clarify expectations for school wide practice with regard to writing and provide in-service and support on these practices for all teachers in the school.

Consistent with the description and recommendation for professional development offered in the *Performance Management* section of this guide, professional development focused on writing should be intensive and ongoing, focused on the ways writing can be used to support content area learning and targeted at prioritized areas of need. One example of a model that meets these goals is the National Writing Project (NWP). The NWP consists of a 200+ sites located at colleges and universities across the United States. Among the professional development opportunities offered by the NWP are invitational summer institutes to train teacher-consultants to lead school-based improvement, on-site in-service programs, continuing education courses, and practitioner research initiatives.

Interested readers are encouraged to visit the NWP's website at http://www.nwp.org

Practice 2: *Have teachers create learning groups to share their best writing practices and work together to discover new ones.*

Teachers' personal experiences are an often-underused resource for increasing the capacity to teach writing. Teachers within and across disciplines should be encouraged to form groups to teach one another best writing practices and collaboratively improve classroom writing instruction and the use of writing to support student learning. Such groups can operate during the school year or the summer, and they can involve teachers from multiple schools. When teachers work together in this way, less experienced teachers benefit from the knowledge of more seasoned teachers.

Conclusion

The seven Writing and Writing Interventions principles are based on meta-analyses of writing intervention research. This includes three meta-analyses of experimental and quasi-experimental writing intervention studies conducted by Graham and colleagues for the Carnegie Corporation of New York: *Writing Next*,[13] *Writing to Read*,[5] and *Informing Writing*.[28] The principles are also supported by nineteen other meta-analytic reviews that focus on particular types of research (e.g., single subject designs), particular practices (e.g., writing to learn, word processing, formative assessment), and/or particular groups of students (e.g., students with learning disabilities).[1, 2, 3, 4, 11, 14, 18, 19, 25, 33, 34, 35, 36, 37, 38, 64, 75, 76, 77] The carefully selected, high-quality individual studies cited in this chapter offer additional support for the principles and practices and complement the meta-analytic findings. Consequently, each of the seven principles are supported by relatively strong evidence involving multiple empirical studies, even though there are no studies examining the impact of applying the recommended principles in unison. Research examining the combined effects of the principles is needed, and future studies should investigate this issue.

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