TEAL

Teaching Excellence in Adult Literacy

JUST WRITE! GUIDE

February 2012

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Acknowledgments

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Contents

Introduction

Mary Ann Corley, Ph.D., TEAL Director
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February 1, 2012

It is my pleasure to introduce you to the Teaching Excellence in Adult Literacy (TEAL) *Just Write! Guide.* This guide is the culmination of two years of work in identifying research-based instructional practices in the content area of writing. It also incorporates professional wisdom gleaned from participants in the six TEAL online courses on effective instruction.

A word about the background of TEAL: American Institutes for Research, through a contract awarded by the U.S. Department of Education Office of Vocational and Adult Education (OVAE), assists OVAE in its efforts to enhance state and local adult education providers' capacity to understand and apply evidence-based instructional practices that promote student learning. The TEAL Center is designed to improve the quality of adult education teaching in content areas. Focused on the content area of writing for adult basic education (ABE) students, the TEAL Center offers an intensive program of professional development and individualized technical assistance.

Because content knowledge is but one important facet of quality instruction, TEAL Center staff developed a series of six online courses to help teachers become familiar with the equally important elements of quality teaching: research-based processes and approaches. Accordingly, teams of teachers and a professional development coordinator from 12 states participated in the first round of online courses and the field test of TEAL materials; they engaged in online courses from October 2010 through July 2011 on the following topics:

- Strategy Instruction
- Self-Regulated Learning
- Universal Design for Learning
- Formative Assessment
- Differentiated Instruction
- Effective Lesson Planning

Through the online courses, participants across the 12 states formed an online community of practice in which they could share ideas and resources and discuss possible solutions to instructional challenges encountered in the ABE classroom. The capstone event was the TEAL Summer Institute in August 2011, during which participants engaged in hands-on activities facilitated by leading researchers in writing instruction and had the opportunity to weave together all they learned through the online courses about effective instruction, consider this learning in the context of writing instruction, and develop and share lesson plans for teaching writing strategies.

TEAL
Teaching Excellence in Adult Literacy

The *Just Write! Guide* is a resource guide for ABE teachers, intended to increase familiarity with evidence-based writing instruction and to facilitate translation of research findings into teaching practices and products that will enhance the quality of instruction delivered to adult learners. We hope that the guide will inspire adult education teachers to write more, think more deeply about the writing they do with their students, and consider how to enhance their instruction overall.

Numerous individuals helped with the development of this guide and the online courses. First and foremost, on behalf of AIR, I offer a hearty thank you to Heidi Silver-Pacuilla, the principal researcher who led the conceptualization and development of the guide and the online courses. I also offer sincere appreciation to the TEAL subject matter experts who willingly reviewed and provided guidance to TEAL staff along our journey as we fashioned the guide and the courses: Mary Beth Curtis, Noel Gregg, Tracey Hall, Charles "Skip" MacArthur, Linda Mason, Brett Miller, Elizabeth "Boo" Murray, Dolores Perin, David Scanlon, and Tanya Shuy. In addition, I extend appreciation to the OVAE staff members who provided constant support throughout the development of the online courses and guide: Chris Coro and Mary Jo Marali, as well as to AIR staff members who have supported this effort at numerous junctures: Mark Kutner, Larry Condelli, Mariesa Cash, Melissa Storm, Dahlia Shaewitz, Barbera Crawford, Helen Duffy, W. Christine Rauscher, Renee Sherman, Marcela Movit, Adam Battle, Rachel Goins, Scott Buckley, and Kip Thomson.

For additional information, visit the TEAL website at **https://teal.ed.gov**, or contact the TEAL Center at **teal@air.org**.

Sincerely,

Mary Ann Corley, Ph.D.
Director, TEAL Center, and
Principal Research Analyst,
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Why Write? Why Teach Writing?

Adults communicate in writing on a daily basis through notes to children's teachers, work activity logs and forms, e-mails to family and co-workers, online service forms, shopping lists, and so on. Adults in postsecondary education or technical training courses face expectations to produce a variety of writing products from lecture notes, summaries, and critiques to research papers and essays. The pervasiveness of writing in daily life underscores the need for learners and their instructors to focus on adults becoming flexible, fluent, and confident writers.

There is plenty of evidence to suggest that many adults in America are *not* flexible, fluent, confident writers. National reports decry that nearly 40 percent of community college registrants have skills below the college level and are referred to developmental instruction in reading, writing, or mathematics (Strong American Schools, 2008). Similarly, reports document that the writing demands of most jobs—even at the entry level—are increasing, and businesses are stressed to provide the remedial writing instruction that workers need (Business Roundtable, 2009; Casner-Lotto & Barrington, 2006; Graham & Perin, 2007).

The urgency of this situation is further heightened by the introduction of the Common Core State Standards (CCSS) framework's College and Career Ready Benchmarks. CCSS is an initiative of the National Governors Association and the Council of Chief State School Officers to write academic standards that are "(1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked" (CCSS Initiative, 2010, p. 3). These standards have been adopted in 46 states and will be the basis of student K–12 assessments, as well as the revised GED tests, to be released in 2014, in cooperative development with two consortia of states and publishers.

The CCSS Initiative represents the latest of many national efforts to increase standards and expectations for K–12 education and to elucidate the lack of alignment between secondary and postsecondary expectations (ACT, 2008; CCSS Initiative, 2010; National Commission on Writing, 2006). For adult education, the adoption of CCSS represents a significant increase in the expectations for learners and writing instruction. The CCSS description of College and Career Ready writing includes the following:

> To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. (CCSS Initiative, 2010, p. 41)

Preparing adult learners for further education or work advancement requires that educators help learners improve their writing skills, increase confidence in their ability to write, and embrace the goal of writing well as a means of communication and expression.

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Overview

The purpose of the **TEAL project** is to improve the quality of teaching in adult education in the content areas. The TEAL Center offers participating state teams an intensive program of professional development and individualized technical assistance in the area of writing instruction for adult basic education students. In addition, TEAL focuses on evidence-based instructional approaches that are effective across the content areas (e.g., *formative assessment*, *differentiated instruction*, self-regulated learning, effective lesson planning, and *UDL*). Evidence-based instruction means that there is reliable, trustworthy, and valid evidence to suggest that particular instructional practices are effective and successful in helping students learn.

The TEAL *Just Write! Guide* represents the culmination of two years of work identifying research-based instructional practices in the content area of writing. It also incorporates professional wisdom from participants in six online courses that TEAL provided to adult educators during the second year of the project. The intent of the guide is to increase the familiarity of adult basic education teachers with evidence-based writing instruction and to facilitate translation of research findings into teaching practices and products that will enhance the quality of instruction delivered to adult learners.

This guide aims to help adult education instructors improve the writing instruction they already use in their programs. As such, the guide is not a curriculum; rather, it is intended to strengthen existing writing instruction. We hope that this guide will inspire and guide adult education teachers to write more, think more deeply about the writing they do with their learners, and consider how to enhance their instruction overall.

To begin, we specify a set of assumptions about the writing process to position our work within the larger academic conversation about literacy development. The TEAL Center staff and our advisors consider writing to be the following:

- A language-based process that includes oral language, reading, and writing
- A complex social and cognitive process
- A process that carries a significant affective or emotional element that affects learners' motivation and engagement

We also believe that research can inform practice. We know that the literacy research base is stronger in K–12 and postsecondary settings and weaker in adult education settings; therefore, we have extrapolated and contextualized findings and recommendations based on our experiences serving adult education students and teachers. Research citations are provided throughout the guide to ground our recommendations; these and the annotated bibliography of research in writing instruction for adults, available on the TEAL website (https://teal.ed.gov/biblio), form the evidence base on which we have drawn these recommendations.

This approach has been developed and field-tested with participants in our 12 state pilot programs; their input into the materials has been invaluable. Their voices are represented in the guide as they shared reflections on their own learning or relayed stories of how adult learners responded to the activities. We are indebted to their dedication to their students' success and enthusiastic participation in the online courses in which these materials were first presented.

We also strongly believe that writing instruction, as with all other instruction, should be based on diagnostic information, such as a thoughtfully analyzed writing sample that can be used to personalize and differentiate instruction. We provide suggestions throughout the guide on how to gather and analyze information from students. Finally, we add our voices to the call for more research and research-based diagnostic rubrics and tools in this area for the adult education population.

Organization of the Guide

The guide is presented in three parts:

1. Introduction – background information about the project and research-based information
2. Research-Based Interventions – writing practices and activities to support the writing process
3. Enhancing Teaching Practices – best practice approaches and how they can serve improved writing instruction

The guide is designed for use by adult education administrators and professional development specialists, coaches and mentors, and adult education teachers at all stages of professional development. It is a resource they can turn to again and again to review models and best practices. The guide has been written for those who are interested in writing as a process and who would like to use their understanding of the concepts presented herein for designing classroom instruction or professional development opportunities. (For additional information, see the TEAL Center Fact Sheet on Research-Based Writing Instruction at the end of this section.)

Research-Based Writing Instruction

Recent research reviews have gathered what we know about effective practices for teaching writing to adolescents. This fact sheet examines the research on writing instruction for youth and adults, with attention to those who struggle to learn. Extrapolating from these major analyses provides guidance for adult educators to boost their writing instruction for adult learners.

About Writing Instruction

Recent reviews of research have gathered what we know about effective practices to teach writing. *Writing Next* (Graham & Perin, 2007b), and a companion analysis, "What We Know and What We Still Need to Know" (Graham & Perin, 2007a), examine the research on writing instruction in grades 4–12, with attention given to those whose writing skills need improvement. *Writing to Read* (Graham & Hebert, 2010) analyzes the research on how writing instruction and practice can improve reading skills. Although these studies focus on students younger than most of the adult education population, they provide direction for instruction with adults. This fact sheet provides a thumbnail sketch of these three major studies and the implications for adult educators and learners.

Elements of Writing

Writing is multifaceted and includes a number of skills that must work together. Evaluating writing can be subjective when instructors and learners alike are unsure of what makes "good" writing. Writing "quality" is defined in *Writing Next* as "coherently organized essays containing well developed and pertinent ideas, supporting examples, and appropriate detail" (Graham & Perin, 2007b, p. 14). Sentence structure and vocabulary are other key elements that contribute to the quality of a piece of writing. Learners who find writing difficult may experience challenges in any of these areas as well as in spelling, handwriting, prior knowledge of the topic, and familiarity with models of academic literacies or genres. Because writing is such a complex act, high-quality writing depends on this large constellation of skills and abilities. The goal of writing instruction is to help writers become flexible; proficient; and able to adapt to various purposes, contexts, and formats, and, in so doing, to synergize literacy development in both writing and reading.

Why Teach Writing to Adult Learners?

Adults encounter writing tasks on a daily basis, especially informational or expository writing such as notes to children's teachers, grocery lists, work activity logs and forms, emails to family and co-workers, online service forms, and so on. The pervasiveness of writing in daily life underscores the need for learners and their instructors to focus on helping adults become flexible, confident writers.

There is plenty of evidence to suggest that many adults of all ages in America are ***not*** flexible, confident writers. *Writing Next* and *Writing to Read* provide grim statistics showing that poor in-school performance and high drop-out rates from high school lead to a situation in which adults are underprepared for postsecondary education or successful employment. For example, they report that nearly a quarter of community college registrants show the need for developmental writing instruction. Similarly, the reports document that the writing demands of most jobs—even at the entry level—are increasing and businesses may have to provide the remedial writing instruction that workers need. Preparing adult students for further education or work advancement requires that adult educators help learners improve their writing skills and increase their confidence in their ability to write.

What's the Research?

Writing Next and *Writing to Read* are metaanalyses, that is, large-scale statistical reviews of studies that compare treatment and control groups. A metaanalysis allows researchers to combine multiple studies of a single instructional intervention and report "effect sizes" as an effectiveness measure. An effect size tells whether statistically significant findings are also educationally meaningful. *Writing Next* analyzed 142 studies and *Writing to Read* analyzed 93 studies. *What We Know* extends the conclusions of *Writing Next* by reviewing articles that did not fit the strict inclusion criteria, including 48 single-subject studies of writing, many of which were focused on students who had learning disabilities or were otherwise low achieving. Because there is very little rigorous research on the effectiveness of literacy interventions for adult learners, it is necessary to refer to studies with younger students. The challenge for the adult education community is to extrapolate from reports on younger students and apply these findings in

instructional design for adults. We already know, for example, that many native English speaking adult learners were low-achieving students in K–12 and many have undiagnosed learning disabilities (Corley & Taymans, 2002; National Institute for Literacy, 2009). We also know from adult learning theory that adults show different learning patterns and levels of motivation from adolescents and younger children, and it is necessary to take these differences into account when drawing from work with younger populations to plan for instruction with adults. There are also some studies of writing development in adults and youth in postsecondary settings that fill in some of the gaps and help us develop approaches to helping adults improve their writing abilities.

Recommended Instructional Strategies

All three reports find that writing instruction should emphasize explicit, direct, and systematic instruction with many opportunities for learners to engage in meaningful, extended writing. Learners who wish to improve their writing skills will benefit from learning strategies, and from assistance given by peers, mentors, and technology tools.

Writing Next, What We Know, and *Writing to Read* found the following instructional interventions to be effective. Those that are especially helpful for low-achieving writers are noted. This TEAL Center Fact Sheet offers in italics suggestions for contextualizing instruction in the adult education setting.

- **Strategy instruction,** especially *self-regulated strategy development (SRSD)*, and summarization described below, are the most effective approaches identified in these reports. Writers who are explicitly taught strategies that are reinforced in class over time can internalize these strategies and draw on them for support when writing. Strategies replace negative self-talk with positive self-instructions to help students overcome frustration and past failure. *Strategy instruction has been introduced to adult education through the professional development programs*, Bridges to Practice *and* Learning to Achieve, *developed by the National Institute for Literacy to address the needs of students with learning disabilities. It is an instructional approach that requires professional development and practice leading to instruction that is consistent and explicit.*
- **Summarization.** Explicit teaching of the elements of a summary of a text leads to improved ability and increased confidence in writing summaries. Having learners write summaries about what they read is a key recommendation from *Writing to Read*. In addition, summarization is an increasingly common expectation as students advance in their education and are assigned more complex texts to read and comprehend. *Connect this instruction and practice with increasingly complex texts to reinforce learners' comprehension as well as writing skills.*
- **Collaborative writing.** Making arrangements for students to work together through the entire process of writing—planning, drafting, revising, editing, and publishing—results in higher quality writing products. *Use technology to support and share writing, especially for classes that do not meet daily, or assign writing as an out-of-class activity.*
- **Setting specific product goals.** Understanding the nature of goals for a written product, setting the goal in advance during planning, and then monitoring and editing one's work for adherence to the goal all result in higher quality final products. Specific goals (e.g., "to persuade a voter") are more effective than general goals (e.g., "write a 200-word essay"). *Discuss writing quality with learners and identify areas for improvement. Help learners set explicit goals to guide their writing, and work with them to track progress. For example, learners may want to write more words during a Quick or Free Write exercise; others may identify that their sentences are all of a similar type and want to focus on adding variety and using combined sentences. Tracking goals works!*
- **Word processing** and other technology tools are especially supportive for struggling writers, providing the means to move more easily from idea to composition, supporting spelling, revising, and proof reading. Technology-assisted writing also makes collaborative writing (see above) more feasible and productive.
- **Sentence combining,** that is, practicing how to combine two simple sentences into a compound or complex sentence, has a positive impact on overall writing quality and can boost learners' reading comprehension skills as well. *Use this technique in conjunction with other effective writing techniques, such as encouraging peer discussion as part of collaborative writing, to help reinforce the practice.*

- **Prewriting activities,** or brainstorming before beginning to draft a composition, has a positive impact on the final written product. Prewriting activities can be done individually or as a collaborative process. This planning strategy may be particularly important to low-achieving writers for compensating and overcoming documented weak prior knowledge and vocabulary (Graham & Perin, 2007). *Engaging learners and supporting vocabulary development and background knowledge through pre-reading strategies can support writing about the topic, too. Generate lists, word webs, and personal glossaries that can help writers demonstrate what they know.*
- **Inquiry,** in which learners engage in a focused investigation with "immediate and concrete data" (Graham & Perin, 2007a, p. 19) that they gather and analyze, is a springboard to higher quality writing. *Assign authentic activities and materials as inquiry writing, either inquiry in the community (i.e., is there consensus for the public library to expand?) and/or online as a web quest.*
- **Process writing approach** includes many related activities, including a greatly increased quantity of writing (only some of which is completed to publication) and a focus on writing throughout the course, along with mini-lessons on embedded skills. It is a professional development model as well, and results seen in students' writing are correlated to teachers' training in the approach. It is worth noting that the instructional activities of sentence combining and inquiry are part of the approach. Another key component is the modeling of writing by instructors. *Model writing and responding to feedback and model applying the strategies you teach. Many adult educators have participated in local National Writing Project chapters; see* www.nwp.org *for a local chapter that can offer professional development and a community of writers.*
- **Study of written models with direct, guided practice** was found to be an effective instructional strategy, especially for students with low skills. *Many adult education students are not familiar with different types of written genres; the explicit study of formats, styles, tones, vocabularies, sentence structures, etc., can provide new frames and words for their own work.*

A cautionary note about **grammar instruction** emerges from the meta-analyses: Studies of grammar instruction alone or as a primary writing instructional approach produced **negative results** for students' overall writing quality. However, the authors argue that it is important to teach grammar. It seems most helpful to the learner to use grammar approaches that involve active learning (such as sentence combination) and are integrated with other writing activities.

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Reviewed by: Dolores Perin, Columbia University

About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Research-Based Writing Interventions

Increase the Amount of Student Writing

Two necessary conditions for students to improve the quality of their writing are *explicit instruction* in writing techniques and sustained writing practice. Explicit instruction is a systemic approach to teaching that includes a set of proven design and delivery procedures or interventions derived from research. Throughout this guide, you will find descriptions of many such writing interventions.

This section addresses the importance of increasing the amount of writing that students do. Increased writing activity is not an instructional intervention that addresses specific academic difficulties, but research does show that sustained writing practice:

- Improves writing.
- Improves reading.
- Makes students more fluent in the writing process.
- Makes writers more comfortable with writing.
- Promotes transfer between contexts.
- Deepens thinking about content and helps students construct new knowledge.

Surveys and research have shown how little time American secondary and postsecondary students are expected to devote to writing and how little they actually produce (Applebee & Langer, 2011; Kellogg & Whiteford, 2009). In fact, frequent composing helps students become better communicators, and increasing the amount of time that students spend writing is an important factor in improving writing quality and fluency.

How Are We Doing in Adult Education?

How much time are TEAL adult education instructors currently spending on writing in their classrooms? Figures 1a and 1b show responses to polls taken in the spring of 2011 in the online course titled Effective Lesson Planning. Set your goal to increase the amount of time your learners write and the amount of writing they do. It will serve them well!

Figure 1a. Average Student Writing Time Per Week

How much time per week do your students write in class? (*N* = 50)

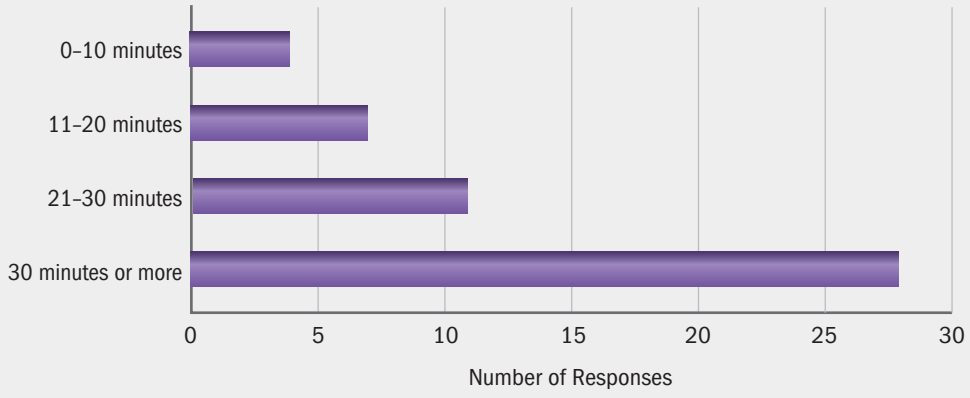
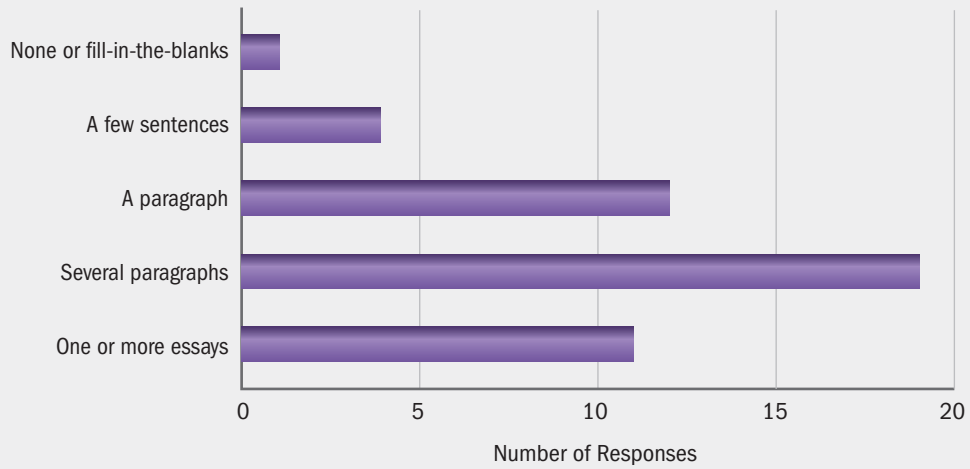


Figure 1b. Average Length of Content Produced by Students Per Week



Struggling writers gradually develop into better writers when they are prompted to write daily and when they receive immediate and specific feedback about that writing. Short daily writing tasks help build learners' writing fluency and boost their confidence in expressing themselves in writing. You can incorporate a variety of activities into your teaching to increase the amount of writing your students do—and not all of it has to be corrected! Get learners writing every class period.

You can help build your learners' writing fluency by giving them frequent, short writing assignments, asking them to journal about their learning activities, suggesting that they correspond daily with a buddy student via e-mail, and so on. Consider the following strategies, and find ideas of how to manage the workload of feedback in the Provide Constructive Feedback section (see page 48). Consider the many ways learners can write, and provide options for them to show what they know by applying the principles of *UDL* (see page 52).

- Quick Writes (see page 14)
- Writing-to-Learn Prompts (see page 15)
- Sentence Combining (see page 36)
- Writing Summaries (see page 44)
- Writing With Frames (see page 46)

Quick Writes

Quick Writes, otherwise known as "free writes," are:

- Nongraded
- Informal
- Quick
- Motivational
- Practice
- Opportunities for reflection and elaboration

Table 1 includes information about using Quick Writes in your instruction.

Table 1. Applying Quick Writes to Instruction

When to use them:	• Warm-up activities to start class • After a reading assignment, to reinforce comprehension • Before a class discussion, to focus ideas • Before a writing assignment, to brainstorm and elicit ideas
Why use them:	• Provide opportunities for readers to strengthen their comprehension through writing. • Deepen writers' thinking about a topic as a *writing-to-learn* activity. • Support progress toward one or more specific writing goals (i.e., longer compositions, more details, or more complex sentences). • Desensitize students to the fear of a blank page.
Key components:	• Enforce the rules: No talking and **everyone** writes—including the instructor! • Keep writing time to five minutes or less. • Try to stay on topic, but it's more important to keep writing. • Debrief afterwards—ask for ideas or words that were generated.
What adult education instructors say about Quick Writes:	"In my opinion, the Quick Writes approach is particularly successful for engaging nonwriters or those for whom asking for a certain amount of words is a daunting challenge. If you can get students to feel successful with writing quick-fire paragraphs, it can then be a goal to work on through sentence expansion to begin reaching towards a more formal essay assignment." *–Jonathan Moore, Mississippi TEAL Team*
	"I have found that using Quick Writes in the classroom is a simple, effective strategy to help students get their thoughts on paper. Devoting only a few minutes towards the writing activity is nonthreatening to students. They have begun to welcome the assignment rather than dreading the writing process. As an instructor, I like this activity because it gives me the opportunity to work alongside my students. I become a writer with them. … I am very pleased to be able to use Quick Writes in my classroom." *–Lynne Ralston, Florida TEAL*

Writing-to-Learn

Writing to learn is different from writing to communicate. Writing-to-learn activities are writing tasks that help students learn subject matter by thinking through key concepts or ideas presented and then writing about them. In essence, the primary function of writing to learn is to order and represent the content of the learning experience to one's own understanding. Table 2 includes examples of writing-to-learn activities and practical applications for instruction.

Table 2. Writing-to-Learn Activities and Applications

Activity	Application
Entry Slips	Use before a lesson; check for prior knowledge or assumptions.
Crystal Ball	Check for assumptions by asking, "What might happen next?"
Found Poems	Get the gist. Have students rearrange something they've read or written without adding new words.
Awards	Check for understanding. Nominate the most helpful, most important, most influential element of a content lesson.
Yesterday's News	Check recall by asking, "What was the headline from last class?"
Take a Stand	Get opinions out and discussed.
Letters	Ask imaginary or real others for an explanation of their work, stance, or action.
Exit Slips	Get closure with a summary or short list of what students learned.

Adapted from *Improving Adolescent Literacy: Strategies at Work* by D. Fisher and N. Frey, pp. 142–143. Copyright © 2004 Pearson Education.

Get Ready

You most likely are aware that getting adult learners ready to write is a complex task. Setting the stage for writing instruction with adults involves an understanding of how adults learn differently from children and what that means to your teaching style, classroom management, and planned instructional experiences. Each learner regardless of age is unique and has varied interests, skills, desires, and challenges. No one curriculum plan or intervention idea will meet the needs of all learners. The skillful teacher is confident that every student can improve and, therefore, prepares for flexible instructional environments to capitalize on strengths and support varied challenges of learners. (For additional information, see the TEAL Center Fact Sheets on Adult Learning Theories and Student-Centered Learning at the end of this section.)

Teachers are most successful in reaching struggling writers when their instruction emphasizes the full writing process—planning, writing the first draft, and revising—and

makes those stages clear and explicit. It is critical that teachers guide students and provide support in the planning and prewriting stage so that they have a map or outline of important points laid out for them to follow in writing their first draft. Teachers also need to offer numerous models of good writing that students can review when completing writing assignments. Finally, effective teachers provide specific, timely, and supportive feedback to students about their writing. Writing research suggests that, especially for struggling writers, planning and *prewriting* development, *authentic* inquiry activities, and *collaboration* with peers improve writing instruction and the quality of students' written products. All three of these activities are good fits for adult education.

"The teaching of writing is highly dependent on ... provocative prewriting activities that spur discussion, debate, and thought. … Generating for the students a purpose for writing assignments is one of the most successful practices a teacher can implement in the writing class."

(Thomas, 2000, p. 43)

Prewriting Activities

Prewriting is exploring, planning, and organizing ideas. It is a necessary step that precedes writing the first draft of an essay and then revising the draft to produce the final piece of writing. Activities in the classroom, such as debating a controversial topic or brainstorming ideas and vocabulary before beginning to draft a composition, have a positive impact on the final written product. The process of dialogue about the topic, the audience, the assignment, and so on, deepens learners' connection of oral to written language and the ability to articulate their thoughts. Be sure to emphasize to students that the more time they put into prewriting and the more thorough the prewriting activity, the more polished their essays will be. Consider asking the reluctant or challenged writer to try writing in the digital environment.

This planning work can be helpful for introducing vocabulary relevant to the topic. However, keep in mind that intensive vocabulary instruction also will be needed, particularly for low-achieving writers (Graham & Perin, 2007a) and adult literacy learners (Greenberg, Ehri, & Perin, 1997). Techniques for teaching vocabulary include creating vocabulary lists, word walls, word webs, and personal glossaries to help learners gain new vocabulary to express themselves on the topic—and then leaving these visible in the room! Too often, such lists get erased or thrown out even though they could remain helpful through the entire writing process.

Engage learners through multisensory and multicultural experiences to spark their imagination and reach their interests. Encourage a variety of approaches to brainstorming, planning, and idea gathering. Brainstorming is not the only way to help students begin planning what they will write. You can ask students to discuss the topic long before they begin to write; ask them to list pros and cons of a proposed action or idea; require that they keep writer's journals; strengthen your use of graphic organizers; and model your own prewriting strategies.

Consider allowing learners to complete this phase in any medium, using drawing, oral recordings, or graphic organizers to help get their ideas down, and then translate or transfer them to text after the ideas are formed. For ideas on creating options for learners at all stages of the writing process, see the Apply Universal Design for Learning section (page 52).

Last year, I taught a 12-week session on writing in which students composed 12 essays. The first 6 essays were done with a group brainstorm and a webbed graphic organizer (slightly modified). The last 6 were done independently. Students drew the graphic organizer from memory, and filled it out to give them a starting point for their essays. One of the chief concerns my students voice each year is that they don't know where to start when confronted with an essay prompt. I always tell them to take 5–10 minutes to plan their essays using this graphic organizer. It works!

Judy Hoye,
Virginia TEAL Team

Inquiry Learning

Inquiry learning is a form of active learning in which students engage in a focused investigation on a topic of interest. Honing inquiry skills by gathering and analyzing "concrete and immediate data" and engaging in activities such as comparing and contrasting or evaluating evidence collected (Graham & Perin, 2007b, p. 19) results in improved writing quality. This approach relies on rich prewriting dialogue to bring issues and prior knowledge to the surface as well as to deepen vocabulary and critical thinking on the issues. One example of use of inquiry learning is asking students to interview one or more key informant(s) about an issue before taking a position and writing about the issue.

There is a long history and a strong tradition of this sort of problem-posing approach and authentic writing activity in adult basic skills pedagogy (Freire, 1970, 1994; Horton & Freire, 1990). Adults are strongly motivated to address issues of immediate concern in their lives and communities. Discussions and authentic learning experiences that allow their voices to be heard on the issues are empowering and energizing. The discussions should feed into the planning and prewriting process. In particular, inquiry learning can involve preparation for persuasive and informational writing and also can be connected to reading comprehension instruction.

> *"Our TEAL project has been [focused] a lot on the learning process. I feel students (especially adults) can learn from one another. Maybe they feel more comfortable or maybe other students can speak the same "language" as another student… I feel the cooperative learning groups can be a very efficient and effective part of the learning process."*
>
> Mary Ellen Davis,
> Oklahoma TEAL Team

Discussions can engage students to do the following:

- Learn new vocabulary.
- Deepen their understanding of the issue.
- Develop an awareness of different points of view.
- Articulate their thinking.
- Write for an authentic audience.

Writing instruction must acknowledge the importance of this cognitive development for adults who have not previously had outlets for expressing their opinions and thoughts. Spending prewriting time with inquiry, dialogue, vocabulary, and background knowledge development on authentic activities is documented as a necessary step for adult learners (Purcell-Gates, 1995; Purcell-Gates, Degener, Jacobson, & Soler, 2002; Purcell-Gates & Waterman, 2000; Silver-Pacuilla, 2004, 2006).

Collaboration

Learners working together through the entire process of writing—planning, drafting, revising, and editing—results in higher quality products. Sharing drafts is easier when writers use technology, but there is much in the early phases of drafting that does not require technology, such as dialogue, notes, organizers, and outlines.

Teach and model your expectations for group and partner interactions so that feedback is constructive and partners learn from each other. Use peers as pairs, triads, and small groups in every aspect of writing instruction to carry out the following:

- Plan and discuss topics and arguments.
- Generate vocabulary lists, word webs, and glossaries.
- Draft outlines.
- Suggest sentences to combine or revise.
- Be authentic readers and provide genuine feedback.

Make time for learners to discuss, plan, inquire, and collaborate on all stages of writing activities. You will see the benefits in more thoughtful and coherent writing products.

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Adult Learning Theories

Adult learning theories provide insight into how adults learn and can help instructors be more effective in their practice and more responsive to the needs of the learners they serve.

What Are Adult Learning Theories?

There is no single theory of learning that can be applied to all adults. Indeed, the literature of the past century has yielded a variety of models, sets of assumptions and principles, theories, and explanations that make up the adult learning knowledge base. The more that adult educators are familiar with this knowledge base, the more effective their practice can be, and the more responsive their practice can be to the needs of adult learners. This fact sheet reviews three major theories—andragogy, *self-directed learning*, and transformational learning—and discusses their implications for practice. It also provides a theoretical grounding for the work of the TEAL Center and links readers to many TEAL resources, all of which are available at https://teal.ed.gov.

What Is Andragogy?

In attempting to document differences between the ways adults and children learn, Malcolm Knowles (1980) popularized the concept of *andragogy* ("the art and science of helping adults learn"), contrasting it with *pedagogy* ("the art and science of teaching children"). He posited a set of assumptions about adult learners—namely, that the adult learner

- Moves from dependency to increasing self-directedness as he/she matures and can direct his/her own learning.
- Draws on his/her accumulated reservoir of life experiences to aid learning.
- Is ready to learn when he/she assumes new social or life roles.
- Is problem-centered and wants to apply new learning immediately.
- Is motivated to learn by internal, rather than external, factors.

Inherent in these assumptions are implications for practice. Knowles (1984) suggests that adult educators

- Set a cooperative climate for learning in the classroom.
- Assess the learner's specific needs and interests.
- Develop learning objectives based on the learner's needs, interests, and skill levels.
- Design sequential activities to achieve the objectives.
- Work collaboratively with the learner to select methods, materials, and resources for instruction.
- Evaluate the quality of the learning experience and make adjustments, as needed, while assessing needs for further learning.

Because adults need to know *why* they are learning something, effective teachers explain their reasons for teaching specific skills. Because adults learn by doing, effective instruction focuses on tasks that adults can perform, rather than on memorization of content. Because adults are problem-solvers and learn best when the subject is of immediate use, effective instruction involves the learner in solving real-life problems. (For additional ideas on ways to actualize these suggestions, refer to the TEAL Fact Sheet No. 6 on Student-Centered Learning.)

Andragogy is not without criticism. Brookfield (2003) called the theory "culture blind," stating that the concept of self-directed learning and the concept of the student's establishing a non-threatening relationship with the teacher as facilitator of learning may neglect races and cultures that value the teacher as the primary source of knowledge and direction.

What Is Self-Directed Learning?

Approximately 70 percent of adult learning is self-directed (Cross, 1981), and about 90 percent of all adults conduct at least one self-directed learning project a year (Tough, 1971). *Self-directed learning (SDL)* is a "process in which individuals take the initiative, without the help of others" in planning, carrying out, and evaluating their own learning experiences (Knowles, 1975). In essence, SDL is an informal process that primarily takes place *outside* the classroom. What qualifies learning as "self-directed" is who (the learner) makes decisions about content, methods, resources, and evaluation

of the learning. Individuals take responsibility for their own learning process by determining their needs, setting goals, identifying resources, implementing a plan to meet their goals, and evaluating the outcomes.

The benefit of *SDL* is that learning can easily be incorporated into daily routines and occurs both at the learner's convenience and according to his/her learning preferences. It can involve the learner in isolated activities, such as researching information on the Internet; it also can involve the learner in communication with experts and peers, as in a traditional classroom.

SDL can be difficult for adults with low-level literacy skills who may lack independence, confidence, internal motivation, or resources. Brookfield (1985) suggests that not all learners prefer the self-directed option and that many adults who engage in SDL also engage in more formal educational programs, such as teacher-directed courses. Within the adult education setting, the teacher can augment traditional classroom instruction with a variety of techniques to foster SDL for individuals or for small groups of learners who are ready and willing to embark on independent, SDL experiences. Self-direction is a critical component of persistence in adult education, helping learners recognize how and when to engage in self-study when they find they must stop out of formal education.

Following are strategies for facilitating SDL. The teacher can help the learner to

- Conduct a self-assessment of skill levels and needs to determine appropriate learning objectives.
- Identify the starting point for a learning project.
- Match appropriate resources (books, articles, content experts) and methods (Internet searches, lectures, electronic discussion groups) to the learning goal.
- Negotiate a learning contract that sets learning goals, strategies, and evaluation criteria.
- Acquire strategies for decision-making and self-evaluation of work.
- Develop positive attitudes and independence relative to self-directed learning.
- Reflect on what he/she is learning.

The teacher also can

- Encourage and support learners throughout the process, helping them recognize their own growing thought processes and strategies (for suggestions on how to do this, refer to the TEAL Center Fact Sheet No. 4 on Metacognitive Processes).
- Offer a variety of options as evidence of successful learning outcomes (for additional information about this, refer to the TEAL Center Fact Sheet No 2 on Universal Design for Learning).

What Is Transformational Learning?

Transformative learning (TL) is often described as learning that changes the way individuals think about themselves and their world, and that involves a shift of consciousness. For example, English language learners often report a shift in their view of U.S. culture and in their view of themselves as they gain confidence communicating in a new language (King, 2000).

Different theorists look at TL through various lenses. Paolo Freire (2000) taught Brazilian workers to read by engaging them, through a problem-posing instructional approach, in discussions about working conditions and poor compensation, thereby helping them change their thinking and strive for social change. To Freire, transformative learning is emancipating.

To Mezirow (2000), TL is a rational process. As individuals reflect on and discuss their assumptions about the world, they often experience a shift in their frame of reference or world view. For this to happen, individuals engaging in reflective discourse need to challenge each others' assumptions and encourage group members to consider various perspectives. It is essential that participants engaging in reflective discourse have complete and accurate information about the topic for discussion; be free from bias; and meet in an environment of acceptance, empathy, and trust (Mezirow, 1997, 2000). A criticism often leveled at Mezirow's TL theory is that it does not account for the effect of the individual's race, class, and gender, or the historical context in which the learning occurs (Cervero & Wilson, 2001; Corley, 2003; Sheared & Johnson-Bailey, 2010; Taylor, 1998). It has also been criticized as hyper-rational, ignoring feelings, relationships, context and culture, and temporal aspects (Silver-Pacuilla, 2003).

Adult educators seeking to foster transformative learning within their classes may wish to consider the following:

- **Create a climate that supports transformative learning.** Taylor (2000) suggests that teachers need to be "trusting, empathetic, caring, authentic, sincere, and demonstrative of high integrity" (p. 313). They need to provide students with immediate and helpful feedback, employ activities that "promote student autonomy, participation, and collaboration" (Taylor, 1998, p. 48), and help them to explore alternative perspectives and engage in problem-solving and critical reflection (p. 49).
- **Know your students and the types of learning activities that most appeal to them.** Cranton (2002) suggests that "thinking types" who enjoy logic will appreciate "case studies, debates, critical questioning, and analyses of theoretical perspectives" (2000, p. 199). Those who are uncomfortable with confrontation and having their statements challenged may be more successful when learning occurs in "harmonious groups" in which participants discuss, but do not debate, alternative viewpoints. The experiential learner will enjoy field trips and simulations, and the intuitive learner will appreciate brainstorming and games involving imagination.
- **Develop and use learning activities that explore and expose different points of view.** Cranton (2002) suggests using films and short stories. She also suggests having students engage in journal writing to engage in self-reflection. The teacher can ask a learner to write a brief autobiographical essay and then ask other students to review and reflect on the writer's assumptions. Each student can take a turn at writing his/her autobiographical essay. Another technique is to use critical incidents to engage in reflective discourse, in which learners reflect on an experience, either good or bad, and analyze their assumptions and various perspectives. When the teacher writes and shares as an equal, an atmosphere of trust and openness is fostered.

Bringing Theory Into Practice

The art of teaching adults effectively requires an understanding of various principles or theories of how adults learn, and requires making an effort to apply some of those principles to practice. The three major theories presented in this fact sheet and the implications for practice issuing from each are not mutually exclusive. Suggestions for applying these theories to writing instruction for adult learners include the following:

- Incorporate more writing in more contexts in the adult education setting to promote self-reflection and articulation of learning. Use ungraded, short and timed prompts such as *quick writes*, *entry/exit cards*, or yesterday's news. Writing is a natural means of self-reflection, and sharing personal writing is a way to bring stories of personal challenge, growth, resilience, and dreams into dialogue.
- Engage new adult writers with online communities of writers, as contributors, readers, and peers, to foster their *SDL*, self-study, and persistence. (For information on ways to incorporate technology into writing instruction, refer to the TEAL Center Technology-Supported Writing Fact Sheet.)
- Provide feedback that challenges learners' assumptions and deepens their critical thinking. (For ideas on providing constructive feedback, refer to the TEAL Center Formative Assessment Fact Sheet.)

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Adapted from the CALPRO Fact Sheet No. 5, Adult Learning Theories. Author: Mary Ann Corley

About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Student-Centered Learning

Student-centered learning is an approach to learning in which learners choose not only what to study but also how and why. At the heart of the learning environment are learner responsibility and activity, in contrast to the emphasis on instructor control and coverage of academic content found in conventional, didactic teaching.

About Student-Centered Learning

Student-centered learning has been defined most simply as an approach to learning in which learners choose not only *what* to study but also *how* and *why* that topic might be of interest (Rogers, 1983). In other words, the learning environment has learner responsibility and activity at its heart, in contrast to the emphasis on instructor control and the coverage of academic content found in much conventional, didactic teaching (Cannon, 2000). Additionally, learners find the learning process more meaningful when topics are relevant to their lives, needs, and interests, and when they are actively engaged in creating, understanding, and connecting to knowledge (McCombs & Whistler, 1997).

There has been increasing emphasis in recent years on moving away from traditional teaching toward *student-centered learning*. This paradigm shift has encouraged moving power from the instructor to the learner, treating the learner as a co-creator in the teaching and learning process (Barr & Tagg, 1995). Instructors who deliver student-centered instruction include the learner in decisions about how and what they learn and how that learning is assessed, and they respect and accommodate individual differences in learners' backgrounds, interests, abilities, and experiences (McCombs & Whistler, 1997). The role of the instructor in student-centered classrooms is to encourage learners to do more discovery learning and to learn from each other; the instructor focuses on constructing authentic, real-life tasks that motivate learner involvement and participation (Weimer, 2002).

Characteristics of Student-Centered Learning

Do you remember the best class you ever had? The class in which you were most confident? In which you learned the best? More than likely, this was a class in which you discovered new knowledge and felt motivated to learn both by the instructor and by an intrinsic desire to know more. The student-centered classroom facilitates learning by increasing motivation and effort.

The student-centered model requires that instructors see each learner as distinct and unique. This means recognizing that learners in any classroom learn at different rates with different styles, they have different abilities and talents, their feelings of efficacy may vary, and they may be in different stages of development. In this model, learning is a constructive process that is relevant and meaningful to the learner and connected to the learner's prior knowledge and experience. The learning environment supports positive interactions among learners and provides a supportive space in which the leaner feels appreciated, acknowledged, respected, and validated. Rather than trying to "fix" the learner, the learner has the power to master his or her world through the natural process of learning (McCombs & Whistler, 1997).

The student-centered classroom involves changes in the roles and responsibilities of learners and instructors, in the delivery of instructional strategies, and in learning itself; these all differ from those in the traditional, teacher-centered classroom. In the student-centered classroom, the learner requires individualization, interaction, and integration. *Individualization* ensures that learners are empowered to create their own activities and select their own authentic materials. Learners *interact* through team learning and by teaching each other. During the learning process, learners *integrate* what they have learned with prior learning and construct new meaning (Moffett & Wagner, 1992). Below are examples of the changed roles and responsibilities in the student-centered classroom.

Learners

- Are active participants in their own learning.
- Make decisions about what and how they will learn.
- Construct new knowledge and skills by building on current knowledge and skills.
- Understand expectations and are encouraged to use self-assessment measures.
- Monitor their own learning to develop strategies for learning.

- Work in collaboration with other learners.
- Produce work that demonstrates authentic learning.

Instructors

- Recognize and accommodate different learning modalities.
- Provide structure without being overly directive.
- Listen to and respect each learner's point of view.
- Encourage and facilitate learners' shared decision-making.
- Help learners work through difficulties by asking open-ended questions to help them arrive at conclusions or solutions that are satisfactory to them.

Learning is

- An active search for meaning by the learner.
- Constructing knowledge rather than passively receiving it—shaping as well as being shaped by experiences.

Instructional strategies and methods are used to

- Manage time in flexible ways to match learner needs.
- Include learning activities that are personally relevant to learners.
- Give learners increasing responsibility for the learning process.
- Provide questions and tasks that stimulate learners' thinking beyond rote memorization.
- Help learners refine their understanding by using critical thinking skills.
- Support learners in developing and using effective learning strategies for each task.
- Include peer learning and peer teaching as part of the instructional method.

How Can Students Benefit From Student-Centered Learning?

Benefits of the student-centered model are often cited in the literature. Every learner benefits from effective instruction, no matter how diverse their learning needs (Stuart, 1997). Learner motivation and actual learning increase when learners have a stake in their own learning and are treated as co-creators in the learning process (McCombs & Whistler, 1997). In addition, learners who meet with success in assuming new responsibilities gain self-confidence and feel good about themselves (Aaronsohn, 1996), and learners demonstrate higher achievement when they can attribute success to their own abilities and effort instead of luck (North Central Regional Educational Laboratory, 2000).

The process of moving to *student-centered learning*, however, is not always easy for adult learners. Many initially resist what they perceive as the instructors' abdication of his or her responsibility to manage instruction; knowing that this may happen can help spark a discussion of the changes openly and negotiate new roles for learners and instructors.

Creating a Student-Centered Classroom

Student-centered learning has subtle but profound implications for instructors. To move toward this new model, instructors must be willing to emphasize learning while sharing power with learners in the classroom (Barr & Tagg, 1995). This can be done in a thoughtful way through planning and the use of incremental steps. First, instructors can help learners set goals for themselves and can offer self-directed activities through which learners can build both their self-confidence and their learning skills. As a result, learners become motivated to take greater control of their learning, and instructors gain confidence in managing the new environment.

Next, instructors can encourage learners to discover how they learn best and apply different strategies suitable for each learner. Sharing decision-making with learners helps them become more self-directed. When the learner is self-directed (i.e., setting his or her own goals and standards), the instructor becomes a facilitator who reviews learner-set criteria, timelines, lists of resources, collaborations, etc. In the student-centered classroom, the learners have choices in their education, they are responsible for their learning, they measure their own achievement, and they have power in the classroom.

The instructor role changes from "sage on the stage" to "guide on the side." Instructors lead less and facilitate more, with learners taking on the responsibility for organizing content, generating examples, posing and answering questions, and solving problems. The instructor does more design work, constructing real-life, authentic tasks that encourage learner involvement and participation. Instructors model or demonstrate how to approach learning tasks, and they encourage learners to learn from and with each other. The instructor retains responsibility for maintaining a climate of learning.

Instructors who implement the student-centered model move from whole-class instruction to small-group and individual inquiry. These groupings are heterogeneous and require *differentiated instruction* (see the TEAL Center Fact Sheet No. 5 on Differentiated Instruction). Rather than keeping learners busy with individual work, the instructor focuses on topics of interest to small groups and creates inquiry into those areas. Learners also benefit from reading and using authentic materials rather than textbooks and basal readers. Time that was spent entirely on content and memorization now balances with time spent learning how to learn and understand content. Assessment in the student-centered classroom relies on portfolios that include both instructor-developed and self-assessments.

Note that changing the classroom affects relationships, curriculum, instruction, learner grouping, and evaluation in the following ways:

- *Relationships* between the instructor and learners are more collaborative.
- *Curriculum* is more thematic, experiential, and inclusive of multiple perspectives.
- *Instruction* allows for a broad range of learning preferences, builds from learners' strengths, interests, and experiences, and is participatory.
- *Grouping* is not tracked by perceptions of ability but rather promotes cooperation, a shared responsibility, and a sense of belonging.
- *Evaluation* considers multiple intelligences, uses *authentic assessments*, and fosters self-reflection.

Despite the benefits of *student-centered learning*, the challenge remains for instructors to be open to change and modify their teaching habits. Because relinquishing control of the classroom can be intimidating, it can be helpful for instructors to take small steps and practice new approaches incrementally; this can help assuage the anxiety that often results from abrupt changes. Instructors must remember that this is a learning process for all—experience and continued practice will contribute to successful change.

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Student-Centered Learning. Author: Mary Ann Corley

Set and Monitor Goals

According to Comings, Perella, and Soricone (1999), learners who have specific goals in mind are more likely to persist in their studies. The primary incentive for learner persistence is the learner's ability to set a goal and see progress in reaching that goal.

> *"… I think the term* goal setting *has been so linked to policy [mandates] that teachers don't readily consider some of the regular activities they utilize as part of it, especially because much of it happens [throughout the course]. Now, we have begun to discuss* what goal setting can be, alongside what it must be.*"*
>
> Kristin Hott,
> Virginia TEAL Team

> *"One of the most interesting things that came about in our discussion is that the majority of my students* did *have a goal in mind,* but *it stayed* only in their mind[s]. *It never occurred to them to write them down. In addition, the goal was very general and not specific at all. Becoming aware of this alone was very powerful to my students. They had an 'a-ha' moment… my students and I left that discussion with a fire lit under us."*
>
> Guillermo Verdin,
> California TEAL Team

Components of the goal-setting process include teachers helping learners to:

- Identify goals that are meaningful to them, keeping goals small or breaking down long-term goals into smaller, more readily achievable goals.
- Organize and prioritize goals.
- Identify benefits of and barriers to reaching their top-ranked goals.
- Write positive goal statements to make the goal tangible.
- Create a goal plan that includes interim steps and deadlines toward achieving each step.
- Monitor progress and revise goals, as needed.

Comings et al. (1999) recommend that teachers help learners by regularly revisiting goals that were set early in the semester (1) to assess whether the goals are still relevant and achievable and (2) to refine and revise goals, as needed.

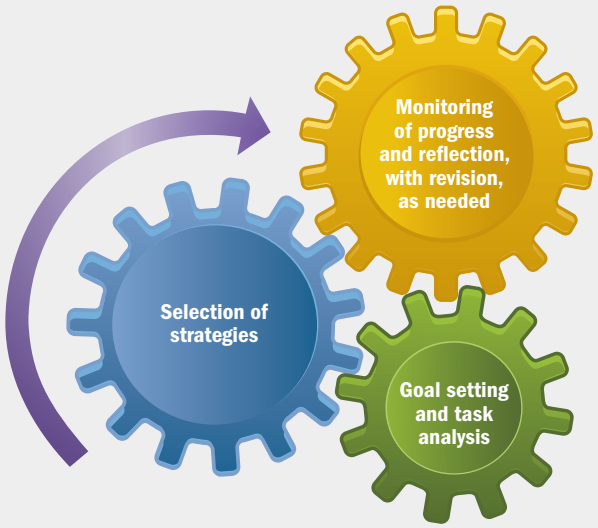
Self-regulation is important to the likelihood of learners' success in realizing their goals and may include the following:

- Analyze gap between goal and current status.
- Break down goals into smaller steps and prioritize.
- Set deadlines for the goal and interim steps.

> *The difference between a goal and a dream is the written word.*
> —adapted from Donohue (n.d.)

Adult learners engage recursively in a cycle of cognitive activities as they work through a given task, as illustrated in Figure 2.

Figure 2. Learners' Cycle of Cognitive Activities



According to Zimmerman (1989), self-regulated learners are individuals who are "metacognitively, motivationally, and behaviorally active participants in their own learning process" (p. 4). To be a self-regulated learner means that the individual plans, sets goals, organizes, monitors, and self-evaluates at various points during the learning process.

You can take the following steps to support your learners in their efforts to become self-regulated:

1. Help learners to set goals and expectations for their learning outcomes.
2. Promote reflective dialogue by practices such as modeling *think-alouds* and encouraging collaborative problem solving among students.
3. Provide immediate and specific feedback on learners' performance.
4. Help learners link new information to prior learning.

Self-regulation supports:

- Cognitive development of skills and information.
- Metacognitive development and knowledge transfer.
- Motivation and persistence.
- Competence as a lifelong learner.

Self-regulation supports learning and performance on specific tasks through the following:

- Metacognitive knowledge about academic work.
- Strategies for analyzing tasks.
- Metacognitive knowledge about task-specific strategies (e.g., for managing work, learning mathematics, comprehending texts, writing paragraphs).
- Skills for implementing strategies.
- Strategies for self-monitoring and strategic use of feedback.

"Teachers and students like [setting goals] because it keeps the learning goal in focus and is transparent for students as to why the lesson is relevant to their personal goals. It helps with the 'why are we doing this?' issue. The template is: We will be able to [blank] in order to [blank] as evidenced by [blank]. We used 'we' instead of 'student' to support the feeling that the teacher and students are partners in this learning process."

Pam Blundell,
Oklahoma TEAL Team

Attributing Success to Effort

What are your learners' explanations for success or failure?

- Do they link outcomes to controllable factors, such as applying effort or using strategies?
- Or do they attribute failure to low ability and success to luck?

Your feedback to students related to strategy selection and success is critical. You play a role in changing students' motivation when you help them see that success or failure on a task is related to whether they chose effective strategies and followed through in carrying them out. Their recognition of this point is deeply connected to the reflection part of the process. Their motivation will change when they experience success and recognize that it comes from setting goals and using appropriate strategies.

Promote students' positive self-perceptions of competence and motivational beliefs because:

- Perceptions of self-efficacy, which is the confidence one feels in his or her ability to perform a difficult task, are critical to motivation and persistence.
- Students' perceptions of self-efficacy influence the goals they set, their commitment to those goals, and the learning strategies employed.
- Self-efficacy influences students' willingness to invest effort in tasks.

It is imperative that students attribute success and learning to their own efforts. Only in this way can they find the motivation to persist and invest in their efforts. This recognition does not happen easily! It takes time and many instances of seeing and reflecting on the effects of increased effort. Table 3 includes guidelines on appropriate times to teach self-regulated learning strategies.

Table 3. When Can You Teach Self-Regulated Learning Strategies?

One on One	Small Group	Whole Class
Reflective discussions	Peer dialogue	Full-group discussion
Personalized strategies	Collaborative strategies	Common strategies individually applied
Task analysis across tasks	Task analysis across common tasks	Task analysis for specific assignment
Self-monitoring and direct feedback	Providing feedback	Reflection expected as part of the assignment

For more ideas on providing feedback, see Butler (2002).

Monitoring Progress Works!

- Learners need to see their successes and monitor their efforts.
- Make learning visible.
- See the resources and research in the Look at Student Work Regularly section (page 76).

For more information, see the TEAL Center Fact Sheets on Self-Regulated Learning and Metacognitive Processes at the end of this section.

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Self-Regulated Learning

Good self-regulators have developed the skills and habits to be effective learners, exhibiting effective learning strategies, effort, and persistence. The key for instructors is to understand how to foster and train these skills in all students. This fact sheet offers some instructional strategies.

About Self-Regulated Learning

Self-regulated learning refers to one's ability to understand and control one's learning environment. Self-regulation abilities include goal setting, self-monitoring, self-instruction, and self-reinforcement (Harris & Graham, 1999; Schraw, Crippen, & Hartley, 2006; Shunk, 1996). Self-regulation should not be confused with a mental ability or an academic performance skill. Instead, self-regulation is a self-directive process and set of behaviors whereby learners transform their mental abilities into skills (Zimmerman, Bonnor, & Kovach, 2002) and habits through a developmental process (Butler, 1995, 1998, 2002) that emerges from guided practice and feedback (Paris & Paris, 2001).

Elements of Self-Regulated Learning

Effective learners are self-regulating; analyzing task requirements; setting productive goals; and selecting, adapting, or inventing strategies to achieve their objectives. These learners also monitor progress as they work through the task, managing intrusive emotions and waning motivation as well as adjusting strategies processed to foster success. These are the students who ask questions, take notes, and allocate their time and their resources in ways that help them to be in charge of their own learning (Paris & Paris, 2001).

Why Teach Self-Regulated Learning to Adults?

Good self-regulators have developed the skills and habits to be effective learners, exhibiting effective learning strategies, effort, and persistence. The key for instructors is to understand how to foster and train these skills in all students. This fact sheet offers some instructional strategies for adult education settings.

Self-regulated learning strategies help to prepare learners for lifelong learning and the important capacity to transfer skills, knowledge, and abilities from one domain or setting to another.

What's the Research?

In the 1980s, the term *self-regulated learning* originated from the increased focus on self-regulation in academic settings (Dinsmore, Alexander, & Loughlin, 2008). A large base of literature has been established on self-regulated learning since the mid-1980s when researchers first began to look at how students become masters of their own learning processes (Zimmerman & Schunk, 2001). Today, most models of self-regulated learning incorporate aspects of both *metacognition* and self-regulation focusing on self-monitoring (Dinsmore, Alexander, & Loughlin, 2008). Zimmerman and Schunk (2001, 2008) directly link motivation to self-regulation. According to these researchers, self-regulated students are those students who are metacognitively, motivationally, and behaviorally active in their own learning processes and in achieving their own goals.

Recommended Instructional Strategies

When *strategy instruction* for academic learning is paired with self-regulation, called SRSD or *self-regulated strategy development*, learners become more confident at adapting strategies reflectively and flexibly within recursive cycles of task analysis, strategy use, and monitoring.

Many of the self-regulated learning strategies are useful across various content domains. Specifically, self-regulated learning consists of three components: **cognition, metacognition**, and **motivation**. The cognition component includes the skills and habits that are necessary to encode, memorize, and recall information as well as think critically. Within the metacognition component are skills that enable learners to understand and monitor their cognitive processes. The motivation component surfaces the beliefs and attitudes that affect the use and development of both the cognitive and metacognitive skills.

Suggestions for developing self-regulation in the adult education classroom follow:

- **Cognitive strategies,** include learning strategies that can be specific to a domain or content. Problem solving strategies and critical thinking skills are also important. Critical thinking involves a variety of skills such as identifying a particular source of information and reflecting on whether or not that information is consistent with one's prior knowledge. Activities to help adults articulate and practice critical thinking include comprehension activities such as student-generated questions before or during reading to focus the learner's attention, constructing graphs and tables of real-world issues, and engaging in classroom debate to articulate arguments for writing a persuasive essay.
- The **metacognitive** component is comprised of *declarative knowledge* (knowledge about oneself as a learner—the factors that influence performance), procedural knowledge (knowledge about strategies and other procedures), and conditional knowledge (knowledge of why and when to use a particular strategy). Adults often struggle to articulate their knowledge or to transfer domain-specific knowledge to a new setting. The goal of self-regulated learning is for these strategies to first become visible and eventually automated for the adult learner. One way to make the three types of knowledge visible in the classroom is to have learners do a demonstration. When demonstrating (such as cooking a particular dish), it is easier to find the specific words needed to articulate what one is doing and how one knows to do it. Questions will draw out more language. Debriefing after the demonstration can make visible the difference between declarative, procedural, and conditional knowledge so that one can make explicit points about how to transfer that knowledge to an academic task.
- The **motivation** component includes both self-efficacy (degree to which one is confident that one can perform a task or accomplish a goal) and epistemological beliefs (beliefs about the origin and nature of knowledge). Working with adults who have failed in school or with specific academic tasks necessitates deliberate discussion of their sense of self-efficacy. Many adult learners have shared with teachers and researchers how difficult it can be to overcome ingrained, virulent, negative self-talk. Making *self-regulated strategy development (SRSD)*, including goal setting, monitoring and displaying of progress, an everyday feature of instruction can assist these learners to replace negative self-talk with positive self-instruction and a sense of self as an effective learner. Building new habits reinforces adults' persistence and motivation.

Adult educators work diligently to help adults become successful, independent learners. Self-regulated learning strategies are research-based instructional techniques to help learners monitor and manage their own learning skills and habits. When paired with *strategy instruction* and metacogntive processes, instructors have a powerful learning toolkit to share with learners.

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About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Metacognitive Processes

Metacognition is one's ability to use prior knowledge to plan a strategy for approaching a learning task, take necessary steps to problem solve, reflect on and evaluate results, and modify one's approach as needed. It helps learners choose the right cognitive tool for the task and plays a critical role in successful learning.

What Is Metacognition?

Metacognition refers to awareness of one's own knowledge—what one does and doesn't know—and one's ability to understand, control, and manipulate one's cognitive processes (Meichenbaum, 1985). It includes knowing when and where to use particular strategies for learning and problem solving as well as how and why to use specific strategies. Metacognition is the ability to use prior knowledge to plan a strategy for approaching a learning task, take necessary steps to problem solve, reflect on and evaluate results, and modify one's approach as needed. Flavell (1976), who first used the term, offers the following example: I am engaging in *metacognition* if I notice that I am having more trouble learning A than B; if it strikes me that I should double check C before accepting it as fact (p. 232).

Cognitive strategies are the basic mental abilities we use to think, study, and learn (e.g., recalling information from memory, analyzing sounds and images, making associations between or comparing/contrasting different pieces of information, and making inferences or interpreting text). They help an individual achieve a particular goal, such as comprehending text or solving a math problem, and they can be individually identified and measured. In contrast, metacognitive strategies are used to ensure that an overarching learning goal is being or has been reached. Examples of metacognitive activities include planning how to approach a learning task, using appropriate skills and strategies to solve a problem, monitoring one's own comprehension of text, self-assessing and self-correcting in response to the self-assessment, evaluating progress toward the completion of a task, and becoming aware of distracting stimuli.

Elements of Metacognition

Researchers distinguish between metacognitive knowledge and metacognitive regulation (Flavell, 1979, 1987; Schraw & Dennison, 1994). Metacognitive knowledge refers to what individuals know about themselves as cognitive processors, about different approaches that can be used for learning and problem solving, and about the demands of a particular learning task. Metacognitive regulation refers to adjustments individuals make to their processes to help control their learning, such as planning, information management strategies, comprehension monitoring, de-bugging strategies, and evaluation of progress and goals. Flavell (1979) further divides metacognitive knowledge into three categories:

- *Person variables:* What one recognizes about his or her strengths and weaknesses in learning and processing information.
- *Task variables:* What one knows or can figure out about the nature of a task and the processing demands required to complete the task—for example, knowledge that it will take more time to read, comprehend, and remember a technical article than it will a similar-length passage from a novel.
- *Strategy variables:* The strategies a person has "at the ready" to apply in a flexible way to successfully accomplish a task; for example, knowing how to activate prior knowledge before reading a technical article, using a glossary to look up unfamiliar words, or recognizing that sometimes one has to reread a paragraph several times before it makes sense.

Livingston (1997) provides an example of all three variables: "I know that I (*person variable*) have difficulty with word problems (*task variable*), so I will answer the computational problems first and save the word problems for last (*strategy variable*)."

Why Teach Metacognitive Skills?

Research shows that metacognitive skills can be taught to students to improve their learning (Nietfeld & Shraw, 2002; Thiede, Anderson, & Therriault, 2003).

Constructing understanding requires both cognitive and metacognitive elements. Learners "construct knowledge" using cognitive strategies, and they guide, regulate, and evaluate their learning using metacognitive strategies. It is through this "thinking about thinking," this use of metacognitive strategies, that real learning occurs. As students become more skilled at using metacognitive strategies, they gain confidence and become more independent as learners.

Individuals with well-developed metacognitive skills can think through a problem or approach a learning task, select appropriate strategies, and make decisions about a course of action to resolve the problem or successfully perform the task. They often think about their own thinking processes, taking time to think about and learn from mistakes or inaccuracies (North Central Regional Educational Laboratory, 1995). Some instructional programs encourage students to engage in "metacognitive conversations" with themselves so that they can "talk" with themselves about their learning, the challenges they encounter, and the ways in which they can self-correct and continue learning.

Moreover, individuals who demonstrate a wide variety of metacognitive skills perform better on exams and complete work more efficiently—they use the right tool for the job, and they modify learning strategies as needed, identifying blocks to learning and changing tools or strategies to ensure goal attainment. Because *metacognition* plays a critical role in successful learning, it is imperative that instructors help learners develop metacognitively.

What's the Research?

Metacognitive strategies can be taught (Halpern, 1996), they are associated with successful learning (Borkowski, Carr, & Pressley, 1987). Successful learners have a repertoire of strategies to select from and can transfer them to new settings (Pressley, Borkowski, & Schneider, 1987). Instructors need to set tasks at an appropriate level of difficulty (i.e., challenging enough so that students need to apply metacognitive strategies to monitor success but not so challenging that students become overwhelmed or frustrated), and instructors need to prompt learners to think about what they are doing as they complete these tasks (Biemiller & Meichenbaum, 1992). Instructors should take care not to do the thinking for learners or tell them what to do because this runs the risk of making students experts at seeking help rather than experts at thinking about and directing their own learning. Instead, effective instructors continually prompt learners, asking *"What should you do next?"*

McKeachie (1988) found that few college instructors explicitly teach strategies for monitoring learning. They assume that students have already learned these strategies in high school. But many have not and are unaware of the metacognitive process and its importance to learning. Rote memorization is the usual—and often the only—learning strategy employed by high school students when they enter college (Nist, 1993). Simpson and Nist (2000), in a review of the literature on strategic learning, emphasize that instructors need to provide *explicit instruction* on the use of study strategies. The implication for ABE programs is that it is likely that ABE learners need explicit instruction in both cognitive and metacognitive strategies. They need to know that they have choices about the strategies they can employ in different contexts, and they need to monitor their use of and success with these strategies.

Recommended Instructional Strategies

Instructors can encourage ABE learners to become more strategic thinkers by helping them focus on the ways they process information. Self-questioning, reflective journal writing, and discussing their thought processes with other learners are among the ways that teachers can encourage learners to examine and develop their metacognitive processes.

Fogarty (1994) suggests that metacognition is a process that spans three distinct phases, and that, to be successful thinkers, students must do the following:

1. Develop a ***plan*** before approaching a learning task, such as reading for comprehension or solving a math problem.
2. ***Monitor*** their understanding; use "fix-up" strategies when meaning breaks down.
3. ***Evaluate*** their thinking after completing the task.

Instructors can model the application of questions, and they can prompt learners to ask themselves questions during each phase. They can incorporate into lesson plans opportunities for learners to practice using these questions during learning tasks, as illustratetd in the following examples:

- **During the planning phase,** learners can ask, *What am I supposed to learn? What prior knowledge will help me with this task? What should I do first? What should I look for in this reading? How much time do I have to complete this? In what direction do I want my thinking to take me?*
- **During the monitoring phase,** learners can ask, *How am I doing? Am I on the right track? How should I proceed? What information is important to remember? Should I move in a different direction? Should I adjust the pace because of the difficulty? What can I do if I do not understand?*
- **During the evaluation phase,** learners can ask, H*ow well did I do? What did I learn? Did I get the results I expected? What could I have done differently? Can I apply this way of thinking to other problems or situations? Is there anything I don't understand—any gaps in my knowledge? Do I need to go back through the task to fill in any gaps in understanding? How might I apply this line of thinking to other problems?*

Rather than viewing reading, writing, science, social studies, and math only as subjects or content to be taught, instructors can see them as opportunities for learners to reflect on their learning processes. Examples follow for each content area:

- **Reading:** Teach learners how to ask questions during reading and model "think-alouds." Ask learners questions during read-alouds and teach them to monitor their reading by constantly asking themselves if they understand what the text is about. Teach them to take notes or highlight important details, asking themselves, *"Why is this a key phrase to highlight?"* and *"Why am I not highlighting this?"*
- **Writing:** Model prewriting strategies for organizing thoughts, such as brainstorming ideas using a word web, or using a graphic organizer to put ideas into paragraphs, with the main idea at the top and the supporting details below it.
- **Social Studies and Science:** Teach learners the importance of using organizers such as *KWL charts*, *Venn diagrams*, *concept maps*, and anticipation/reaction charts to sort information and help them learn and understand content. Learners can use organizers prior to a task to focus their attention on what they already know and identify what they want to learn. They can use a Venn diagram to identify similarities and differences between two related concepts.
- **Math:** Teach learners to use *mnemonics* to recall steps in a process, such as the order of mathematical operations. Model your thought processes in solving problems—for example, *"This is a lot of information; where should I start? Now that I know____, is there something else I know?"*

The goal of teaching metacognitive strategies is to help learners become comfortable with these strategies so that they employ them automatically to learning tasks, focusing their attention, deriving meaning, and making adjustments if something goes wrong. They do not think about these skills while performing them but, if asked what they are doing, they can usually accurately describe their metacognitive processes.

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About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Combine Sentences

Sentence combining presents teachers with an alternative to traditional grammar instruction and holds greater promise for students to produce quality writing. Instruction in sentence combining teaches students to construct more complex and sophisticated sentences by combining two or more simple sentences. This approach has been shown to be effective in helping students write sentences that are:

- More complex and interesting.
- Clear, tight, and focused.
- Varied in form and sequence.

Sentence-combining activities alert students to different kinds of sentence structures they might use to express their ideas. Often, students' writing is monotonous because they use the same structure repeatedly. Help them become more creative and write in more interesting ways. This section has ideas on how to use sentence combining with various levels of writers and types of texts.

- Teach the exercise in whole or small groups. Group students by the types of errors they make so you can focus your feedback and modeling.
- Go for fluency and multiple options—there are no right answers, just better ones. Make this fun and generative.
- Focus on meaning and effectiveness—don't get distracted by spelling or technical issues.
- Stay focused. If students get distracted or frustrated when you do not give them the correct spelling, just supply it and move on.

"I had my students use checklists this year at the end of each new vocabulary unit we had, and I used a checklist for paragraph writing. Some items on the checklist refer to mechanics—punctuation, spelling, and other items refer to paragraph organization like indenting, topic sentence, examples of support, concluding sentence. Students said they found the checklists useful, and after a while, many of these items became automatic for them and they didn't even need the checklists by the end of the year for their paragraphs. They said they could remember what they had to look for when they checked their writings and didn't need the checklists anymore."

Chris Bourret,
Rhode Island TEAL Team

Instructional Sequence

Align your teaching sequence to the *Gradual Release* sequence (See page 71 for additional information on gradual release), as follows:

1. Introduce and define the sentence-combining strategy in a focus lesson, either in whole or small groups. Keep in mind that it is critical to provide *explicit instruction* in this and all writing strategies.
2. Model it. Put sentences on the board, overhead, or projector, and show students how to identify the key phrases in each sentence as well as the repeated terms or ideas that can be condensed.
3. Provide guided practice as you team up students in pairs or triads to do it together and to talk about their thinking.
4. Have students do the activity independently.

Repeat this sequence when you introduce different variations of the sentence-combining activity. You may be able to work through it more quickly as learners get more familiar, but it will help call their attention to the salient features of the new variation if you introduce and model the exercise.

Selecting Sample Text for Sentence Combining: Practice

Keep this activity fun and low stakes so that learners are comfortable sharing their work. Using sentences created in the sentence-combining activity described previously, choose a few sentences from each learner. Use learners' own writing or something you are reading in class. Another good idea is to pick up some text from what the learners are reading. Is it too simple? Make it more interesting! Is it too complex? Make it more straightforward.

Identify the following common areas of difficulty:

- Simple sentences
- Too frequent use of the word *and*
- Repeated sentence types
- Run-on sentences
- Overly complex structures

Group learners to focus on a single problem. You may have various groups all doing sentence combining but addressing different problems.

Simple Fixes

Figure 3 includes an example exercise for combining simple sentences into more complex, interesting ones.

Use the following guidelines for this type of exercise:

- Find a few simple sentences to link.
- Put the base clause first.
- Discuss the combined meaning.
- Identify the key words from the second sentence to bring to the first.
- Rewrite into one sentence.
- Dig in! Move things around and be creative.

Figure 3. Combining Simple Sentence Exercise

1. The cake was delicious.
   It was chocolate.
   _____
2. I played softball in high school.
   My position was first base.
   _____
3. I have three children.
   Two are boys and the middle one is a girl.
   _____
4. At work I keep track of the assembly line speed.
   I work at Johnson and Taylor factory.
   _____

Encourage learners to do more than the obvious. Be creative and make this a generative activity. For learners who struggle with this activity, you might want to scaffold it a bit by first underlining the key words in the second sentence to draw their attention to the new ideas. After guided practice sessions, they should move to identifying and underlining those words themselves before suggesting a combined sentence.

Revising Strategy

Too often, our efforts to get learners to improve their writing results in frustration. They aren't sure what to revise, and we don't want to be overly prescriptive. Try assigning a sentence-combining pass through their writing; have them find two or three sentences to rewrite. This process helps them focus on a concrete improvement.

Show them how this is done. Start at the top of the instructional sequence (focus lesson) again, and model this strategy. Put a paragraph or essay on the board or overhead, and discuss how to find a sentence or two to focus on for combining.

When learners are ready to revise their written work, remind them of the sentence-combining exercises. Have them identify two or more sentences that they can improve. Ask learner pairs to identify two or more sentences in each other's writing to work on together to combine or clarify.

Sentence combining is also a great assignment for peer editors. Ask learners to identify sentences in each others' work that could be improved. If time permits, have them work together to improve the sentences; otherwise, this can be a productive homework activity.

Is It Better?

What does "quality writing" mean? Help learners focus on three aspects of "better" when evaluating combined sentences:

- Clarity and directness of meaning
- Rhythmic appeal (i.e., varied forms)
- Fit for intended audience

Take It Further

The following ideas may extend the activity of sentence combining and help you work it into other areas of your writing instruction:

- Provide learners a set of unimproved sentences for combining and constructing into a paragraph.
- Use sentences from texts the learners are reading.
- Find particularly complex and difficult sentences for a "detangle" challenge. Newspaper articles, appliance instructional manuals, and some college textbooks offer this type of material.
- Use the activity to support higher-order thinking goals such as cause and effect, if/then reasoning, why and how explanations, and so on. Discuss how some sentences can be combined to demonstrate these relationships; supply the transition and key words to help learners link the ideas.
- Take the strategy to writing. Provide a paragraph. Have learners identify sentences that could be combined. Revise the paragraph by using the sentence-combining strategy.

- Apply these sentence-combining strategies to their own writing (as a team process or individually).

"I think of acronyms as a way of condensing something into an easy to remember code. I recently had an adult student who had trouble remembering what to do next in long division. He could do problems like 84/2 in his head with no problem, but 147/3 was a big struggle. We resorted to using the acronym DMSB (Divide, Multiply, Subtract, Bring down), and the student's response was almost instantaneous. He loved it, and his division skills have become pretty solid. This is a flexible strategy that can work to remember a wide variety of things.

Victor Richardson,
Mississippi TEAL Team

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Teach Self-Regulated Strategy Development

Strategy instruction, which can be used for instruction in all content areas, teaches learners to apply the planning, drafting, and revising strategies that are used by proficient writers. An explicit and systematic approach to instruction that is based in research on what successful learners do and areas in which struggling learners falter, strategy instruction helps learners to understand, acquire, and retain new knowledge and skills. Strategies help make explicit the routines and techniques employed by effective learners so that *all* learners can be more effective.

The instructional sequence is critically important for strategy instruction. When a learning strategy is taught in a systematic manner, learners can internalize the steps and techniques. This approach is a good match to the *Gradual Release* approach discussed throughout this guide.

Self-regulated strategy development (SRSD), adds self-regulation to strategy instruction. SRSD has been applied to reading, writing, and even history instruction and has been studied extensively for writing instruction. In this section, we present ideas on how to bring this approach to the adult education classroom. (See the TEAL Center Fact Sheet on Self-Regulated Strategy Development at the end of this section for more information.)

> *"The concept of revising to make it 'better' was interesting because it allowed for the individual growth and differences while suggesting specific categories. This embodies the concepts of self-regulated learning and differentiated instruction! Teacher and student awareness equals 'better' products."*
>
> Teacher,
> California TEAL Team

Strategy Instruction for Adult Learners

When working with adults learning academic material in college, Simpson and Nist (2000) insist that strategy instruction should take several points into consideration. Here, these points are presented in **bold**, with contextualizing ideas for adult learners in *italics*.

- **"Task understanding is critical to strategic learning" (p. 529).** *Don't assume that learners automatically know what they have been asked to do. Discussing strong and weak examples of the assignment can help clarify the expectation for learners.*
- **"Beliefs about learning influence how students read and study" (p. 530).** *The power of belief and how to instill a more positive sense of self-as-learner are discussed in more detail in the Set and Monitor Goals section* (See page 26).
- **"Quality instruction is essential" (p. 531).** *That is, instruction should be intense, of significant duration, metacognitive, explicit and direct, and use relevant content.*
- **"It is important to teach a variety of research-based strategies" (p. 532).** *No one strategy fits all! This is essential to remember as you try to teach a mnemonic or set of steps for an academic task: It may make sense to some of the learners but not to others. Remember the options mantra from UDL* (See the Apply Universal Design for Learning section on page 52).

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Self-Regulated Strategy Development

Self-regulated strategy development (SRSD) is an instructional approach designed to help students learn, use, and adopt the strategies used by skilled writers. It is an approach that adds the element of self-regulation to strategy instruction for writing. It encourages students to monitor, evaluate, and revise their writing, which in turn reinforces self-regulation skills and independent learning.

What Is Self-Regulated Strategy Development?

One of the greatest challenges for instructors in adult education programs is to help students acquire the basic cognitive skills and habits needed to be self-directed learners. A large body of research from both secondary and postsecondary settings suggests that *strategy instruction* strengthens students' abilities to engage with learning, benefit from instruction, and succeed.

Strategy instruction is an approach that teaches the tools and techniques necessary for understanding, learning, and retaining new content and skills. It involves teaching strategies that are both ***effective*** in assisting learners with acquiring, retaining, and generalizing information, and ***efficient,*** helping them acquire the information in the least amount of time (Lenz, Ellis, & Scanlon, 1996). There is a range of approaches and a range of uses for strategy instruction in all content areas for learners of all ages.

Strategy Instruction for Writing

Writing researchers identified what good writers do: **plan, monitor, evaluate, revise,** and **manage the writing process.** They also observed struggling writers who do not perform these same steps when writing and produce lower-quality writing. For example, proficient writers engage in extensive planning, in which they set goals about their topic and audience, generate ideas, and use their knowledge of genres or text structure to organize ideas. When they revise, they think about their audience and the substance of what they have written. They apply evaluation criteria to identify problems and opportunities for improvement.

Self-regulated strategy development (SRSD) is an instructional approach designed to help students learn, use, and adopt the strategies used by skilled writers. It is an approach that adds the element of self-regulation to strategy instruction for writing. It encourages students to monitor, evaluate, and revise their writing, which in turn reinforces self-regulation skills and independent learning.

As with other types of strategy instruction, *SRSD* is explicit, direct, and guided so that strategies become integrated into the overall learning process. Instruction begins as teacher-directed but with a goal of empowering students to be self-directed. The self-regulation element addresses negative self-talk or perceptions of self-as-learner through replacement with positive self-talk, self-instructions, and new habits with which to approach learning tasks.

Why Teach SRSD to Adult Learners?

Strategies can be used to teach learners how to learn and study, how to accomplish specific cognitive tasks, or how to apply and communicate their knowledge in a variety of contexts. The goal is for learners to internalize the process and strategies and to select and use them independently and with confidence. Strategies are tools in the learner's toolbox. Knowing which tool to choose for a given task is a closely related challenge, one discussed in the TEAL Center Fact Sheet No. 4 on Metacognitive Processes. Monitoring whether the task is done fully is the reflective element discussed in the TEAL Center Fact Sheet No. 3 on Self-Regulated Learning. Both are available at https://TEAL.ed.gov.

What's the Research?

A large body of research demonstrates that strategy instruction can be effective for improving writing and for boosting learners' planning, editing, and overall written product quality (De la Paz, 2007; De la Paz & Graham, 2002; Englert, 2009; Graham, 2006; Graham & Perin, 2007; Perin, 2007). Moreover, when taught systematically, strategy use by learners can be retained and applied beyond the immediate instructional setting (De la Paz & Graham, 2002; Graham & Perin, 2007). Strategy instruction has been found to be particularly supportive of adults with learning disabilities (Berry & Mason, 2010; Ellis & Scanlon, 1996; McArthur & Lembo, 2009; Mellard & Scanlon, 2006).

A meta-analysis of *strategy instruction* research conducted with students in first grade through postsecondary grades identified elements of the approach that had the greatest impact for learners (De la Paz, 2007). Twelve studies were combined and their effects analyzed. The most powerful elements of strategy instruction were found to be **self-regulation, motivation,** and **peer support.**

Elements of SRSD Instruction

Instructor modeling of strategies is essential to SRSD and must explicitly show learners how to create meaning. Graham and Harris (2005) describe a five-step process. By completing the following scaffolded instructional sequence, teachers can help learners gain confidence in the strategy and learn to use it automatically for more independent learning.

1. **Discuss It.** Set the stage. Discuss when and how learners might use a strategy to accomplish specific writing tasks and goals. Talk about the benefits of becoming a more proficient and flexible writer. Address any negative self-talk or negative beliefs the learner holds, and ask the learner for a commitment to try to learn and use the strategy. Discuss how the learner should track progress to document the use and impact of the strategy.
2. **Model It.** Model the strategy using think-alouds, self-talk, and self-instruction as you walk through the steps. Discuss afterwards how it might be made more effective and efficient for each individual, and have learners customize the strategy with personal self-statements. Ask students to set specific writing goals. Model the strategy more than once with various sample texts; for example, use a graphic organizer to demonstrate how to comprehend various texts of a similar genre (persuasive arguments or editorials).
3. **Make It Your Own.** Strategies are composed of multiple steps, similar to a checklist. When steps are captured in a *mnemonic* or acrostic sentence, they are easier to remember. Paraphrasing or re-naming the steps in a mnemonic or creating a new mnemonic is fine, provided that the learner is able to remember the steps that the names represent. Customizing the checklist or mnemonic helps learners make it their own.
4. **Support It.** Use the strategy as often as possible, in as many ways as possible. Instructors and other students can be supports, offering direct assistance, prompts, constructive feedback, and encouragement. When you introduce a new type of application (a new genre or writing frame, for example), it may be appropriate to model the strategy again. Learners can rely on charts and checklists too, as they learn the strategy and make it their own, but all of this should fade as learners become familiar enough with the strategy to set their goals, monitor their use of the strategy, and use self-statements independently.
5. **Independent Performance.** Learners come to use the strategy independently across a variety of tasks. For example, learners may begin to draw graphic organizers without being prompted as a means to help them comprehend and plan.

Recommended SRSD Strategies

The strategies here may be helpful for adult education students to improve their literacy skills. All strategies must be taught explicitly for learners to generalize and apply them when faced with a new task. Teach each step through the sequence described in the previous section.

- **RAP.** Active comprehension requires self-monitoring and self-regulation. This strategy, researched with adolescents (Hagaman, Luschen & Reid, 2010; Schumaker, Denton, & Deschler, 1984), supports learners in monitoring their reading and comprehension. Explain to students that *RAP* means Read, Ask, and Paraphrase, as in the following: *Read* a paragraph or passage. Ask yourself, "What is the topic?" "What is the most important thing it tells me about that topic?" "What are the most important details?" *Paraphrase*, or put it in your own words. Now start by introducing a paragraph. After students have mastered identifying the main idea and important details at the paragraph level, you can increase the amount of text. Students will vary in how much practice they need. All students should practice with a variety of types of text, increasing in challenge, to identify topics in passages where main ideas are not explicitly stated. In the Ask step, the student first identifies the topic. Prompt students to check their thinking by asking whether they think that

the whole paragraph is about the topic they have chosen. After they have identified the topic, ask them to determine the main idea—that is, what the author wanted to say about the topic. Finally, ask them to determine details that are essential to capture important information. Then, ask students to describe their understanding of the passage in their own words. Set the text aside and explain. When students are comfortable using the *RAP* strategy for comprehension, you can extend it to helping them write summaries.

- **POW+TREE.** The *POW+TREE* strategy helps writers approach an essay-writing task and check their work as they become more independent (Harris, Graham, Mason, & Friedlander, 2008). It was found to be effective with adult education students (Berry & Mason, 2010). The first part, **POW,** represents and emphasizes the importance of the planning process: ***P****ick* my idea and pay attention to prompt; ***O****rganize;* ***W****rite* and say more. The **TREE** acronym is a memory and visualization tool that helps writers structure their essays: the ***T****opic* sentence is like the trunk of the tree that supports the whole argument; ***R****easons* (at least three) are like the roots of the argument; ***E****xplain* is a reminder to tell more about each reason; and finally, ***E****nding* is like the earth that wraps up the whole argument. Think sheets or graphic organizers shaped like stylized trees that learners write in as they brainstorm and plan can prompt the internalization of this strategy.

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About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Teach Summarization

The activity of writing a summary exemplifies the reading-writing synergy. Writing a summary of a text not only helps learners comprehend what they read by focusing on and connecting the important ideas, it also helps them process those thoughts by rephrasing them in their own words. In fact, simply writing summaries—with no other feedback, grades, or corrections—improves summary writing (Perin, 2002). Practice makes better!

Summarization skills are critical to student success in postsecondary education. Writing summaries of information is an important part of producing college papers. The information to be summarized often comes from text, which indicates the close relation of reading and writing instruction.

Graham and Hebert (2010) conducted a meta-analysis of studies that investigated whether students' writing activities had any effect on their reading abilities. As one might expect, they found a strong reciprocal relationship between reading and writing. Having students **write** about what they have read helps improve their reading abilities. You can use this approach during many of the activities discussed in this guide, such as the following:

- Responding to a text in writing
- Writing summaries of a text
- Writing notes about a text
- Answering questions about a text in writing

A summary of a text is **short**, **accurate**, and **written in students' own words**. It tells what is most important to the author and states the information needed for review. Because summaries are short—typically less than 100 words—they are great low-stress writing practice activities.

Suggested Steps for Teaching Summarizing

Step 1: Learners can summarize information stored in memory or, more often, information they find in text they are reading. A summary is anchored in the topic. The topic is what a text is mostly about. An easy way to find the topic is to keep track of how often an author repeats words or their synonyms.

- Discuss the text with learners and ask them what they think is the most important point. Ask questions that help them identify and clarify the topic.
- When learners can identify the topic of a passage, move to identifying the more specific topics of paragraphs. For example, what is the topic of the first paragraph? The second? And so on.

Step 2: When learners can identify the topic of a paragraph, they need to know how to find main ideas. You can define the main idea as the most important point an author makes about a topic.

- If you have not already done so, you will need to show learners how authors often put their main idea in the first sentence in a paragraph. Provide practice. Repeat the same procedure with paragraphs in which the main idea is in the last sentence and with paragraphs in which the main idea is embedded in the middle.

- Then, teach learners how to construct a main idea when one is not clearly stated. Model for learners how to construct implicit main idea statements for paragraphs, and provide them with numerous opportunities to practice.

Step 3: When learners can identify the topic of a paragraph, recognize explicit main idea statements, and construct implicit main idea statements when needed. Show them how to apply these steps to a text with multiple paragraphs. Insist that learners write summaries in their own words.

- There are many ways to write something! Have peers work together or share drafts.

Step 4: Review. Help learners build a habit of reviewing whether or not their summary is **short**, **accurate**, and **written in their own words**.

Learn an easy-to-remember strategy to help learners master these steps in the TEAL Center Fact Sheet on Self-Regulated Strategy Development on page 40, called RAP:

- **R**ead a paragraph or passage.
- **A**sk questions: What is the topic? What is the most important thing it tells me about the topic? What are the important details?
- **P**araphrase: Put the information into your own words.

References

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Make Use of Frames

Using frames or templates is a great way to scaffold instruction and build learners' confidence in writing, particularly in writing tasks and genres with which they have little prior experience. A writing frame consists of a skeleton outline given to learners to scaffold their writing. By providing a few sentence starters and some rhetorical phrases common to the task or genre, frames give learners a structure that allows them to focus on expressing their thoughts. They also help learners incorporate vocabulary they have learned in a given topic and create more sophisticated sentences and paragraphs. An example is a science lab report with clearly delineated sections, expectations, and sentence starters that scaffold a learner's successful writing of the report. Advantages of frames include the following:

- Provide a structure on which to hang ideas.
- Can provide suitable sentence starters.
- Provide support for struggling writers.
- Can be differentiated to stretch more competent writers.

By making academic literacy explicit in this way, writing frames can help learners improve their reading comprehension and begin to predict and follow the academic style of writing. The use of a frame should begin with a discussion and teacher modeling. This discussion should be followed by teacher and students jointly using the frame and then by students independently writing using the frame as a support.

It's Not Cheating!

Using frames or templates to write is no more cheating than it is to learn to dance with an instructor counting the tempo and calling out the directional moves. It allows the learner to focus on making the right moves with his or her own style and topic at hand. Learners will use the frames only as long as they are helpful. Dancing coaches—and writing coaches—know when to remove the scaffolds: when students are combining moves in creative ways that show their grasp of the fundamentals and their own personal expression.

Persuasive Argument Frames

Persuasive writing follows a structure of (1) presenting an opinion, (2) stating reasons for the position, (3) stating counter-arguments, (4) providing rebuttal of counter-arguments, and (5) drawing a conclusion. Steps 3 and 4, stating counter-arguments and providing rebuttal, are important areas of instruction because omitting the counter-arguments and rebuttal can weaken the writer's position. Consider using sentence and paragraph frames for academic persuasive writing, such as an essay on a controversial or "hot" topic or in response to an assigned reading. Adult learners usually have plenty to say on these topics; the challenge is to help them construct powerful arguments in writing that express their opinions and show their learning.

Frames and their rhetorical uses in academic writing for postsecondary students are compiled by Graff and Birkenstein (2010) in *They Say/I Say*. The main argument of this book is that academic writing is a dialogue; helping students understand how to insert themselves into the conversation requires a few writing "moves" that can be helpfully provided as frames. By beginning with a frame, students can focus on the meaning they are trying to convey, use appropriate vocabulary, and make their point. Figure 4 includes a few frames from the book.

Figure 4. Frames From *They Say/I Say* by Graff and Birkenstein (2010)

Introducing what they say (p. 23)

- It has become common today to dismiss _____.

Making what they say something you say (p. 25)

- Although I should know better by now, I cannot help thinking that _____.

Agreeing—with a difference (p. 66)

- I agree that _____ because my experience _____ confirms it.

Agreeing and disagreeing simultaneously (p. 65)

- Though I concede that _____, I still insist that _____.

Making concessions while still standing your ground (p. 89)

- Although I grant that _____ , I still maintain that _____.

Establishing why your claims matter (p. 99)

- Ultimately, what is at stake here is _____.

Writing frames also can be used as a type of cloze technique to check for understanding. The same frames provided in Figure 4 can be used as prompts for an Exit Ticket (see the Writing-to-Learn section, page 15) to ask students to reflect on the classroom discussion.

You can certainly make your own frames, too. Draw from the classroom discussion, referencing back to the vocabulary generated and argument moves made by learners. Perhaps there had been two or three clear "camps" of thinkers on a topic. Write up the three frames on the board, handout, or word processing program, and ask students to write their response, thinking back to the class discussion and using the vocabulary discussed.

It is useful to connect writing frames to summarization when the task is to provide an opinion or critique of a text. Including a summary of the text's main points before introducing your opinion or critique is a solid structure for a persuasive and thoughtful essay. (For more information, see the Teach Summarization section on page 44.)

Reference

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Provide Constructive Feedback

Constructive feedback is:

- Timely
- Specific
- Task-focused

> *"Teachers' response to student writing is as conspicuous and arresting a feature in composition teaching as Cyrano's nose on his face. But mainstream scholarship in rhetoric and composition has never really looked in the mirror and realized the need to highlight this distinctive 'nose' in any serious theory of student composition."*
>
> (Phelps, 2000, p. 92)

Teacher feedback is an understudied area of writing, so the research base is slim. This section summarizes the key points, provides guidance as you reflect on your feedback, and offers ideas for managing the time burden involved in providing high-quality feedback.

Make your feedback count! Teachers often focus on surface features rather than content. Students respond in kind, resulting in little improvement. Instill in your classroom an attitude that "considers the emerging text as an improvable object" (Haneda & Wells, 2000, p. 443). This attitude will help you and your learners focus on ***meaning*** and ***expression***, which will free the processes of writing, revising, and thinking from a right/wrong approach.

Constructive feedback can:

- Bridge understanding from expert (teacher) to novice (learner).
- Scaffold metacognitive strategy use.
- Focus on forms, models, and language choices appropriate to various academic literacies.
- Provide individualized, personalized instruction.
- Reinforce instruction given in whole groups.

> *"At first I edit the papers, ask them to rewrite and think about what mistakes may have been made. As the student progresses, we discuss the sentence structure, how they may be able to reword the sentences and combine the thoughts. Feedback from the teacher is very important because it helps [students] understand what they may have done incorrectly, and teacher editing decreases as the students progress, their individual comfort level increases, and their writings are greatly improved."*
>
> Janet Lopes,
> Rhode Island TEAL Team

Writing Conferences

In independent, one-on-one writing conferences with learners, consider these steps for a successful conference:

- In collaboration with the learner, establish a goal for the writing conference (e.g., clarify the requirement of the assignment and/or meaning of the writing prompt, review feedback on a particular section of writing; discuss use of writing conventions or particular writing style of focus).
- Let the learner take the lead to introduce his or her work.
- Know the learner's work; have his or her portfolio ready.
- Be patient, respect silence, and let the learner speak.
- Look for the teachable moment; focus on one or two areas.
- Keep it short; use a timer.
- End with a few action items—in writing!

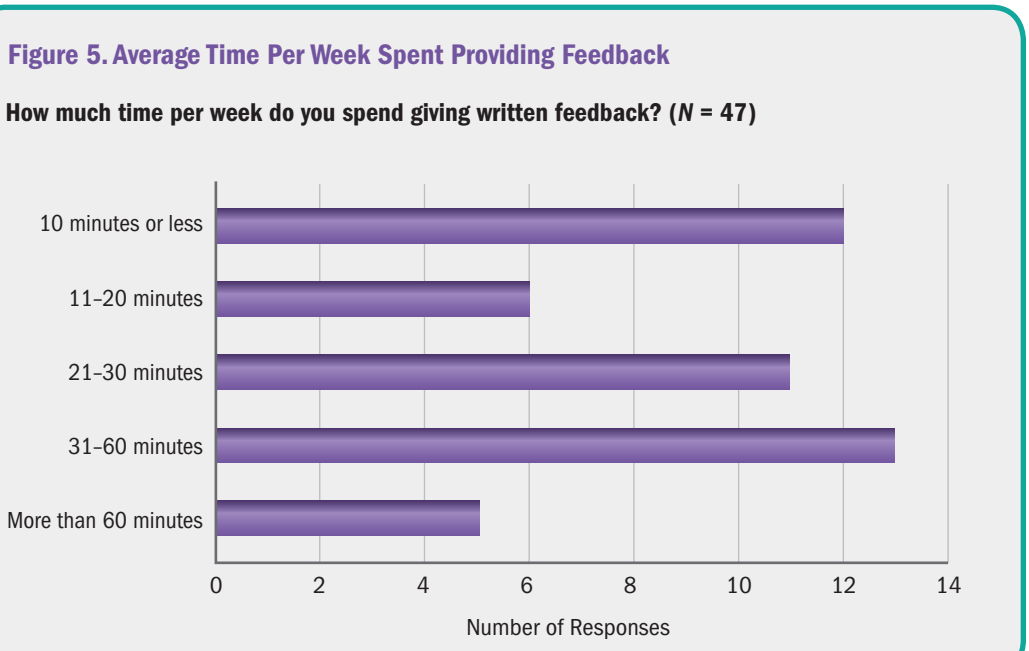
One way to check yourself for how well you are conducting conferences is either to audio record a conference for later reflection or to ask a colleague to serve as a "critical friend" who sits in on one or two of your conferences and provides coaching and reflection. As you listen to the recording or the feedback, listen to the ratio of talk time. Reflect on:

- Who is talking more—you or the learner?
- Did you make the most of a teachable moment?
- Was the conference really five minutes, or did it run much longer?
- Did it end with an action item?

Managing the Time Burden

High-quality feedback takes time. TEAL teachers responded to a poll on how many minutes per week on average are spent providing feedback. Their responses are shown in Figure 5.

Figure 5. Average Time Per Week Spent Providing Feedback



The following tips may help you to address the time burden.

- Don't grade everything; intermittent feedback is effective.
- Respond to first drafts, not finals. Students rarely revise a paper if it is not an assignment. Your suggestions are more likely to be processed in an intermediate draft.
- Use peers as authentic readers, and train them to provide feedback.
- Provide opportunities for authentic readers in the program, community, or world (via the Web). Authentic readers of published materials are great motivators for revision and best effort. But you can find authentic readers to serve as pen pals, providing feedback, too.

Choose a slice of writing such as a paragraph, and follow these steps to pass the responsibility for revision back to the writer. These steps are based on the work of Flower, Hayes, Carey, and Schriver (1986).

1. Put checks at end of the lines, one per error.
2. Students identify the error (detect).
3. Students determine how to fix it (diagnose).
4. Students revise the passage.
5. Students create their own proofreading checklist.

Using Rubrics

Points to remember:

- Rubrics are holistic tools.
- Don't use a single "cell" to make a decision or assign a score.
- Help students weigh meaning as most important.
- Use rubrics as a classroom and instructional management tool, not a skills assessment.

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Enhancing Teaching Practices

Apply Universal Design for Learning

Options!

It's the key word in the *Universal Design for Learning Guidelines* from CAST (2011). Look for multiple ways to get your teaching objectives taught as means in which teachers help learners to engage with the instruction. In writing, think about all the ways writers could do the physical work of writing:

- Handwriting
- Typing
- Word processing
- Voice recognition
- Word prediction
- Edit with highlighters
- Cut and paste revisions with paper

"I was most surprised [in the course] at how well the UDL concepts fit into my teaching beliefs that all students learn when given the information in a form that relates to their needs."

Sherri Soluri,
Florida TEAL Team

"[After learning about UDL], I realized that I was paying more attention to individual students in big classes (who were slower to engage) and focused on making writing exercises fun and interesting. I could witness the students respond. Also, I had just seen the movie, Waiting for Superman, *and realized how important it is for a teacher to always be engaged in the classroom and committed to student learning."*

A.J. Zissler,
Idaho TEAL Team

Make Time to Plan

How can you support planning in multiple modes? How much time do you allot to planning? This is an incredibly important step and one struggling writers will regularly skip—to their detriment. Use this list of ideas to spark your imagination:

- Video
- Music
- Collage and montage
- Art
- Stories
- Nature walks/time outdoors
- Models of writing

I. Provide Multiple Means of Representation.

1. Provide options for perception.

- Options that customize the display of information
- Options that provide alternatives for auditory information
- Options that provide alternatives for visual information

2. Provide options for language and symbols.

- Options that define vocabulary and symbols
- Options that clarify syntax and structure
- Options for decoding text or mathematical notation
- Options that promote cross-linguistic understanding
- Options that illustrate key concepts non-linguistically

3. Provide options for comprehension.

- Options that provide or activate background knowledge
- Options that highlight critical features, big ideas, and relationships
- Options that guide information processing
- Options that support memory and transfer

II. Provide Multiple Means of Action and Expression.

4. Provide options for physical action.

- Options in the mode of physical response
- Options in the means of navigation
- Options for accessing tools and assistive technologies

5. Provide options for expressive skills and fluency.

- Options in the media for communication
- Options in the tools for composition and problem solving
- Options in the scaffolds for practice and performance

6. Provide options for executive functions.

- Options that guide effective goal-setting
- Options that support planning and strategy development
- Options that facilitate managing information and resources
- Options that enhance capacity for monitoring progress

Alter Your Expectations

Use the ideas from the *Universal Design for Learning Guidelines* provided in this section to expand your thinking on getting students engaged in learning.

Struggling writers often have weak content-area vocabulary and prior knowledge. Scaffold with them and help them grow their own funds of knowledge and experience. Make explicit analogies from their lives and work. Create lists and webs of words and ideas generated in class, and keep the following visible during the writing phases so learners can use them:

- Classroom-created lists
- Lyrics
- Internet searches
- Online dictionaries and thesauruses
- Magazines
- Book titles

Share your secrets to getting and staying organized!

- Paper or digital outlines
- Preformed templates and graphic organizers
- Index cards
- Poster paper
- PowerPoint slides

Engagement Is an Everyday Concern

On writing, the research is clear: Choice of topics, authentic questions, and real audiences for the work are motivating and engaging. Adults are especially motivated to work on issues in their daily lives and communities, and they can usually suggest hot topics to address. Even when assignments are preformed, look for ways to enhance the relevance of the assignment to learners' daily concerns:

- Various prompts
- Choice of topics
- Authentic questions
- Uses for writing

Rely on Peers

Use collaborative groups or pairs to dialogue a topic and flesh out appropriate vocabulary and concepts and to deepen learners' thinking on the topic. Use collaborative groups or pairs to offer peer support for reviewing, editing, and providing insight on audience response.

Set Goals

Goal setting is a critical element to successful teaching/learning. Help learners to set achievable and specific goals, and help them monitor progress toward their goals. (See the Teach Self-Regulated Strategy Development section on page 40).

For more information, see the TEAL Center Fact Sheet on *Universal Design for Learning* at the end of this section.

III. Provide Multiple Means of Engagement.

7. Provide options for recruiting interest.

- Options that increase individual choice and autonomy
- Options that enhance relevance, value, and authenticity
- Options that reduce threats and distractions

8. Provide options for sustaining effort and persistence.

- Options that heighten salience of goals and objectives
- Options that vary levels of challenge and support
- Options that foster collaboration and communication
- Options that increase mastery-oriented feedback

9. Provide options for self-regulation.

- Options that guide personal goal-setting and expectations
- Options that scaffold coping skills and strategies
- Options that develop self-assessment and reflection

Reference

CAST. (2011). *Universal Design for Learning guidelines version 2.0.* Wakefield, MA: Author. Retrieved December 27, 2011, from http://www.udlcenter.org/aboutudl/udlguidelines/downloads

Universal Design for Learning

UDL is an approach to curriculum design that can help teachers customize curriculum to serve all learners, regardless of ability, disability, age, gender, or cultural and linguistic background. UDL provides a blueprint for designing strategies, materials, assessments, and tools to reach and teach students with diverse needs.

About UDL

Universal design for learning (UDL) is a set of principles for designing curriculum that provides all individuals with equal opportunities to learn. UDL is designed to serve all learners, regardless of ability, disability, age, gender, or cultural and linguistic background. UDL provides a blueprint for designing goals, methods, materials, and assessments to reach *all* students including those with diverse needs. Grounded in research of learner differences and effective instructional settings, UDL principles call for **varied and flexible ways** to:

- Present or access information, concepts, and ideas (the "what" of learning).
- Plan and execute learning tasks (the "how" of learning).
- Get engaged—and stay engaged—in learning (the "why" of learning).

UDL is different from other approaches to curriculum design in that educators begin the design process *expecting* the curriculum to be used by a diverse set of students with varying skills and abilities.

UDL is an approach to learning that addresses and redresses the primary barrier to learning: **inflexible, one-size-fits-all curricula** that raise unintentional barriers. Learners with disabilities are the most vulnerable to such barriers, but many students without disabilities also find that curricula are poorly designed to meet their learning needs. UDL helps meet the challenges of diversity by recommending the use of flexible instructional materials, techniques, and strategies that empower educators to meet students' diverse needs. A universally designed curriculum is shaped from the outset to meet the needs of the greatest number of users, making costly, time-consuming, and after-the-fact changes to the curriculum unnecessary.

The UDL framework is grounded in three principles:

- **Multiple means of representation –** using a variety of methods to present information, provide a range of means to support
- **Multiple means of action and expression –** providing learners with alternative ways to act skillfully and demonstrate what they know
- **Multiple means of engagement –** tapping into learners' interests by offering choices of content and tools; motivating learners by offering adjustable levels of challenge

Roots of UDL

The term *universal design* refers to a movement in architecture and product development that aims to make places and things more accessible to individuals with disabilities. Many adaptations for people with disabilities benefit a variety of users. For example, ramps and curb cuts make it easier for parents with baby strollers, elderly people, and delivery people to negotiate walkways and street. Similarly, closed captions on television and movies can be appreciated not only by the deaf and hard of hearing, but by people who can read them in noisy environments. They also can be used as support for listening comprehension by viewers learning the language. The concept that everyone benefits when designs incorporate the needs of every user has become known as universal design. UDL extends this concept to education by applying advances in the understanding of how the brain processes information to the design of curricula that accommodate diverse learning needs.

Under the UDL Umbrella

The good news is that UDL is not in conflict with other methods and practices. It actually incorporates and supports many current research-based approaches to teaching and learning, such as the following:

- Cooperative learning (group work)
- Differentiated instruction (see TEAL Center Fact Sheet No. 5 on Differentiated Instruction)
- Performance-based assessment

- Project-based learning
- Multisensory teaching
- Theory of multiple intelligences
- Principles of *student-centered learning* (see TEAL Center Fact Sheet No. 6 on Student-Centered Learning)

How Can Students Benefit From UDL?

Adult students benefit from two major aspects of UDL: (1) its emphasis on flexible curriculum and (2) the variety of instructional practices, materials, and learning activities. All students, including those learning English, older students, and those with disabilities appreciate the multifaceted ways content is presented, as well as options for demonstrating what they know. UDL helps educators meet the challenge of serving those with special needs while enhancing learning for all.

How Can Instructors Incorporate UDL?

Instructors may want to try the following strategies (Rose & Meyer, 2002):

- **Use multiple strategies to present content.** Enhance instruction through the use of case studies, music, role play, cooperative learning, hands-on activities, field trips, guest speakers, Web-based communications, and educational software. *Example: Students can role play important events in American history to give them a better understanding of the events and people involved.* Also, **offer a choice of learning contexts** by providing opportunities for individual, pair, and group work as well as distance learning, peer learning, and field work.
- **Use a variety of materials.** To present, illustrate, and reinforce new content, use materials such as online resources, videos, podcasts, PowerPoint presentations, realia, manipulatives, and e-books.
- **Provide cognitive supports.** Give students organizing clues; for example: *"I have explained the four main points, and now I am going to summarize them."* Present background information for new concepts using pictures, artifacts, videos, and other materials that are not lecture-based. Scaffold student learning (provide temporary support to reduce the complexity of a task) by providing a course syllabus, outlines, summaries, study guides, and copies of PowerPoint slides.
- **Teach to a variety of learning styles.** Build movement into learning. Give instructions both orally and in writing to engage students auditorily and visually. Consider using large visual aids for slides, graphics, and charts.
- **Provide flexible opportunities for assessment.** Allow students to demonstrate their learning in multiple ways that include visual and oral presentation, rather than only written assessment.

How might this work in the adult education classroom? Because adult education classes do not always rely on textbooks only for curriculum material, but rather utilize realia and authentic materials, instructors can be at an advantage when trying to incorporate principles of UDL. A common example is the technique of using total physical response (TPR) exercises for adult English language learners. An example in the ABE classroom might be to teach weights and measurement using real objects and a variety of measurement tools. Show video clips to demonstrate measurement in various ways. Hands-on activities and demonstrations can help learners grasp the concept more readily than textbook readings and discussion. Have learners demonstrate their understanding through created visuals, oral presentations or demonstrations, maps and charts, or simulated tasks.

What's the Research?

According to the National Center on Universal Design for Learning at CAST, the research that supports UDL comes first from the research basis for the general principles of UDL, which comes from cognitive learning science and neuroscience, and is also derived from the work of Lev Vygotsky and Benjamin Bloom on understanding individual differences and the pedagogies required to address them. Research has been identified on specific practices for meeting the needs of individual differences as well as research on the specific applications of UDL. Links to the research can be found under Research on the National Center on UDL website.

Resources

Center for Applied Special Technology (CAST) (www.cast.org) offers extensive UDL resources and strategies on its website.

Disabilities, Opportunities, Internetworking, and Technology (DO-IT) (http://www.washington.edu/doit) offers supports for incorporating UDL principles into the postsecondary setting and experiences of students with disabilities.

National Center for Accessible Media (http://ncam.wgbh.org) provides information and resources for expanding access to educational and media technologies for students with disabilities.

National Center on Universal Design for Learning (National UDL Center) (http://www.udlcenter.org/) supports the effective implementation of UDL by connecting stakeholders in the field and providing resources and information about UDL and UDL implementation.

NIMAS Development and Technical Assistance Centers (http://aim.cast.org) serve as a resource for information about the policies, practices, and technologies related to the National Instructional Materials Accessibility Standard (NIMAS).

Teaching Every Student (http://www.cast.org/teachingeverystudent) is a CAST website that includes a multimedia version of the book, *Teaching Every Student in the Digital Age: Universal Design for Learning* (Rose & Meyer, 2002). This website is designed for kindergarten through grade 12 teachers but can be informative for adult education teachers.

UDL Guidelines (http://www.udlcenter.org/aboutudl/udlguidelines) from the National UDL Center provide a set of strategies for implementing UDL along with practical suggestions.

Reference

Rose, D., & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning*. Alexandria, VA: Association for Supervision and Curriculum Development.

Authors: TEAL Center staff

Reviewed by: Tracey Hall and Boo Murray, CAST

Adapted from CALPRO Fact Sheet No. 2, Universal Design for Learning. Authors: Sally Ianiro with Anestine Hector-Mason

About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas. Beginning with writing instruction for Adult Basic Education (ABE) students, the TEAL Center will offer an intensive program of professional development and individualized technical assistance to participating local staff in 12 states.

Check for Understanding

This section provides ideas on how to plan, monitor, and use the feedback you elicit from learners. (See the Teach Self-Regulated Strategy Development section on page 39 for related discussion.)

Formative assessment is the process of using information about students' learning throughout instruction to make decisions for improving that learning. Students' self-regulated strategies play an important role in formative assessment, as students learn to monitor their own learning processes and make adjustments, as needed. Formative assessment is assessment *for* learning, as opposed to diagnostic assessment, which is assessment conducted *prior to* beginning instruction, or to *summative assessment*, which is assessment *of* learning and usually is administered at the end of a learning unit or course of study. Formative assessment is a process of informal, interactive, ongoing assessment, instructional adjustments, and feedback. Formative assessment occurs when the teacher observes learners' work and provides feedback about specific qualities of their work and about how to improve (See Figure 6).

Figure 6. Assessment Process

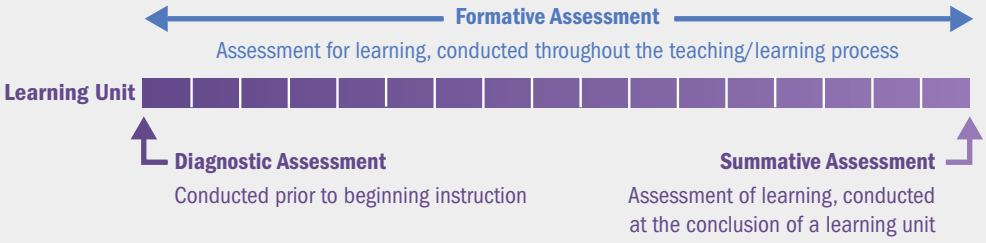

Figure 7 illustrates how self-regulation, formative assessment, and constructive feedback build on one another to help learners meet shared learning goals. Although the graphic is linear, the process is iterative. The process begins with the learner providing some assessment of how he/she felt about his/her performance on a task (self-regulation). This student assessment is coupled with constructive feedback from the teacher (formative assessment), who uses effective questioning to encourage the learner to reflect on what he/she has learned and still needs to learn. Then, the teacher and learner together develop or refine the learning goals.

Figure 7. Meeting Shared Learning Goals

When teachers know how learners are progressing and where they are having trouble, instructional adjustments can be made. Effective teacher feedback leads to learners' engagement in self-reflection. It is widely and empirically argued that formative assessment has the greatest impact on learning and achievement.

This process of *formative assessment* and using the collected information happens iteratively through the following:

- Rich conversations between teachers and learners that continually build and go deeper
- The provision of constructive, timely feedback to enable learners to advance their learning
- Teachers modifying instructional approaches to respond to shared learning goals or outcomes

Formative assessment is a critical component of all the pedagogical concepts introduced by the TEAL Center; it is how you will make decisions about grouping learners, calibrate your expectations for performance, and personalize instruction. In assessing student writing, it is important to assess both the product and the process. Assessment of the product can use rubrics and checklists and informal evaluation. Students can learn to evaluate their own writing as well as provide peer review of other students' writing, using such tools.

Assessment of the process involves determining whether students are using the strategies they are learning. In *strategy instruction*, it is critical for teachers to assess and give feedback on students' use of strategies, and it is equally important for students to monitor the processes they are using and reflect on whether the strategies are working.

Refer to Rose and Gravel (2009), and consider the analogy of the GPS unit to curriculum. If you don't know where you and your learners are going or even where you are now, how can you close the gap?

Here are some ways to create that roadmap with learners:

- **Where Am I Going?** Have a clear vision of the ultimate learning goal and the progression of learning subgoals to get there. Learners need to see examples of both strong and weak work and use these examples to develop criteria for quality.
- **Where Am I Now?** Learners need to receive and give regular descriptive feedback.
- **How Can I Close The Gap?** Focus on one learning target at a time to engage learners in self-reflection and monitoring.

Implications for Classroom Practice

- Share learning goals with learners.
- Involve learners in self-assessment.
- Provide feedback that helps learners recognize next steps and how to take them.
- Adjust instruction to reflect class learning.
- Most importantly, be confident that every learner can improve.

"Sometimes, I'll stop and say, 'So, why does this matter?' Sometimes, the confusion is because the 'big picture' is getting bogged down in details, and taking a minute to remember the original purpose can help. And, sometimes I've forgotten to explain the reason we're doing this, or my explanation has gotten too abstract. Taking a more explicit problem-solving approach can help in breaking things down step-by-step and making each step seem more relevant..."

Hillary Major,
Virginia TEAL Team

For more information, see the TEAL Center Fact Sheet on Formative Assessment at the end of this section.

Reference

Rose, D., & Gravel, J. (2009). *Getting from here to there: UDL, global positioning systems, and lessons for improving education*. Wakefield, MA: National Center on Universal Design for Learning. Retrieved December 27, 2011, from http://www.udlcenter.org/sites/udlcenter.org/files/GPSarticle.pdf

Formative Assessment

The purpose of formative assessment tasks and activities is to provide the teacher with a window into students' cognitive processes. Formative assessments allow students to show their thinking and allow teachers a way to see and gauge students' cognitive processes.

What Is Formative Assessment?

The use of assessment to provide feedback to teachers and students in the course of learning is called *formative assessment*. Information gained through informal assessments provides opportunities for teachers to make adjustments to the ways in which they deliver instruction. For example, they may reteach a concept, use alternative instructional approaches, or offer more opportunities for practice and reinforcement. These activities can lead to improved student success.

Formative assessment centers on active feedback loops that assist learning (Black & Wiliam, 2004; Sadler, 1989; Shavelson, 2006). Teachers use formative assessments both to provide **feedback** to students about their progress and to **guide decisions** about next steps in the learning process, thereby closing the gap between the learner's current and desired states. Popham (2008) defines formative assessment as "a planned process in which teachers or students use assessment-based evidence to adjust what they are currently doing" (p. 15). The operative word in this definition is *process,* in that formative assessment is happening throughout the learning, as opposed to *summative assessment*, which is often a one-time event that occurs at the end of a learning unit and is used to make judgments about student competence.

Elements of the Formative Assessment Process

Several researchers (e.g.; Black & Wiliam, 1998; Sadler, 1989) have identified essential elements of formative assessment. These include (1) identifying the gap, (2) feedback, (3) learning progressions, and (4) student involvement, which are described as follows.

1. *Identifying the gap* is the process of defining the difference (the "gap") between what students know and what they need to know; it includes collaboration between teacher and learner to identify learning goals and outcomes and criteria for achieving these.
2. *Feedback* (i.e., rich conversations between the teacher and student) gives the teacher information needed to identify the current status of a student's learning as well as the specific next steps that he or she can take to improve. Teacher feedback to students must be both constructive and timely to enable students to advance their learning. It must include a description of how their response differed from that reflected in the desired learning goal and how they can move forward. Student feedback and reflection can alert the teacher of the need to modify instructional approaches.
3. *Learning progressions* are used by the teacher to break a learning goal into smaller, more manageable subgoals. The teacher identifies a student's location on the learning continuum and works collaboratively with the student to set a series of smaller goals.
4. *Involving students* in decisions about their own learning and in self-assessment helps students to engage in reflection and build their metacognitive skills. See the TEAL Center Fact Sheet No. 4 on Metacognitive Processes. There is a profound influence on student motivation and self-esteem when students are involved in self-assessments and understand how to improve.

"Formative assessment represents evidence-based instructional decision making. If you want to become more instructionally effective, and if you want your students to achieve more, then formative assessment should be for you."

– Popham (2008), p. 15

Why Use Formative Assessment?

Formative assessment with appropriate feedback is **the** most powerful moderator in the enhancement of achievement (Hattie & Timperley, 2007). Formative assessment helps teachers identify the current state of learners' knowledge and skills; make changes in instruction so that students meet with success; create appropriate lessons, activities, and groupings; and inform students about their progress to help them set goals (Ainsworth & Viegut, 2006, p. 23).

Teachers can use results of *formative assessments* to adjust their teaching strategies and match students with appropriate materials and learning conditions. Information gained from formative assessment can help a teacher determine (1) how to group students, (2) whether students need alternative materials, (3) how much time to allocate to specific learning activities, (4) which concepts need to be re-taught to specific students, and (5) which students are ready to advance.

Feedback on Student Writing

The role of feedback in the learner's writing quality has received considerably less attention than it deserves, according to the few researchers who have turned the inquiry spotlight from students' compositions to teachers' comments on drafts. Teacher feedback, given in written annotations and in oral comments in conferencing, is the mechanism to provide the guided practice struggling writers need to apply newly learned skills (Pathey-Chavez, Matsumura, & Valdes, 2004).

Too often, students tend to correct only those specific errors or directions that are noted without taking the steps to revise the draft (Beach & Friedrich, 2006; Fisher & Frey, 2007), resulting in no real improvement in the consequent draft. These researchers recommend providing feedback through modeling of metacognitive processing and carefully focusing feedback in written and oral comments on students' understanding of writing development. They emphasize that conferences about writing drafts should end with a written plan of action, whether or not these have occurred face-to-face or online.

A national study of effective writing conducted in the U.K. (Grief, Meyer, & Burgess, 2007) credits constructive and timely feedback with significant development of competence and confidence. The study's authors recommend that group dialogue and individual feedback be part of a writing curriculum for adult basic education students.

Recommended Strategies

The purpose of assessment tasks and activities is to provide the teacher with a window into students' cognitive processes. Formative assessments allow students to show their thinking and allow teachers a way to see and gauge students' cognitive processes.

Forms of assessment can range from performance-based assessments to reflection journals to multiple-choice items. They can take the form of checklists, rubrics, written papers or oral presentations, graphic organizers, Socratic questioning, etc. They can be teacher observations of student performance, teacher questioning/class discussions, analysis of student work, student self-assessment, *KWLs*, and student journals, among other informal assessments. The following approaches are useful for assessing students' knowledge about a given topic as well as their writing skills:

- **Quick Write:** As a pre- or post-assessment tool, 1- to 3-minute *quick writes* on a topic or big idea can be revealing. Student responses often show what they do or do not understand about a topic, and they provide the teacher with insights into the reasoning processes that students are using.
- **Graphic Organizers:** These include items such as *Venn diagrams*, word/idea webs or *concept maps*, cause/effect charts, flowcharts, and sequence charts. Graphic organizers can be used to assess prior knowledge, record learning during a lecture or class reading, or organize knowledge after learning.
- **Cloze Writing:** The *cloze procedure* consists of fill-in-the-blank activities for sentences and paragraphs that can be used to assess knowledge. Facilitative supports, such as a vocabulary bank, can be used for sentences. For a more extended response, students can be given a short story (for example) for which they must write a one-paragraph ending. The brainstorming for this activity can be done in pairs or small groups, and then each student can write his or her own one-paragraph ending.
- **Think-Pair-Share** or **Write-Pair-Share:** *Think-pair-share* or write-pair-share activities ensure that everyone has a chance to talk and process their thinking. Ask for two minutes of silence while each student considers his or her response to a prompt, text, lecture, etc. Then, have students take turns sharing their reflections with a partner. Some reflections can then be shared with the whole group.
- **Entry/Exit Cards:** As students enter class, they respond to a prompt displayed on the board or a flipchart (e.g., a sentence or short paragraph) related to the topic of that day's lesson. Alternatively, students can be asked for an *exit card* that provides insight into what they learned from the day's activities or what they predict might follow.

- **Student Reflection:** The teacher can encourage students to reflect on their accomplishments as well as their challenges by asking students to answer questions that spark critical thinking:
  - What was your task, the ultimate goal, or the outcome for this activity?
  - What are some important concepts and ideas that you discovered/learned? Why are they important?
  - How did you solve the problem or task? Did you reach your goal? Explain.
  - Would you make changes if you had to do it again? Explain.

There is a significant body of evidence linking the *formative assessment* with student achievement. Adult educators, by encouraging student reflection on their learning and by involving students in decisions related to next steps in reaching their learning goals, both motivate and empower students in the assessment and learning process. Formative assessment can help teachers improve the quality of instruction and help students reach their full potential.

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Reviewed by: Linda Mason, Penn State University

About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Differentiate Instruction

Differentiated instruction (DI) is defined as the planning and delivery of classroom instruction that considers the varied levels of readiness, learning needs, and interests of each learner in the class. Instructors practice this approach by using a range of routines and tools to engage learners at varying levels of readiness in multiple ways and by offering them options for demonstrating their understanding and mastery of the material.

Figure 8 presents some of the analogies TEAL teachers contributed to a wiki called "In Your Own Words" in the DI online course. It captures various ways to think about what DI might mean.

Figure 8. "In Your Own Words" Analogies From TEAL Teachers

Differentiating instruction encompasses an instructors' response to learner differences by adapting curriculum and instruction on six dimensions:

Teacher-Dependent

- Content (the what of the lesson)
- Process (the how of the lesson)
- Product (the learner-produced results)

Learner-Dependent

- Interest
- Profile (strengths, weaknesses, gaps)
- Readiness

Getting Started

Take it one dimension at a time. Look at your teaching—try to vary the content, process, or product for a particular lesson or across a unit. Look at your learners—get to know something more about their interests, profiles, or readiness. Consider incorporating the following ideas into your classroom management, instruction, and approach:

Ideas to consider for adapting the **content**, or the *what*:

- Changing the complexity of the lesson
  - Vary the complexity along the lines of concrete, symbolic, or abstract explorations.
- The resources you provide for the lesson
  - Vary the resources, involving narrative, informational, multimedia, experts, and guests.
- The context of the lesson
  - Vary the context from classrooms, programs, communities, and virtual environments.

Ideas to consider for adapting the **process**, or the *how*:

- Changing how you deliver *direct instruction*
  - Work variously with the whole group, small groups, and individuals.
  - Reconsider how material is framed; try breaking up a lesson or unit in new ways to chunk and compress material.
- Changing how you structure cooperative activities
  - Arrange flexible, changeable groupings and peer activities.
  - Provide roles and clear expectations for group members.
- Changing the way you structure inquiry
  - Use problem-based learning, service learning, and performance-based experiences.

Ideas to consider for adapting the **product**, or the *result*:

- Expecting student work that reflects multiple intelligences
  - Consider all eight intelligences in your planning: verbal-linguistic, mathematical-logical, musical-rhythmic, visual-spatial, bodily *kinesthetic*, interpersonal, intrapersonal, and naturalist.
- Assessing completeness through various means
  - Collect and use portfolio, rubrics, peer reviews, and performance-based learning.
  - Get quick feedback through paperless routines such as thumbs up/down, ranking with fingers 1–5, etc.

Become a Student of Your Students

What are your students' **interests**? Take time to find out through methods such as the following:

- Journals and responses to prompts. For example:
  - If you had your GED or college degree tomorrow, what would you want to be doing?
  - What is one job you would want to have and why?
- Informal conversations and ice breakers
- Sharing opportunities with the whole class
- Community events
- Program support staff and transition specialists

Ideas to consider for accommodating learner **profiles**:

- Disability screening results—know how to accommodate learning and attention difficulties
- Cultural and linguistic factors
- Health and wellness factors
- Age and years out of school setting
- Past educational and academic experiences

Beyond test scores, think about what you know about your learners' **readiness** as evidenced by:

- Past educational achievement
- Background knowledge
- Self-efficacy (How do they attribute success and effort?)

Put It Into Practice

Thanks to a TEAL teacher from Texas, for asking the following "get-real" questions about DI in adult education contexts:

Q: How does DI help teach to the multilevel class with variations in age, ability, goals and motivation, educational background—you name it?

A: Embrace diversity, don't fight it! Here are some ideas to treat diversity as a resource:

- Create intergenerational peer projects.
- Assign roles in cooperative groupings so that everyone has a task (e.g., timekeeper, note taker, reporter, researcher).
- Encourage students to work on projects of personal interest.
- Provide multiple means of representation, expression, and engagement for lessons and across units.

Q: How does DI work when teachers don't get timely or useful reports from students' test scores?

A: Here are some ways to determine students' readiness and learning profile in the classroom:

- Design short quizzes to determine knowledge on the lesson topic; do these the day before you begin the topic, so you have a sense of what the students know.
- Establish paperless routines that can give you a sense of the class in a quick scan.
- Up or Down: Have students give a thumbs up or down on whether they feel confident with a particular skill (e.g., where to put commas, how to identify the main idea, how to calculate diameter).
- Rating 1–5: Have students rate their self-assessment of a particular skill on a 1–5 scale by holding up one to five fingers.
- Ask students to rank their own abilities with class materials. Before you begin a unit or at the start of the semester, put out your materials and give students time to browse through them. Have the students indicate which materials they could work with by categorizing them as *On My Own, With Some Help*, or *Need Instruction.*

Q: How can teachers implement the *flexible grouping* required in DI? Adult students don't always work well in groups.

A: Classroom management is everyone's responsibility! Train yourself not to answer off-topic questions and train students to:

- Try three strategies before asking the teacher (post some strategies in the classroom).
- Rely on others in the group.
- Jot down a question for later.

Q: How can teachers work with multiple levels of classroom materials? The leveled workbooks are not aligned by week or topic!

A: Adapting the content is critical—here's how:

- Create an index to find lessons in various workbooks that are on the same topic. (This is a good volunteer task!)
- Begin with a common, shared text and have different activities to assign based on it.
- Find various ways to categorize your materials into thematic units, so that you can do some focused whole-group instruction and then assign varying groups to dig deeper. Your materials may not all be exactly alike, but what do they have in common? Think in general terms—do you have enough variety to designate a biography theme? A space exploration theme? A how-to or do-it-yourself theme?

How Are Teachers Incorporating DI?

Here are some goal statements TEAL teachers shared:

> In my teaching, I plan to incorporate the DI principles of readiness and variable content. I will do this by establishing an intake process that has assessment processes that allow the instructor to meet the student where they are and gear the instruction to the student's goal. Content will be determined by grade-level classes but will be adjusted to meet the wide variety of learning styles and academic levels within that class. I will monitor my progress on this goal by student assessment, student grouping, and student exit surveys. *—Jami Anderson, Wyoming TEAL Team*

> In my teaching, *I have already changed my plans and incorporated* the DI principles of content and process. I *did* this by slowing down the amount of new material that I taught at once. I *monitored* my progress on this goal by the immediate response of the learners. I asked my students about their feelings on the new material and immediately decided to hold off on the other two new concepts for that day. Instead of discussing it all at once, I spread the lesson out over three days with lots of practice and discussion, which seems to be very successful for this group of learners. *—Kelsee Miller, Wyoming TEAL Team*

For more information, see the TEAL Center Fact Sheet on Differentiated Instruction at the end of this section.

Differentiated Instruction

Differentiated instruction is an approach that enables instructors to plan strategically to meet the needs of every learner. The approach encompasses planning and delivery of instruction, classroom management techniques, and expectations of learners' performance that take into consideration the diversity and varied levels of readiness, interests, and learning profiles of learners.

About Differentiated Instruction

Differentiated instruction is an approach that enables instructors to plan strategically to meet the needs of every learner. It is rooted in the belief that there is variability among any group of learners and that instructors should adjust instruction accordingly (Tomlinson, 1999, 2001, 2003). The approach encompasses the planning and delivery of instruction, classroom management techniques, and expectations of learners' performance that take into consideration the diversity and varied levels of readiness, interests, and learning profiles of the learners.

Differentiated instruction can be looked at as an instructor's response to learner differences by adapting curriculum and instruction on six dimensions, including how the instructor approaches the (1) **content** (the *what* of the lesson), (2) **process** (the *how* of the lesson), and (3) expected **product** (the learner-produced result), and takes into consideration the learner's (4) **interest,** (5) **profile** (learning strengths, weaknesses, and gaps), and (6) **readiness.** These adaptations can be planned to happen simultaneously, in sequence, or as needed depending on the circumstance and goals of instruction. Teaching small groups of learners, grouped based on instructional approach and learner profile, is a cornerstone of *differentiated instruction*.

How Does It Work in Adult Education?

Here is an example. An instructor who is teaching writing (the **content**) in an adult basic education (ABE) class needs to understand the various learners' **readiness** to write independently or collaboratively, the supports they might need to engage in the **process** based on their learning **profiles,** the quality and quantity of the learner **product** to be expected, and the learners' **interests.** Some of this understanding will come from professional observation of the learners over time; some of it will come from informal assessments gathered from previous writing assignments.

Planning is critical. For instance, knowing that some learners need templates, prompts, or *advance organizers* to prepare them to write, or software to assist them with spelling, means that the necessary supports, such as use of the computer lab with concept-mapping software and word processors, need to be planned for in advance. Perhaps a colleague who has more experience with a particular level or type of learner can collaborate or team teach a small group to better meet their needs. Perhaps a more advanced peer learner can run a small group or provide technology assistance.

An instructor teaching persuasive essays (the **content**) may begin with a study of various models such as op-ed pieces from the local newspaper to identify the elements of such an essay. The class may spend time brainstorming to elicit learners' **interests** in various "hot topics" of the day, while creating lists of vocabulary words to support composition. Deciding on a couple of key topics, learners may be grouped to continue to generate possible argument points. A scribe in the group can generate a web or advance organizer that captures the discussion. Learners can then be regrouped according to the level of support they need (their **profile** and **readiness**) for composition (the **process**).

Those who can compose on their own can work independently or in dyads to conduct further research on the Internet to provide evidence for their argument; those who need technical support can work in the computer lab with the instructor and an advanced peer, possibly with a precreated outline or template; those who cannot compose on their own can work in a smaller group with a tutor or the instructor to generate a group essay that learners can each then work on for editing and revising. Conferencing with each learner can be another opportunity for accommodating learners' **readiness** by focusing only on the mechanics, grammar, or organizational elements that the writer is able to master. Final products can be shared in various ways: published by the learners to a blog

or submitted to a newspaper, posted in the classroom, read to the class, etc. The essays, the **products**, which result from the group will be varied in their complexity and sophistication, yet all learners will have engaged in the process and basic key elements of a persuasive essay (brainstorming, planning, outlining, composing, editing, revising, and sharing).

How Can Technology Help?

Technology tools can help make this coordination more efficient by providing productivity support for instructors, providing supports for learners at varying levels of readiness, and offering learners options for demonstrating their understanding and mastery of the material. To see how technology can help, see TEAL Center Fact Sheet No. 7 on Technology-Supported Writing Instruction.

Managing Differentiated Instruction

Classroom management to coordinate *flexible groupings* and projects is a key component of applying *differentiated instruction*. Following are some ideas for creating and coordinating groups in a multi-level, differentiated class:

- Set up stations in the classroom where different learning groups can work simultaneously. Such stations naturally invite flexible grouping.
  - Encourage peer-to-peer learning and mentoring and help learners learn to be tutors.
  - Ask volunteers to lead small-group instruction stations.
- Structure problem-based learning (PBL) to have learners actively solve problems, either individually or in small groups.
  - Use WebQuests (http://webquest.org/index.php) as PBL for teams of learners; these inquiry-based projects are pre-arranged, and many have teaching supports (lesson plans, tips, handouts, and additional materials) linked to them.
  - Share reflections with other instructors leading problem-based learning at www.Edutopia.org.
- Assign tiered activities to allow learners to work on the same concepts but with varying degrees of complexity.
  - Find texts on a single, encompassing topic (for example, climate change) in various levels of complexity and readability.
  - Encourage learners to find audio books and digital text at their interest level rather than their independent reading level.
- Employ compacting: assess learners' knowledge and skills before beginning a unit of study and allow learners to move to advanced work based on their preassessment.
  - Find ways to give credit for independent study and advancement if a learner is particularly motivated or interested in a topic.
  - Help learners supplement class instruction with online classes or learning opportunities such as webinars, online chats, blogs, social networks, or daily content blasts (e-mails such as a *Word of the day,* or *This day in history,* can be a boost to vocabulary and content knowledge).
- Institute chunking, or breaking assignments and activities into smaller, more manageable parts, and providing more structured directions for each part.
  - Have learners make personalized lists of tasks to complete the chunks in a specified but flexible timeframe.
  - Encourage self-study, especially when learners have to "stop out" of regular attendance.
- Model differentiation by keeping grades and scores in a variety of ways.
  - Use portfolios as a means for reflecting on learner growth over time, and encourage learners to critique their growth.
  - Keep scores and observations in a spreadsheet that can be sorted flexibly to reveal natural groups.

What's the Research?

This TEAL Center fact sheet draws on two NCSALL *Focus on the Basics* articles (Corley, 2005; Silver-Pacuilla, 2007) and resources created by the Center for Implementing Technology in Education (www.cited.org, see the Research section).

For adult education, the principles of differentiating instruction are not new: engaging learners based on their interests, creating activities based on learners' needs and roles, and recognizing and honoring the diversity in any classroom. Applying these principles informed by the analysis of formal and informal assessment data may require a new way of working, however, as well as enhanced coordination among instructors within a program, lesson planning, and instructional delivery. See related TEAL Center Fact Sheets on Student-Centered Learning (No. 6), Effective Lesson Planning (No. 8), and Adult Learning Theories (No. 11).

References

Corley, M. (2005). Differentiated instruction: Adjusting to the needs of all learners. *Focus on the Basics,* Vol. 7, Issue C: March. Available at: http://www.ncsall.net/?id=736

Silver-Pacuilla, H. (2007). Getting started with assistive technology. *Focus on the Basics,* Vol. 8, Issue D: November. Available at: http://www.ncsall.net/fileadmin/resources/fob/2007/fob_8d.pdf

Tomlinson, C. (1999). *The differentiated classroom: Responding to the needs of all learners.* Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. (2003). *Fulfilling the promise of the differentiated classroom: Strategies and tools for responsive teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Authors: TEAL Center staff

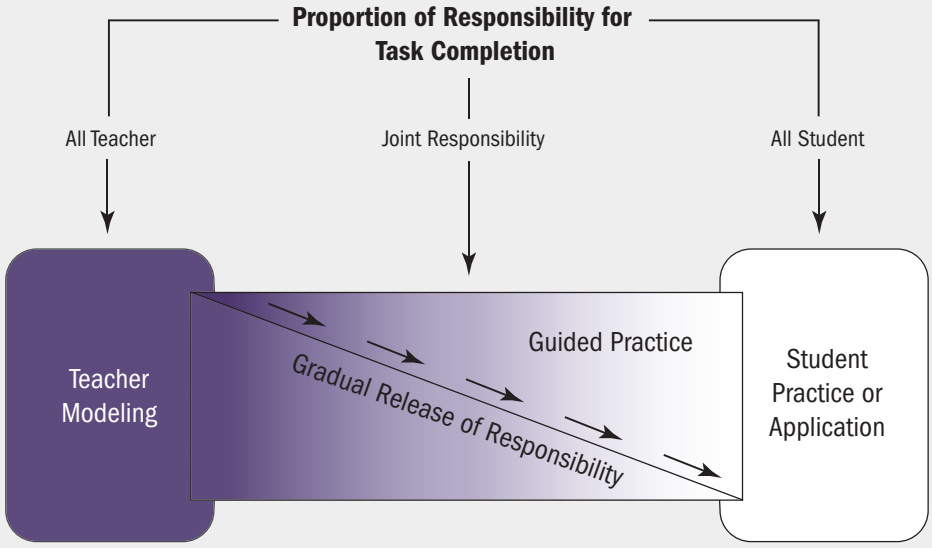
Adapted from two NCSALL *Focus on the Basics* articles, Vol. 7, Issue C, and Vol. 8, Issue D.

About the TEAL Center: The Teaching Excellence in Adult Literacy (TEAL) Center is a project of the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), designed to improve the quality of teaching in adult education in the content areas.

Gradual Release of Responsibility

The *Gradual Release* approach to writing instruction supports a varied approach to content, process, and product over the course of a unit or semester. Learner diversity is embraced by supporting interests, learning profiles, and readiness. Gradual Release is a way to apply *differentiated instruction* principles to writing instruction as the responsibility for independent writing shifts to the learners as illustrated in Figure 9.

Figure 9. Proportion of Responsibility for Task Completion



Voices of Teachers Reflecting on This Graphic

I will hang this model in my classroom as it is a great reminder to me as a teacher and my students as a learner/teacher. *—Deborah DeSousa, Rhode Island TEAL Team*

I currently have the pyramid posted by my desk as a reminder to myself. Deborah shared that she has hers posted in the classroom. When I return to work tomorrow, I will be moving the pyramid! What was I thinking keeping it all to myself?! *—Shannon Schaben, Nebraska TEAL Team*

In the past when working with writing groups, I did a lot of modeling and collaborative work on organization as that was the first roadblock. Then generally, I let students work independently on writing their essays. Next, I would work with each student individually to discuss good parts and parts needing additional work. I really like the graphic on transferring responsibility and see now that I need to work more on the intermediate steps. *—Sue Pohlman, Nebraska TEAL Team*

Gradual Release is *not* a linear sequence; you cycle through the approaches multiple times as you start new topics or address knowledge gaps. Consult Tables 4–8 to find instructional activities to fit your various teaching goals.

Oral Language and Dialogue

Getting adults ready to write is a step not to be skipped. Prewriting engages learners in activities designed to help them generate or organize ideas for writing a first draft. This process improves the quality of their writing. Spend time with discussion, dialogue, vocabulary, and critical thinking. (Find more ideas in the Get Ready section on page 15).

Table 4. Oral Language and Dialogue

Purpose	Level of Support and Role of Instructor
Prepare students to write. • Activate background knowledge. • Clarify thinking and arguments on a topic. • Make connections between speech and print. • Generate words appropriate to a topic.	**Extensive** • Elicit and model thinking, critique, and language.

Examine Writing Together: Modeling and Guided Practice

Dive into writing and study various aspects. Make learners' and others' writing an object of study. Use the cloze technique to highlight different syntactic elements depending on learners' writing development. Use sentence combining for various levels of improvement and revision (See the Combine Sentences section on page 36). Assign written summaries from common readings that can illustrate various ways to write on the same topic (See the Teach Summarization section on page 44).

Table 5. Modeling and Guided Practice

Purpose	Level of Support and Role of Instructor
Work with words, sentences, and paragraphs to build fluency with syntax. • Cloze exercise • Sentence combining • Summaries	**Modest** • Provide criteria and timeframe for writing; lead discussion on answers and reasons.

Collaboration

Have learners work in pairs or small groups to generate writing based on class discussions. This approach reinforces the oral to written language connection as learners articulate to each other how to express an opinion, an argument, or a stance and provides an immediate authentic audience. Use peer learning to reinforce *self-regulated strategy development*, having learners work together on a shared strategy sequence. (Find more ideas in the Teach Self-Regulated Strategy Development section on page 39. Learn more about the importance of collaboration in the Get Ready section on page 15).

Table 6. Collaboration	
Purpose	**Level of Support and Role of Instructor**
Compose collaborative written messages based on group discussion.	**Significant to moderate**
• Peers work in pairs to draft a single document. • Individuals work independently but collaboratively plan, outline, share drafts, edit, and/or revise.	• Teacher or student leader works with small group to discuss and scaffold conversation into writing.

Independent Writing

This is the goal! Leading adult writers through the process of critical thinking, organizing their thoughts, planning, and outlining an essay leads to their actual independent writing. This does not mean that there is no role for the instructor, however. Continue to scaffold, remind learners of strategies and techniques they've learned, and help them use technology productively. Providing frames and models helps writers get started in a new structure, such as an academic essay or assignment. Academic sentence starters can be used first for *Quick Writes* or writing-to-learn prompts to help learners feel more comfortable with them. Move to using frames to get started with independent essays. Find more ideas in the Make Use of Frames section (See page 46). Make your feedback to writers timely, specific, and task-oriented. Find more ideas in the Provide Constructive Feedback section (See page 48) and Use Technology Effectively section (See page 82).

Table 7. Independent Writing	
Purpose	**Level of Support and Role of Instructor**
Create original texts that are authentic, well-crafted, and accurate.	**Minimal**
• Learn writing genres' structures, templates or models, and academic vocabulary. • Use templates or advance organizers. • Conference with instructor to talk about writing goals.	• Provide models, demonstrate structure, and discuss embedded vocabulary and timeframe for writing. • Use assistive and accessible technology to support the actual spelling, transcription, revision, and proofreading.

Reference

Fisher, D., & Frey, N. (2008). *Better learning through structured teaching: A framework for the gradual release of responsibility.* Alexandria, VA: ASCD.

Join a Professional Learning Community

This section is based on an online resource created by The Center for Comprehensive School Reform and Improvement (2009). See the research support and more at www.centerforcsri.org/plc/index.html.

A professional learning community (PLC) is an approach used to establish a schoolwide or programwide culture that is based on a fundamental belief in building teacher leadership in school improvement efforts. Through participation in PLCs, teachers enhance their leadership capacity as they work as members of ongoing, high-performing, collaborative teams that focus on improving student learning.

"Being a member of our professional learning community has allowed me to step back into the role of learner again so that I may advance in my role as instructor!"

Dawn Jung,
Wyoming TEAL Team

"TEAL has been tremendously helpful in that I have learned so much from other instructors as they share ideas. My program does not gather instructors for the sole purpose of sharing what works and what doesn't—we do this 'on the fly.' I hope I have been able to contribute ideas that were useful to others!"

Maggie White-McLean,
Nebraska TEAL Team

At their core, PLCs have a belief in teacher leadership and involvement in school improvement efforts. They support calls for continuous job-embedded professional learning for educators and link professional learning to student performance.

"As such, PLCs are grounded in two assumptions related to school improvement:

- "Knowledge is situated in the day-to-day experiences of teachers and is best understood through critical reflection with others who share the same experiences.
- "Actively engaging teachers in PLCs will increase their professional knowledge and enhance student learning" (The Center for Comprehensive School Reform and Improvement, 2009).

A PLC is not a committee, and not an ad-hoc team convened to deal with a time-sensitive issue. Rather, PLCs share several key characteristics (The Center for Comprehensive School Reform and Improvement, 2009):

- **"Shared values and vision"** collaboratively constructed
- **"Collaborative culture"** that provides a mechanism for sharing responsibility for student learning and a means to work together toward a common purpose
- **"Focus on examining student outcomes to improve student learning"** and goal achievement
- **"Supportive and shared leadership"** that recognizes the leadership capabilities of teachers
- **"Shared personal practice"** as teachers share experiences, observe each other, and discuss teaching and solutions

Why Join?

By participating in PLCs, teachers may experience a variety of benefits that contribute to improved student achievement, including the following:

- Reduction of isolation
- Increased commitment to the mission and goals of the school or program
- Shared responsibility for student success

- Greater job satisfaction and higher morale
- Lower rates of absenteeism

What Does It Take?

In order to start and sustain well-functioning PLCs, programs have to consider issues of infrastructure support and visionary leadership. Both are critical to maintaining momentum, putting recommendations into action, and recognizing the challenging work the teachers are undertaking.

Reference

The Center for Comprehensive School Reform and Improvement. (2009). *Professional learning communities.* Washington, DC: Author. Retrieved December 27, 2011, from http://www.centerforcsri.org/plc/elements.html

"If we detach ourselves from the 'vine,' we will quickly wither and die! I feel like TEAL has given me an opportunity for new growth ... and I am blossoming with fresh material and lesson planning ideas that are so relevant to the generation we live in now."

Debbie Langston,
Mississippi TEAL Team

Look at Student Work Regularly

Examining our own practice as teachers means reflecting on whether our lessons are meeting our expectations for student learning. Did students learn what (we thought) we taught? Can we see the learning in our students' work products? How do we know when a lesson has been "effective"? This section provides guidance on how to create a reflective learning community that can help us study our work as teachers by looking carefully at what student work shows us about student learning.

The Looking at Student Work (LASW) professional development approach is:

- An ongoing, collaborative, team-building process.
- A research-based strategy to facilitate implementation.
- A thoughtful examination of the work of diverse learners.
- A cycle of discussion, action, and reflection.

Teams include teaching colleagues and administrators or support staff as appropriate. The team meets regularly, usually for 45–60 minutes once a month. Roles are assigned and rotate to include facilitator, recorder, timekeeper, and presenting instructor.

To begin, the team designates a hosting teacher. This instructor brings together the assignment, lesson plan, and the work of three learners with diverse abilities and needs. This process allows the LASW group to examine the range of abilities in the class to complete a common assignment. Pick one or two students' work on which to focus. Follow the LASW Protocol in Table 9 to keep the team focused and on time.

LASW Step by Step

Step 1: Reflect on learner achievement to date.

- What's working?
- What's not working?
- Where is the learner struggling?
- Are there any extenuating circumstances?

Step 2: Set the context with your lesson plan.

- What are you trying to do?
- How did you introduce and teach the concept?
- Did you present and model?
- Did you provide guided practice?
- How did the lesson go?

Step 3: Examine learner work and discuss the following:

- Instructional strategies
- Instructional sequence and amount of time spent on each step
- Ways to incorporate *UDL* principles
- Ways to integrate supports:
  - Technology supports
  - Peers
  - Aides and volunteers
  - Homework and outside supplemental study

> *"I teach with several others, and we do this on a daily basis, but just off the cuff. By utilizing LASW Protocol, we could really stick to the task at hand."*
>
> Sallee Webb,
> Missouri TEAL Team

Step 4: Identify next steps.

- Generate suggestions for instruction and support.
- The hosting instructor commits to trying one or more and documenting results.

Table 8. LASW Protocol

Task	Suggested Time (minutes)
REFLECT ON RESULTS: (by last month's hosting instructor) • Describe instructional strategies and technology tools used since last meeting (3 minutes). • Describe changes in performance (2 minutes).	**5**
SET THE CONTEXT: • Describe focal students (2 minutes). • Share and describe the lesson (2 minutes). • Identify the standard(s) addressed in the lesson (1 minute). • Pose guiding question to the team (1 minute).	**6**
TEAMWORK: • Observe the work silently (5 minutes). • Discuss observations objectively (6 minutes). • Make interpretations (3 minutes). • Recommend instructional and technology strategies (6 minutes).	**20**
PLAN TO APPLY STRATEGIES: Implementation (8–10 minutes) • Which students will you target? • What instructional strategies and technology tools will you use? • What supports do you need for using technology tools? Assessment (7–10 minutes) • Which standards apply? • What changes in performance do you expect to see? • What evidence will you collect? • What criteria will you use for evaluation?	**15–20**
TOTAL TIME	**45–60 minutes**

Note: The LASW Protocol is a component of the STAR Tech (Supporting Teachers to Achieve Results) Professional Development Program, which was developed and tested by the Education Development Center, Inc. with funding from the U.S. Department of Education, Office of Special Education Programs. The LASW Protocol is available online at http://www.cited.org/library/resourcedocs/LASW%20Protocol.doc.

Benefits of LASW

- Supports *differentiated instruction* and *UDL*.
- Fosters a reflective, effective professional learning community.
- Encourages use of research-based instructional strategies and deliberate planning.

"The LASW surprised me most [in this course]. I did not know about this model. I think this will be something that we can use in our program to improve instruction."

Cindy Heimbach,
Mississippi TEAL Team

"The Bright Spot was helpful to listen to. It made the LASW Protocol become usable for me. I'm always into tweaking. I'm thinking of it to be used as a way for the learners to help me with my lesson. They are usually very good at critiquing me."

Lynn Stewart,
Oklahoma TEAL Team

Benefits of Collaboration

Teacher collaboration is recognized as one of the keys to educational reform. Teachers sharing responsibility for student success and each others' effective teaching positively affects student achievement. Structured and recognized opportunities for teacher collaboration break the perception of isolation that many teachers feel, leading to a more productive and sharing workforce. Documented benefits include the following:

- Use of best-practice instruction more consistently
- Development of PLCs
- Accommodation of the needs of diverse learners
- Strengthening of effective implementation efforts

The Center for Implementing Technology in Education (2009) synthesizes the research by a previous AIR technical assistance project. (See more benefits in the Join a Professional Learning Community section on page 74.)

For more information, see the TEAL Center Fact Sheet on Effective Lesson Planning at the end of this section.

Reference

Center for Implementing Technology in Education. (2009). *"Looking at student work" as a strategy for integrating technology.* Washington, DC: Author. Retrieved December 27, 2011, from http://www.cited.org/index.aspx?page_id=107

Effective Lesson Planning

Planning ahead to identify a course of action that can effectively help learners reach their goals and objectives is an important first step in effective instruction. Lesson planning communicates to learners what they will learn and how their goals will be assessed, and it helps instructors organize content, materials, time, instructional strategies, and assistance in the classroom.

About Effective Lesson Planning

Planning ahead to identify a course of action that can effectively reach goals and objectives is an important first step in any process, and education is no exception. In education, the planning tool is the lesson plan, which is a detailed description of an instructor's course of instruction for an individual lesson intended to help learners achieve a particular learning objective. Lesson plans communicate to learners what they will learn and how they will be assessed, and they help instructors organize content, materials, time, instructional strategies, and assistance in the classroom. Lesson planning helps English as a second language (ESL), adult basic education (ABE), adult secondary education (ASE), and other instructors create a smooth instructional flow and scaffold instruction for learners.

The Lesson Planning Process

Before the actual delivery of a lesson, instructors engage in a planning process. During this process, they determine the ***lesson topic*** (if states have implemented content standards, the topic should derive from them). From the topic, derive the lesson ***objective*** or ***desired results***—the concepts and ideas that learners are expected to develop and the specific knowledge and skills that learners are expected to acquire and use at the end of the lesson. Objectives are critical to effective instruction because they help instructors plan the instructional strategies and activities they will use, including the materials and resources to support learning. It is essential that the objective be clear and describe the intended learning outcome. Objectives can communicate to learners what is expected of them—but only if they are shared with learners in an accessible manner. Instructional objectives must be specific, outcome-based, and measurable, and they must describe learner behavior. Heinich, Molenda, Russell, and Smaldino (2001) refer to the **ABCD's** of writing objectives:

- **A**udience – learners for whom the objective is written (e.g., ESL, ABE, GED)
- **B**ehavior – the verb that describes what the audience will be able to do (e.g., describe, explain, locate, synthesize, argue, communicate)
- **C**ondition – the circumstances under which the audience will perform the behavior (e.g., when a learner obtains medicine from the pharmacy, he or she will be able to read the dosage)
- **D**egree – acceptable performance of the behavior (i.e., how well the learner performs the behavior)

Learner assessment follows from the objectives. Based on the principles of *backward design* developed by Wiggins and McTighe (1998), instructors identify the lesson objective or desired results and then decide what they will accept as evidence of learners' knowledge and skills. The concept of backward design holds that the instructor must begin with the end in mind (i.e., what the student should be able to know, understand, or do) and then map backward from the desired result to the current time and the students' current ability/skill levels to determine the best way to reach the performance goal.

The WIPPEA Model for Lesson Planning

The WIPPEA Model, an acronym that stands for **W**arm-up, **I**ntroduction, **P**resentation, **P**ractice, **E**valuation, **A**pplication, is a lesson plan model that represents a continuous teaching cycle in which each learning concept builds on the previous one, serving as an instructional roadmap for instructors. The WIPPEA lesson plan model is adapted from the work of Hunter (Hunter, 1982). This six-step cyclical lesson planning approach has learners demonstrate mastery of concepts and content at each step before the instructor proceeds to the next step. In the following list, TEAL Center suggestions for incorporating each of these elements are included in italics.

Warm-up – Assesses prior knowledge by reviewing previous materials relevant to the current lesson. *Introduce an activity that reviews previously learned content (e.g., for a vocabulary lesson, the warm-up may be a quick matching exercise with words previously learned and their definitions), and also include an activity that focuses on the topic to be taught.*

Introduction – Provides a broad overview of the content and concepts to be taught and focuses the learners' attention on the new lesson. *Introduce the purpose of the lesson by stating and writing the objectives for learners and discussing the lesson content and benefits by relating the objective to learners' own lives. Assess learners' prior knowledge of the new material by asking questions and writing learners' responses on a chalkboard or flip chart.*

Presentation – Teaches the lesson content and concepts. *Create an activity to introduce the concept or skill (e.g., introduce new vocabulary by asking learners to work in groups to identify words related to taking medications) and then introduce information through a variety of modalities using visuals, realia, description, explanation, and written text. Check for learner understanding of the new material and make changes in lesson procedures if necessary.*

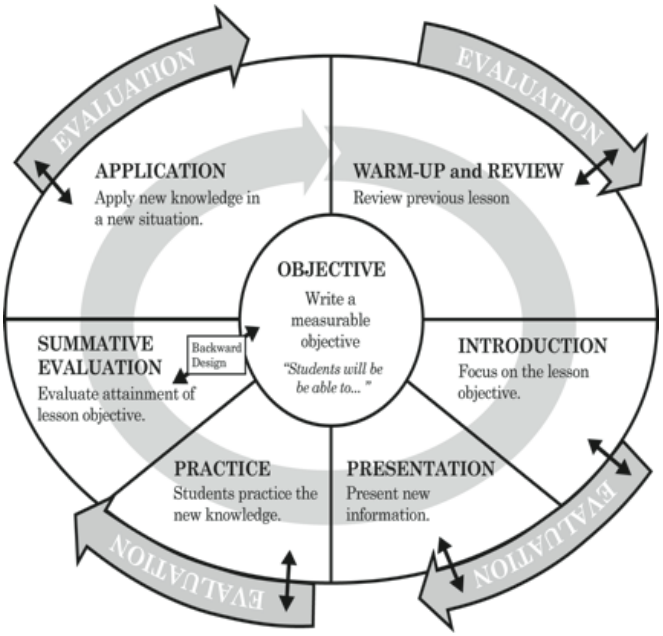
Practice – Models the skills and provides opportunities for guided practice. *Introduce a variety of activities that allow learners to work in groups, in pairs, or independently to practice the skills, concepts, and information presented. Integrate technology into activities as available.*

Evaluation – Assesses each learner's attainment of the objective. *Include oral, aural, written, or applied performance assessments. For example, ask learners to fill in the blanks on a cloze activity using the four medicine warning labels that were discussed in class. For lower level learners, provide a word bank at the bottom of the worksheet. Omit the word bank for more advanced students.*

Application – Provides activities that help learners apply their learning to new situations or contexts beyond the lesson and connect it to their own lives. *Choose activities that learners can relate to or have expressed concern about. For example, have learners read the label of a medication they or a family member may use at home to make certain they understand the meaning of the words on the label. Gather feedback from learners in follow-up classes and help them assess what additional support, if any, they may require.*

The following graphic integrates the WIPPEA process with backward design in a lesson planning wheel. In this cyclical approach, teachers assess prior knowledge, provide a broad overview of the content/concepts to be taught, introduce vocabulary, teach content/concepts, check comprehension, combine the content and vocabulary through guided practice, evaluate student performance, and provide an application activity. Instructional strategies vary depending on the lesson content and skill areas and the needs of the learners.

Figure 1. Planning Wheel



Planning for *differentiated instruction* requires various learner profiles to inform the process (See TEAL Center Fact Sheet No. 5. on Differentiated Instruction. Students demonstrate mastery of concepts/content in each step before the teacher proceeds to the next step.

The relationship of the objective to the evaluation keeps the lesson focused and drives instruction. By keeping the end in mind (backward design) and creating the evaluation activity at the beginning of the lesson, the teacher has a clear destination for the lesson and a roadmap to get there. Instructors can then select materials and activities that will best prepare students to successfully complete the evaluation activity in the lesson. The process is repeated for each learning objective. Lesson planning is an ongoing process in which instruction flows from one objective to the next. This cyclical process is repeated for each learning objective.

How Does Lesson Planning Benefit Learners and Instructors?

Instructors and learners benefit from thoughtful lesson planning. It provides a framework for instruction, and it guides implementation of standards-based education. Lesson planning establishes a road map for instructors of what has been taught and what needs to be taught. It allows them to focus on one objective at a time and communicate to learners what they will learn in each lesson. Because lessons incorporate ongoing assessments that determine how well learners understand concepts and skills, instructors are able to make mid-course changes in instructional procedures or provide additional support to learners. Additionally, the practice and application components of the lesson help learners use the new skills and knowledge in educational and other settings, thus promoting generalization and relevance.

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Use Technology Effectively

In this section, we provide ideas on how you can use the technology you have more effectively in the teaching and learning environment. We recognize the challenges adult education settings have with uneven technology infrastructure (to say the least); however, there are ways to be creative, and we hope to inspire you to try out some of these ideas.

See the TEAL Center Fact Sheet on Technology Supported Writing Instruction at the end of this section for ideas on how to support writing at every stage with specific tools.

One Computer, No Presentation Capabilities

"I find our class uses a variety as well including voice recorders, video recorders, laptops, PowerPoint, i-pods, zip drives, and projectors. It really seems to keep that twinkle in the students' eyes when they are utilized. However, many of us could probably agree that the cost is really an issue. … Perhaps collaborating resources with nearby districts may alleviate some restrictions. My class works very closely with the schools in our neighboring school districts … because the adult parents that I teach have children that attend schools in close proximity. I find that the teachers are very willing to set aside time to allow our class to visit, a field trip if you will, to learn on the SMARTboards that their very own children [use]."

Teacher,
New York TEAL Team

Make sure everyone has an e-mail address (at least a free account such as Hotmail, Yahoo!, or Gmail). In this way, you can exchange digital materials with students. If you do not have access to a computer laboratory or public computers where you can help get this accomplished, work with a partnering organization to do so. The public library, a community center, a local school (public, private, or charter) or college, a vocational rehabilitation center, One Stop, or even a business that has a computer laboratory may be an effective partnering organization. Teach learners how to open and send attachments.

Huddle Up! Use video and multimedia content on full-screen view, and have learners huddle around the one screen. Use this content to demonstrate a concept, introduce background knowledge, or make a point. Consider the learners' ability to see details in such a situation. Send them home with the Web address so that they can watch the clip again on their own time, with better viewing capacity.

E-Mail Supplemental Materials to Learners. Discuss the materials and your expectations for their work in advance while you have learners in class, and discuss again as a debriefing activity. For example, if you want learners to do Web research, discuss ways to organize what they find and learn. Examples include the following:

- Discuss/show on the whiteboard how to copy the URL and how to paste it into an e-mail. Get everyone in the habit of annotating the URL with their thoughts and review of the material. If all learners e-mailed you a few annotated URLs where they found good material on a topic, you could create quite a robust list of resources.
- Discuss/show how to capture a screenshot and paste it into an attachment or e-mail. This process is incredibly helpful to document the moment when "I got stuck"!
- Look for supplemental materials that generate a document that learners can print, save, or e-mail to themselves or you. This provides a learning object on which you can continue to build.

Survey Learners for the Technology Tools They Have in Their Pockets. If at least every two learners have a smart phone and a data plan that allows them to get e-mail in the class, find applications that can be e-mailed or sent via text messaging to the cell phones. Look for compact and mobile software programs if learners are working on tiny screens and keyboards.

Here are some examples:

- Dr. Dictionary, Word of the Day (http://dictionary.reference.com/wordoftheday/list/) – available by e-mail, text message, twitter feed.
- Grammar Girl (http://grammar.quickanddirtytips.com/) – has Q&A for many common grammatical challenges; subscribe to the newsletter or Facebook page and learn a tip at a time.
- Language translation sites (http://translate.google.com/#).
- Google mobile browser (www.google.com/mobile/) – which runs much better on phones.
- This Day in History for history buffs (www.history.com/this-day-in-history) – available by e-mail; find similar sites for sports, arts, movies, cooks, poetry, Bible readers—almost anything!
- Twitter! You can find a Twitter feed for any interest that will send short headlines and teasers; you might consider starting a Twitter channel for your classroom so that you can send links to classroom and supplemental materials. See what's happening nationally in adult education by searching www.Twitter.com for #adulted.

"We use YouTube; often I just turn my monitor around so the class can see."

Hilary Gwilt,
Texas TEAL Team

An Instructor's Computer With Presentation Equipment

In addition to what you can do with one computer, when you have a projector, there are many other ways you can engage learners. Almost everything that you want your learners to do with technology should be considered a new skill that has to be explicitly taught. Start by demonstrating how to use the features.

- Demonstrate sentence-combining techniques in your focus lesson by underlining or highlighting the key word from the second sentence and demonstrating editing a new word into a text string.
- Demonstrate various editing and revision features of your word processing software, such as highlighting related ideas by color code for reorganization, how to use track changes, how to add comments, and how to cut and paste.
- Teach the use of spell checkers! Discuss the suggested words and why they may be included, and teach learners how to choose the right word or work to get a better selection. (Focus on trying to spell the beginning sounds of a word to get a closer match.)
- Teach learners how to use text-to-speech to listen to their writing as a proofreading and revision strategy.
- A single computer also can be a way to introduce websites, software, and ideas you want learners to explore on their own as supplemental to the classwork.
- Show learners in whole or small groups the websites that you want them to explore on their own time at home, in open laboratories, or in libraries. Use TrackStar (http://trackstar.4teachers.org/trackstar/index.jsp) to create a set of URLs or "track" for individual learners or groups working on similar skills. Search the TrackStar site for tracks created and shared by other teachers, or sign up for the "track of the day."

"I have used my ELMO and also find it very useful—not only as a quick way to 'throw' something up on the screen, but also to change and add to it. It works great for math as well as writing. It also means you can model writing and the students can see what you're doing because you're not blocking the board!"

Jonathon Moore,
Mississippi TEAL Team

Classroom Technologies

- SMART Boards have a wide range of functions, from projecting presentation slides and Internet sites to serving as an interactive surface that gets learners working together, solving mutual problems. One of the best features is the ability to print the screen, so that all work related to a lesson is saved for later discussion. They are great for showing editing, sentence combining, graphic organizers, planning, and revising.
- ELMOs are projectors that do not require a laptop—they simply project onto the wall or screen, whatever is put under the lens. You can project student work samples, writing taken from magazines, photos, a notebook page with annotations—anything! When they are connected to laptops, ELMOs can project anything on the screen. They are great for showing editing, sentence combining, graphic organizers, planning, and revising.
- Digital cameras and recorders can get learners out in the community and bring the community back into the classroom with digital stories. Learn about the use of digital stories in adult education at www.creativenarrations.net/.

Nothing!

We hear this from correctional educators who work in the most constrained instructional environments with learners who have little control over their own schedules. However, even with no Internet technology, you can introduce the concepts learners might encounter when they do gain access.

- Teach the vocabulary that describes technology and program features; it changes all the time!
- "Cut and paste" during revision. Do it physically with papers that are ripped apart and taped back together in a new order.
- Highlight and comment with physical highlighters and self-adhesive notes.
- Save "documents" in "folders" that are named, dated, and organized on your "desktop."
- "Tweet" and "text" short headlines and review comments to check for understanding as an Exit or Entrance Ticket (See Writing to Learn on page 21). Count the number of words rather than characters.
- "Google it." Digital literacy depends on being able to judge the value of what you find. Bring in various levels of credible information on a topic of discussion. Talk about how you can tell whether something is worth reading, worth citing, how to cite an article found online, and so on. Describe or draw on the whiteboard how search engines display returns with commercials, paid advertising on top and on the side, and freely available sources listed in the middle of the page. Talk about "photoshopping" and how images can be altered. This knowledge will hold learners in good stead when they do get online.

Technology-Supported Writing Instruction

Using technology to support instruction in writing is undeniably important in the digital age. It is also a key evidence-based method for supporting struggling writers. But which technologies support which components of writing instruction? This fact sheet provides an overview of the various types of writing tools.

About Technology-Supported Writing

Using technology to support instruction in writing is undeniably important in the digital age. It is also a key evidence-based method for supporting struggling writers (Graham & Perin, 2006). But which technologies support which components of writing instruction? This fact sheet summarizes the larger work, *Supporting Struggling Writers Using Technology: Evidence-Based Instruction and Decision-Making*, by Peterson-Karlan and Parette (2007), and it provides an overview of the various types of writing tools.

Technological support can advance all phases of writing—planning, transcribing, and revising. For learners who struggle with any or all of these aspects, technology can enable and liberate thoughts from mechanics and free up the expression of ideas. In fact, research shows that technology-supported writing not only enables skills but also teaches them at the same time, so that users grow their understanding of mechanics, spelling, organizing, and so on when they write with technology tools.

Technology also creates new forms of writing. Technology provides new sources for and means of obtaining information (e.g., the Internet, search engines, blogs, and texting) and enables sharing, editing, and collaboration among writers, teachers, and peers. New electronic genres and multimedia forms involve a combination of media, including print, hyperlinks, still images, video, and sound.

Writing in the Adult Education Classroom

Adult educators teach all kinds of writing. In any one class, an instructor may provide help with letters to elected officials, spelling instruction, vocabulary development, journal writing, and publishing adult student voices on a blog. Learners, meanwhile, are trying to orchestrate the many aspects of writing for various purposes. Analyzing which writing component to focus on at what time requires skill, reflection, and practice from instructors and learners alike.

Whether learners have access to computers in the classroom, in a lab, or only outside of the program, technology can help provide scaffolds and supports throughout the writing process. Even if learners are preparing for a paper-and-pencil essay test such as the current GED Language Arts Test, writing with technology will surely figure into their academic and vocational futures. Helping them become familiar with, and productive in using, the technologies that best suit their needs is an important service. At minimum, programs should insist that all learners be familiar with keyboarding. Keypads and keyboard interfaces are ubiquitous in American culture, from ATMs to cell phones to grocery store registers, and all workers encounter them in the workplace. There is a variety of online, free keyboarding tutorials that offer practice that can be found through a simple Internet search.

Consider the types of technology supports outlined in the following sections for various writing instruction tasks and learning needs. Remember, technology is not a substitute for a comprehensive writing curriculum; these tools should be integrated as scaffolds and supports. And, as with all technologies, learners need *direct instruction* and guided practice in the use of the tools so that they facilitate productivity rather than cause frustration.

The Research

Peterson-Karlan and Parette (2007) conducted a literature review of the research supporting writing development for struggling K–12 students. Their findings echo Graham and Perin in *Writing Next* (2007) and in What We Know, What We Still Need to Know (2007), who find that technology to support struggling writers is a critical, evidence-based instructional strategy.

Peterson-Karlan and Parette go further, looking at the research base of particular types of technology tools developed to support particular writing components. They refer the reader to www.TechMatrix.org, an online database of research and

technology products reviewed for their design and accessibility features. Search the following keywords for reviewed products, research, and resources related to these tools.

Strategies for Technology Use

Planning and Organization. Research emphasizes that struggling students of all ages do not plan and organize their writing successfully. Prompt learners to consider appropriate vocabulary, related ideas and topics, genre-specific text-structures, possible outlines, and arguments. Provide opportunities to practice reflecting on and organizing these thoughts in advance of starting the assignment. To support planning, try the following:

- **Electronic mapping, outlining, and draft templates,** especially those that are genre-specific and that contain embedded content prompts and procedure cues, help structure a prewriting brainstorm, and capture thoughts for later reflection. Many adult learners have not learned with visual *advance organizers* and need specific instruction in how to use them. After students are familiar with the strategy, the tools themselves are easy for even computer novices to manipulate.
- **Portable and Internet-based reference tools**, such as electronic dictionaries, spell checkers, reading pens, and translators can help students find, learn, and use the appropriate content vocabulary in their writing. Use online, free reference tools in the program, and encourage students to purchase these inexpensive study tools.

Transcribing. The many sub-skills within transcription have been described as a "juggling act" (Berninger, 1999) in which the writer must juggle (a) planning what to say and how to say it, (b) selecting words and sentence and discourse structures, (c) producing text, and (d) monitoring what has been written with what is about to be written while revising. Handwriting and spelling skill limitations interfere with the ability of beginning, developing, and struggling writers to translate oral language in memory (text generation) into written language on paper (text production). Learners with disabilities or those who struggle with any one of these sub-skills often experience frustration and demotivation toward the writing process. Several technology tools can support learners in acquiring these skills.

- **Word processors** allow for manipulation and rearrangement of digital text; with built-in spelling and grammar checkers, the use of word processors for writing in the workplace is increasingly expected.
- **Word prediction and cueing** use the logic of linguistics to predict the most reasonable next words to a typed beginning. The words can then be selected from a list, thus minimizing spelling effort and keystrokes. (Most cell phones have a version of this in the texting function.) These programs work simultaneously with word processors, often functioning instead of the built-in spell checker. Consider using word prediction with text-to-speech output for students with persistent spelling difficulties or with physical impairments that limit typing.
- **Speech recognition** systems turn the spoken word into digital text. The process of correcting and cleaning up that transcription has been likened to the language experience approach (Silver-Pacuilla, 2007). Consider trying speech recognition with learners who are unable to type successfully, whose spelling is debilitating to the writing process, or whose thoughts run faster than their ability to write.

Editing and revising. The final major phase of the writing process involves several more skills. Editing, or proofreading, involves detecting and correcting errors of spelling, punctuation, capitalization, and grammar to improve written accuracy. Revising is improving the organization of ideas, the clarity of the composition, and the supporting details, and considering the audience. Two types of technologies address the challenges presented by the editing and revising process:

- Spell checker use should be taught strategically so that users understand the reasons for possible errors and learn strategies to choose a correct word out of the provided list; use those programs with text-to-speech output and phonemic prediction to improve word list offerings.
- Text-to-speech enables learners to have their compositions read back to them. As in the language experience approach, they can then pay attention to the sound of the language to catch wording, phrasing, punctuation, and grammatical errors.

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Notes

Glossary

A

abstraction—The ability to distill an essential message or meaning from a text. Abstraction is an essential skill for summarizing and many kinds of analysis.

accommodations—Techniques and materials that are legally required to reduce or eliminate the impact of a learning disability on successful learning and performance. Examples of accommodations include spell-checkers, tape recorders, and expanded time for completing assignments.

adaptations—Alternative techniques and/or materials provided by a teacher for individual learners to increase the effectiveness of instruction. Unlike accommodations, which are legally required for persons with documented disabilities, adaptations may be made for any learner, on an as-needed basis, and do not require the documentation of a disability. Two examples of adaptations are as follows: providing large-print materials for older learners with diminished visual acuity or allowing the use of native language dictionaries for learners whose primary language is not English.

> **adapted materials**—Authentic texts and other materials that have been modified for lower-level learners. The format, vocabulary, grammatical forms, or sentence structure of authentic materials can be adapted. (*See also authentic materials.*)

advance organizers—*See graphic organizers.*

allusion—A figure of speech that makes a brief reference to a literary work or a historical event.

analysis—An examination of the elements of a text to reveal how the text operates as a whole. In writing, analysis is a method of idea development in which the writer closely breaks apart a subject or topic to examine its parts and the relationships of the parts to reach new conclusions about the whole.

analytical or technical focus—Writing that has as its central focus a controlling idea that must use analysis (the breaking down and examining of parts) to develop that focus. A technical focus would indicate a highly specialized form of writing, such as that usually found in the technical fields (e.g., science) that has as its focus a controlling idea pertaining to that specific field.

anchor activities—Activities that extend the curriculum and in which learners may participate if they have spare time while waiting for the teacher's help or after they have completed a task.

antithesis—A contrast or opposition of thought; the opposite. In persuasive writing, it is the idea that every argument generates a counterargument. In effective persuasive writing, opposing arguments should be addressed and rebutted.

argument—A writer's informed, supportable opinion or stand.

assessment—The process of gathering, describing, or quantifying information about performance. It is a general term that refers to tests and other measures, such as oral reading performances, collections of writings and other work products, teacher observations, and self-evaluations. It is the process of collecting and analyzing data to make educational decisions. (*See also portfolio.*)

> **alternative assessment (also called authentic or performance assessment)**—Any of a variety of assessments that allow teachers to evaluate learners' understanding or performance. It is an assessment that requires learners to generate a response to a question rather than choose from a set of responses provided to them. Examples include exhibitions, investigations, demonstrations, written or oral responses, journals, performance assessments, portfolios, journals, and authentic assessments.

assessment portfolio—A selection of a learner's writing submitted for assessment purposes. The learner, in conferences with teachers, chooses the entries for this portfolio. Ideally, the writings will grow naturally out of instruction rather than being created solely for the portfolio.

authentic assessment—*See alternative assessment.*

formative assessment—A part of the instructional process. When incorporated into classroom practice, it provides the information needed to adjust teaching and learning while they are happening. In this sense, formative assessment informs both teachers and learners about learner understanding at a point when timely adjustments can be made. These adjustments help to ensure learners achieve targeted standards-based learning goals within a set time frame. Although formative assessment strategies appear in a variety of formats, there are some distinct ways to distinguish them from summative assessments.

performance assessment—*See alternative assessment.*

summative assessment—An assessment given periodically to determine at a particular point in time what learners know and do not know. Summative assessments may take the form of standardized tests, such as state assessments or assessments at the district or classroom level for accountability purposes, and generally are used as part of the grading process. They provide a means to gauge learning relative to content standards. Summative assessments happen too far down the learning path to provide information at the classroom level and make instructional adjustments and interventions *during* the learning process. Formative assessment accomplishes this.

assistive technology—Equipment that enhances learners' ability to access instruction and be more efficient and successful. Examples include computer grammar checkers, teacher use of an overhead projector, or audiovisual information delivered through a CD-ROM.

attention deficit disorder (ADD)—A disorder characterized by severe and persistent difficulties in one or more of the following areas: attention, impulsivity, and motor behaviors. These difficulties can lead to learning and behavior problems at home, school, or work. *(See also attention deficit hyperactivity disorder [ADHD].)*

attention deficit hyperactivity disorder (ADHD)—Attention deficit disorder with hyperactivity or excessive and exaggerated motor activity.

audience—The specific person or readership for whom a piece of writing is intended. Awareness of an authentic audience affects important decisions a writer makes about the piece (e.g., purposes, methods of support, organization, word choice, details, form, voice, and tone).

audience awareness—A writer's assessment of the mind-set, opinions, and personal traits of readers and how these factors may influence readers' understanding of his or her writing.

auditory—Having to do with the sense of hearing.

auditory discrimination—The ability to differentiate among speech sounds.

auditory perception—The ability to recognize sounds.

auditory memory—The ability to remember information that has been presented orally.

authentic—Original, realistic, and genuine. When applied to writing, authentic means that the work is the learner's own, done for a realistic purpose and readership and in a realistic form that logically fits the purpose and audience or situation. The writing reveals a genuine effort to communicate with others; it is not merely an academic exercise.

authentic assessment—*See assessment*.

authentic materials—Actual reading or listening materials, not modified or simplified, from the real world (e.g., newspaper articles, pamphlets, and radio broadcasts). (*See also adapted materials*.)

authentic task—An assignment given to learners designed to assess their ability to apply standard-driven knowledge and skills to real-world challenges.

author's craft—The techniques an author chooses to enhance writing. Examples include style, bias, point of view, flashback, foreshadowing, symbolism, figurative language, sensory details, soliloquy, and stream of consciousness.

automaticity—Automatic and correct responses to stimuli without conscious effort.

B

background knowledge—Information that is essential to understanding a situation or a problem. It is what one already knows about a subject.

backward design—A method of designing curriculum by setting goals before choosing activities or content to teach. The idea is to teach toward those goals, which ensures that the content taught remains focused and organized, promoting a better understanding for learners. Backward design challenges traditional methods of curriculum planning, in which the teacher lists the content to be taught and proceeds to assessment to measure the extent to which learners have mastered the content. With backward design, the teacher starts with goals, then assessments, and finally lesson plans.

benchmarks—*See standards*.

Bloom's taxonomy—A hierarchy of six levels within the cognitive domain, from the simple recall or recognition of facts (knowledge) as the lowest level through increasingly more complex and abstract mental levels (understanding, application, analysis, synthesis) to the highest order (evaluation). Benjamin Bloom created this taxonomy for categorizing levels of abstraction in questions that commonly occur in educational settings.

brainstorming—A group thinking process for developing creative solutions to problems. The group thinks open-mindedly about a topic or a problem and generates a written list of possibilities without worrying if any possibility is reasonable or not. One of the reasons this technique is effective is that the brainstormers not only come up with new ideas but also spark associations from other people's ideas by developing and refining them.

C

carousel brainstorming—A strategy in which learners brainstorm responses to prompts or questions written on a flipchart page and placed at five different stations around the room. Learners rotate from station to station and discuss their responses with others in their group. Teachers may use carousel brainstorming as a preassessment tool or as a review opportunity.

chunking—The working memory has a capacity for immediate recall that is limited to five to nine pieces of unrelated items. If information is separated into chunks of that size, learners can remember it more successfully.

cloze procedure—An activity created by the teacher to give learners practice with language usage. The teacher selects a passage of text, marks out some of the words, and then rewrites the text with blank lines where the marked out words were. The result is a "fill in the blank" activity that should be enjoyable for the learner while at the same time giving the teacher information about the learner's language skills.

cognitive learning—Learning that is concerned with acquisition of problem-solving abilities and with intelligence and conscious thought; it is demonstrated by knowledge recall and skills such as comprehension; ability to organize, analyze, and synthesize ideas and data; applying knowledge; and evaluating ideas or actions.

cognitive map—The psychological definition of a cognitive map is the framework in the human mind through which we interpret objects, events, and concepts. The phrase *cognitive mapping* also has been used to describe concept maps.

cognitive skills—Skills that are used for thinking, comprehending, analyzing, or evaluating.

cognitive strategy—A strategy or group of strategies or procedures that a learner uses to perform academic tasks or improve social skills. Often, more than one cognitive strategy is used with others, depending on the learners and their schema for learning. In fact, research indicates that successful learners use numerous strategies. Some of these strategies include visualization, verbalization, making associations, chunking, questioning, scanning, underlining, accessing cues, using mnemonics, sounding out words, and self-checking and monitoring.

cognitive strategy instruction (CSI)—An instructional approach that emphasizes the development of thinking skills and processes as a means to enhance learning. The objective of CSI is to enable all learners to become more strategic, self-reliant, flexible, and productive in their learning endeavors. CSI is based on the assumption that there are identifiable cognitive strategies, previously believed to be used by only the best and the brightest learners, which can be taught to most learners. The use of these strategies has been associated with successful learning.

coherence—The quality achieved when all ideas in a written passage are clearly arranged and connected. The arrangement of ideas, within and among paragraphs, should be organized in such a way that the reader can easily move from one point to another. When all ideas are arranged and connected, a piece of writing has coherence.

collaborative learning—Any kind of work that involves two or more learners.

compacting—A strategy that allows learners to demonstrate what they already know or can do, provides an opportunity to learn or master what they do not already know, and then allows them to spend the time earned from compacting to participate in enrichment, or extension activities, and/or accelerated study.

concept map—*See graphic organizers.*

conference—A writer-centered conversation with a teacher, a peer, or others about a piece of writing with the intent of exploring process strategies and/or revision and editing possibilities. Conferencing is an important instructional strategy. It provides specific feedback at the point at which a writer can best make use of it.

connected instruction—As a key principle of learning disabilities–appropriate instruction, it involves showing the adult learner how information in and between units and lessons is linked to learning and to the adult's goals.

connectionism—Edward L. Thorndike's behavioral theory that learning occurs as the result of connections made in the mind between stimuli and responses.

constructivist models—Models based on the philosophy that knowledge cannot be transferred from the teacher to the learner but must be constructed by each individual. Connections must be made between the learner's existing conceptual network and the new material to be learned.

content mastery approach—A teaching method wherein a learner receives intensive instruction in topics that are needed for daily living, such as obtaining insurance, getting a driver's license, completing tax forms, and procuring health care services.

conventions—Features of standard written English that usually include sentence formation, grammar, spelling, usage, punctuation, and capitalization.

content-based instruction—Using subject matter such as life-skills topics (e.g., housing and work), themes, or academic course materials (e.g., math, science, and social studies) as a basis for language teaching.

content standards—See *standards*.

contextualized instruction—Instruction that is presented within a meaningful context to facilitate learning (e.g., the grammatical structure of commands taught within the context of a doctor's visit: "Open your mouth." "Raise your arms.").

cooperative learning—A range of team-based learning approaches in which learners share knowledge and work together to complete a task. Cooperative learning originated in the 1960s with the work of David Johnson and Roger Johnson. True cooperative learning includes five essential elements: positive interdependence, face-to-face interactions, individual accountability, some structured activity, and team-building (group processing) skills.

cooperative planning—The teacher announces a topic or a problem and asks learners to help think about the best ways to deal with it.

coping strategy—A method or behavioral strategy that helps an individual succeed despite learning or other disabilities.

COPS (capitalization/organization/punctuation/spelling)—A process that helps learners remember the aspects of their writing that they should check when editing.

correctness—Writing that is presented in a format acceptable to one's audience, community, or writing instructor. Correctness is not necessarily a standard of inherent value, but being able to maintain standards of acceptability is a survival skill for academic writers, in fact so much so that it has frequently been confused with "learning to write." In class, correct writing varies according to the assignment, the phase of writing (such as freewriting or graded draft), the genre, and other factors. Most of our writing instructors allow for multiple revisions that facilitate better proofreading. (*See also mechanics, grammar, and proofread/proofreading.*)

> **correctness issues**—A feature of writing, such as spelling, punctuation, capitalization, abbreviation, and documentation. Concern with correctness too early in the process inhibits fluency and revision.

counterargument—*See antithesis.*

criteria—Guidelines, rules, characteristics, or dimensions used to judge the quality of learner performance. Criteria indicate what we value in learner responses, products, or performances. They may be holistic, analytic, general, or specific. (*See also scoring rubric.*)

critical content—Specific information that a learner needs to master for a given task, such as the skills needed to pass a driver's test.

critical thinking—Skilled and active interpretation and evaluation of observations and communications; reasonable, reflective thinking that focuses on deciding what to believe or do. It is relevant not only to the formation and checking of beliefs but also to deciding on and evaluating actions. It involves creative activities such as formulating hypotheses, plans, and counterexamples; planning experiments; and seeing alternatives.

cubing—As a strategy for differentiating instruction, it allows a teacher to plan diverse activities for different learners or groups of learners based on readiness, learning style, and/or interests. The teacher creates a cube for a group of learners. On each of the cube's six faces, the teacher describes a different task related to the subject and/or concept being learned.

cues—Visual or verbal prompts to either remind the learner what has already been learned or provide an opportunity to learn something new. Cues can also be employed to prompt learner use of a strategy.

cue-do-review—A teaching strategy to help ensure learning: the teacher should cue the learner, explaining the level of instruction, do the activities in partnership with the learner, and review the learning at the end of each level.

culture—Shared values, attitudes, beliefs, behaviors, and language use within a social group. These cultural values, beliefs, and practices are at the core of group life and identity and are powerful forces that shape or influence individual attitudes, beliefs, and behaviors.

cultural competence—An ability to interact effectively with people of different cultures. It consists of four components: (1) awareness of one's own cultural worldview, (2) attitude toward cultural differences, (3) knowledge of different cultural practices and worldviews, and (4) crosscultural skills. Developing cultural competence results in an ability to understand, communicate with, and effectively interact with people across cultures.

cultural dissonance—A phenomenon that may present itself when someone who participates in multiple cultures is faced with situations where there are perceived conflicts between a set of rules from one culture and the rules of another. May also refer to an uncomfortable sense of discord, disharmony, confusion, or conflict experienced by people in the midst of change in their cultural environments. The changes are often unexpected, unexplained, or not understandable as a result of various types of cultural dynamics.

curriculum—What should take place in the classroom. It describes the topics, themes, units, and questions contained within the content standards, which are the framework for the curriculum.

D

decoding—A process of recognizing unfamiliar written words by sequentially segmenting the sounds represented by the letters of the word and then blending the sounds into a meaningful word or syllables that are then combined into words.

diagnosis—The confirmation of the existence of a condition by someone qualified to reach such a conclusion. For example, a licensed psychologist can make a diagnosis of a learning disability.

diagnostic test—An aid to assessment that yields information concerning a learner's weaknesses in areas such as reading or math. It is composed of several parts, including personal history and psychoeducational tests.

dialogue writing—The re-creation of a conversation scene as if it were occurring in real time, usually by using direct quotation and attributing this to specific characters.

differentiated instruction—Occurs when the teacher provides multiple options for learners to take information, make sense of ideas, and express what they learn. In providing diverse avenues for learners to access information, the teacher ensures that each learner learns effectively. The components of differentiated instruction include the following: (1) what to teach, or content; (2) how to teach it, or process; (3) how to find out whether learners have learned it; and (4) the environment in which the instruction occurs.

direct instruction—A teacher-centered instructional approach that emphasizes the use of carefully sequenced steps that include demonstration, modeling, guided practice, and independent application. It is characterized by high rates of teacher control during the initial stages of information acquisition, followed by careful performance monitoring as the learner gradually assumes control over application. The instruction is structured, modular, and sequential (simple to complex and concrete to abstract). The teacher provides the learners with much of the information they need, often through lectures, explanations, examples, and problem solving. Most direct instruction techniques allow for only minimal learner-teacher interaction, and they need to be supplemented by review, practice, and group discussions.

E

editing—Checking for and correcting errors in spelling, punctuation, capitalization, grammar, and usage. Editing becomes a concern only after writers are satisfied that the writing clearly says what they want it to say; editing is the final stage of document preparation. (*See also proofread/proofreading.)*

emergent literacy—The concept that learning to read or write does not happen quickly but is built on many small steps that occur over the course of a child's early childhood. The process begins with activities that happen naturally in the home, such as talking with and reading with the child and then continues in the classroom with more formalized strategies to encourage reading and writing.

elaboration—Words used to explain and in some way support the central idea; it is the development and expansion of ideas and arguments. Elaboration varies with the type of writing. (For example, a report may have statistics, examples, anecdotes, and facts, while a narrative would have description, dialogue, show-not-tell, and other related items.)

embedded questions—Embedded questions begin with phrases such as "Do you know…" and "Can you tell me…" and are followed by a noun clause that begins with who, what, where, when, why, how, or if. In the noun clause, the verb order is not transposed as it is in a question, (e.g., Can you tell me where it is?)

embedded statements—Embedded statements look as if they are questions inside sentences. An introductory clause is followed by a noun clause that begins with *who, what, where, when, why, how,* or *if*. In the noun clause, the verb order is not transposed as it is in a question (e.g., I don't know *who* he is. I can't remember *where* I put it. I wonder *when* she left.)

encoding—A process in spelling by which learners segment sounds of a word, translate each phoneme into its corresponding letter, and then spell the word. Encoding requires predictable sound-symbol correspondences and phonic generalizations (spelling rules).

essay planning—Prewriting strategies and techniques, such as freewriting on the essay topic, writing a proposal, outlining, and research.

executive function—Cognitive processing of information that takes place in areas in the left frontal lobe and prefrontal cortex that exercise conscious control over one's emotions and thoughts. This control allows for patterned information to be used for analyzing, connecting, organizing, planning, prioritizing, sequencing, self-monitoring, self-correcting, and sorting, as well as abstracting, assessing, focusing attention, problem solving, and linking information to appropriate actions.

exit cards—A formative assessment technique whereby learners fill out a 3-by-5 card at the end of class and respond to open-ended questions posed by the teacher. It is a great way for a teacher to assess learner understanding and readiness for the next lesson.

experiential learning—Carl Roger's theory that there are two types of learning: cognitive (memorizing or studying simply because work is assigned) and experiential (learning to satisfy the needs and wants of the learner). Studying a book with commonly used phrases in Norwegian is experiential if you are planning a trip to Norway, but the same activity is cognitive if you are taking a language class and the teacher assigns reading from the book.

explicit instruction—The intentional design and delivery of information by a teacher to learners. It involves presenting content clearly and directly, providing detailed explanations and models about how to approach, think about, perform, and evaluate learning and performance. It includes three steps: (1) the teacher's modeling or demonstration of the skill or strategy; (2) a structured and substantial opportunity for learners to practice and apply newly taught skills and knowledge under the teacher's direction and guidance; and (3) an opportunity for feedback.

expository text—Expository text presents and explains facts and information about a topic. It is distinguished from narrative text, which tells a story or relates a series of events.

F

facilitative questioning—To facilitate means to help another person accomplish something. Facilitative questioning is an approach whereby a teacher or a counselor poses open-ended questions to learners to allow them to explore ideas that may be complex or emotionally difficult. In writing classes, the purpose of facilitative questions is to allow a teacher to give assistance to learners without actually contributing new ideas to the work being written. In counseling, the purpose of facilitative questions is to allow learners to generate their own solutions to problems or tasks without being unduly influenced by the counselor's ideas. Facilitative questioning is used most often in situations where there is no right answer, but the solution is dependent on what is best for the individual.

feedback—The means by which a teacher informs a learner about the quality or correctness of the learner's products or actions.

figurative language—Techniques used in writing (particularly expressive writing) to create images (e.g., similes, metaphors, alliteration, assonance, personification, onomatopoeia); it is language that communicates ideas beyond the ordinary or literal meaning of the words (e.g., simile, metaphor, hyperbole, personification). Examples are found in phrases such as the following: "perky as a puppy," "eyes like burning coals," and "a stony silence."

flexible grouping—A method of grouping and regrouping learners according to differences in readiness/performance, interests, and learning profiles. Learners may work in groups with different learners several times a day or in a week.

fluency—The flow of words and ideas and the ease with which a writer generates and expresses those ideas in writing.

focus—A writer's main point or idea.

formative assessment—*See assessment.*

freewriting—A timed activity to stimulate the flow of ideas and words; it is unplanned, unstructured writing that is usually not graded or evaluated. Learners are given a topic and must write everything they can think of about the topic. Learners must not stop writing, even if they "run out of things to say," and they may not do any editing or criticism during the writing.

G

generalizable instruction—Activities before, during, and after information has been mastered that ensures the continued application of the information by learners to increase life success outside the literacy setting. It refers to how well learners use information outside the classroom to increase their success in life.

general-to-specific sequencing—An instructional approach in which objectives are presented to learners, beginning with general principles and proceeding to specific concepts.

generative revision—*See holistic revision.*

generative writing—Writing, usually unstructured, that leads to a greater flow of ideas and usually to more structured and developed writing. Freewriting, journal writing, reading responses, and other types of brainstorming exercises are common types of generative writing.

genre—A literacy category or form of writing (e.g., article, short story, poem, editorial); the main literary genres are fiction, nonfiction, poetry, and drama. Each type conforms to specific expected rules and, often, a unique format. It is also any generally recognized classification of texts, such as a short story, a novel, a play, an epic or a lyric poem, and an essay.

goal setting—An effective tool for making progress by ensuring that learners are clearly aware of what is expected from them if an objective is to be achieved. It involves establishing specific, measurable, and time-targeted objectives.

gradual release—An evidence-based instructional model in which a teacher purposefully transitions from performing a task to mentoring learners to gradually assume responsibility until they can perform the task independently. It is a means of mentoring learners to become capable thinkers and learners in performing tasks they have not yet mastered. This model of instruction has been documented as an effective approach for improving writing achievement, reading comprehension, and literacy outcomes for English language learners.

grammar—The structure of language. In the context of writing instruction, it is frequently misapplied to mean correctness in a written text ("good grammar," "bad grammar"). (*See also correctness.*)

graphic organizers—Visuals used to organize information so it can be more easily represented, recalled, or understood (e.g., word webs, flowcharts, Venn diagrams, charts, and tables). These mental maps help learners make connections between concepts. Graphic organizers represent key skills, such as sequencing, comparing and contrasting, and classifying. They involve learners actively in the thinking process, and they provide tools to help learners organize and structure information. They can be used in advance, during, and/or after presentation of information: those used before learning (an *advance organizer*) help remind learners of what they already know about a subject; those used during learning provide cues for what to look for in the resources or information; and those used during review activities help remind learners of the number and variety of components to remember.

> **advance organizer**—A concise overview or summary of a larger body of information that is used to gain prior knowledge before reading or listening to the larger body of information.

concept map—Any of several forms of graphic organizers that allow learners to perceive relationships between concepts through diagramming keywords representing those concepts. Joseph Novak originated the concept map in the 1960s.

KWHL—A graphic organizer or preassessment tool consisting of four columns, "know," "want to know," "how to find out," and "earn."

KWL chart—A graphic organizer or preassessment tool consisting of three columns: "know,""want to know," and "learn." Learners list in the left column what they know about a topic or idea and in the center column what they want to know about the topic or idea. Then, after reading or instruction, they return to the chart to list in the right column what they learned about the topic or idea or what they still would like to learn. KWL charts can be completed as a class with the teacher or independently.

mind map—A graphic organizer that is used to develop ideas and organize information. Mind mapping helps to identify central ideas, the relative importance of other ideas, and how they are connected. A main or central word or image is placed in the center of a piece of paper and then key words, symbols, images, and abbreviations are added as subideas. Subideas should be on lines that ultimately connect to the center. Each new line should be open, allowing space for more connections to subideas farther from the center. Mind maps are used for a prewriting activity, note taking, developing grocery lists, brainstorming sessions, and other related tasks.

Venn diagram—A graphic organizer (interconnected circles) used to demonstrate how two subjects or topics overlap and how they are unique.

group revision exercise—An exercise that teaches revision strategies or allows learners to employ revision strategies on each other's writing. It is usually done in small groups of two to six people.

guided discovery—A teaching model in which learners are taught through explorations but with directions from teacher.

guided practice—Learners practice a skill with teacher guidance so that they gradually move toward excellence. Guided practice should be conducted in small steps and should be intensely supervised. It should prevent the development of consistent error patterns and inappropriate practices. This means that guided practice must be designed and implemented so that errors are identified and reteaching is conducted immediately. The important element seems to be the provision of controlled practice with *positive* teacher feedback. *(See also gradual release.)* The effectiveness of guided practice can be evaluated by measures of learner success in independent practice. If learners are at least 80 percent successful when they begin the subsequent independent practice, then guided practice has been appropriately conducted. *(See also scaffolding/scaffolded instruction as a vehicle to provide guided practice.)*

guided writing—A teacher and learners (or pairs or small groups of learners) compose together. They go through the steps of the writing process together: brainstorming, drafting, revising, editing, and producing a final product.

H

habits of mind—A process that centers on the idea that learners can learn more effectively if they regulate their own thought processes.

higher-order thinking skills (HOTS)—In the simplest sense, higher-order thinking is any thinking that goes beyond the recall of basic facts. The two key reasons to improve HOTS are to enable learners to apply facts to solve real-world problems and improve the retention of facts. In addition to its basic meaning, HOTS is also used to refer to a specific program designed to teach higher-order thinking skills through the use of computers and the Socratic method for teaching thinking skills.

holistic revision (also referred to as generative revision)—A process in which a writer seeks to improve the entire essay (i.e., strengthen the argument, improve the support, improve overall clarity and organization, and add depth and detail) rather than simply revise for local and superficial errors. *(See also revision.)*

I

independent practice—One learner works independently or with other learners, without teacher intervention, to practice new skills or strategies. This approach includes many activities performed on a computer.

independent study—Opportunities for learners at all readiness levels to pursue topics that interest them.

indirect instruction—This approach to teaching presents learners with instructional stimuli in the form of materials, objects, and events and requires them to go beyond the basic information they are given to make their own conclusions and generalizations. Indirect instruction allows teachers to engage learners in activities that require the learners to learn independently. The role of the teacher is facilitator, supporter, and resource person. The teacher arranges the learning environment, provides opportunity for learner involvement, and, when appropriate, provides feedback to learners while they conduct the inquiry.

individualized education plan (IEP)—A specifically tailored program designed to meet the distinctive needs of learners diagnosed with a disability.

individualized instruction—As a key principle of learning disabilities–appropriate instruction, it involves maintaining a high degree of learner attention and response during ongoing instructional interactions that are scheduled as frequently and as close together as possible.

inductive thinking—Analyzing individual observations to come to general conclusions and proceed from facts to the "big picture."

inference—In the context of reading, it is a conclusion drawn from evidence in a text that leads to knowledge or understanding that is not directly stated in print. In making inferences, a reader understands what is not explicitly stated by filling in information from his or her background knowledge. This process is often called "reading between the lines."

informal essay—An essay in which a writer uses his or her own experiences, thoughts, memories, opinions, and related ideas to make a focused observation or argument. The diction is conversational and less formal than that of most academic essay genres. *(See also narrative, personal narrative, and reflective essay.)*

inquiry—The process by which learners investigate subjects that interest them. Embedded across all content areas and grade levels, inquiry promotes learner ownership and authenticity in their work.

intensive instruction—Learner engagement and time are the defining factors in intensive instruction. In intensive instruction, learners are paying attention and actively engaged in learning tasks—listening, thinking, responding, creating, or otherwise working—and doing so frequently for *significant* amounts of time.

interest centers—A classroom area that contains a collection of exploration activities related to the specific interests of learners.

interest inventory—An assessment tool designed to help a teacher determine learner interests. These may be open-ended or very controlled and specific.

inverted pyramid—A writing format in which the most important information is presented first, followed by the next most important information, and closing with the least important information. Although most commonly used in news reporting, it is useful in teaching learners to prioritize information. Also known as the *journalism model.*

J

jigsaw—A type of collaborative work in which learners read and examine a portion of a reading assignment and report what they have learned to the entire group. It is an effective way to vary content according to complexity or depth of content to match reading readiness levels. It is also a great way to involve learners in subject matter presented in text.

journal—Writing done in a notebook, typically for a few minutes each day, that is often used to encourage reflection or the exploration of ideas of interest to learners. Journal writing is typically not graded and, in some instances, is not read by anyone but the learner. In other instances, the journal can be used to establish an ongoing written dialogue between the learner and the teacher.

journalism model—*See inverted pyramid.*

K

KWL chart—*See graphic organizers.*

KWHL—*See graphic organizers.*

kinesthetic—Learning by doing.

L

learning centers—A classroom area that contains a collection of activities or materials designed to teach, reinforce, or extend a particular skill or concept.

learning disabilities—A variety of neurological disorders, including differences in one or more of the basic processes involved in understanding or using spoken or written language. Learning disabilities are lifelong conditions not related to visual or auditory deficiencies and are not the result of delays in mental development. Specific learning disabilities include the following:

- **developmental aphasia**—A severe language disorder that is presumed to be due to a brain injury rather than a developmental delay in the normal acquisition of language.
- **dyscalculia**—A severe difficulty in understanding and using symbols or functions needed for success in mathematics.
- **dysgraphia**—A severe difficulty in producing handwriting that is legible and written at an age-appropriate speed.
- **dyslexia**—A severe difficulty in understanding or using one or more areas of language, including listening, speaking, reading, writing, and spelling.
- **dysnomia**—A marked difficulty in remembering names or recalling words needed for oral or written language.
- **dyspraxia**—A severe difficulty in performing drawing, writing, buttoning, and other tasks requiring fine motor skills or in sequencing the necessary movements.

learning modalities—The means through which information is perceived, such as visual, auditory, or tactile/kinesthetic means.

learning stations or centers—Different spots in the classroom where learners work on various tasks simultaneously. They invite flexible grouping because not all learners need to go to *all* the stations *all* the time, and not all learners spend the same amount of time at each station. Stations work in concert with one another, and there are usually several stations related to the same subject. (*See also interest centers*.)

learning strategy—A set of specific actions, behaviors, steps, or techniques used by learners to accomplish a particular task, such as taking a test, comprehending text, and writing a story, and improve learning (e.g., using a graphic organizer and using context clues). A first-letter mnemonic is often used to help learners follow the steps of the strategy. Also, it is how a person approaches learning, including how that person thinks and acts before, during, and after a task,and how a person evaluates the impact of the strategy on learning and performance.

learning strategy approaches—Instructional approaches that focus on efficient ways to learn, rather than curriculum. They include specific techniques for organizing, actively interacting with material, memorizing, and monitoring any content or subject.

lesson planning—A written plan that notes the method of delivery, the activities, and the specific goals and timelines associated with the delivery of lesson content. It is like a roadmap that helps a teacher know what to do in a class, including the sequence of activities, to help learners achieve the stated learning goals.

locus of control—The tendency to attribute success and difficulties either to internal factors, such as effort, or external factors, such as chance. Individuals with learning disabilities tend to blame failure on themselves and achievement on luck, which leads to frustration and passivity.

logical reasoning—A catchall term for inductive and deductive thinking that is frequently used as a support for an argument or a thesis. It is frequently used by writers to point out flaws (logical fallacies) in an opposing point of view. Learners progress at their own speed and continue to work until their performance indicates they have mastered each set of objectives.

M

mastery learning—An instructional method that presumes all learners can learn if they are provided with the appropriate learning conditions. Specifically, mastery learning is a method whereby learners are not advanced to a subsequent learning objective until they demonstrate proficiency with the current one. Objectives for learning are established and communicated to learners.

mechanics—Usually refers to correct spelling, punctuation, and paper format (such as proper heading and pagination as indicated by the instructor or by style manuals from the Modern Language Association or the American Psychological Association).

mental models—Learners enter learning situations with existing knowledge. This knowledge is organized into patterns or models that help them explain phenomena. Learning involves adding to or altering a learner's existing mental models.

metacognition—Refers to higher-order thinking that involves active control over the cognitive processes engaged in learning: knowledge about one's own information processing and strategies that influence one's learning. By prompting learners to reflect on and identify the successful learning strategies that they used to solve a problem, teachers encourage learners to act on this awareness to choose appropriate learning strategies that optimize future learning. Successful learners monitor their own thought processes to decide whether they are learning effectively. Metacognitive activities include planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task.

metacognitive learning—An instructional approach that emphasizes awareness of the cognitive processes that facilitate one's own learning and its application to academic and work assignments. Typical metacognitive techniques include the systematic rehearsal of steps or the conscious selection among strategies for completing a task.

metaphorical thinking—Thought in which unlike objects are compared to one another, frequently for an aesthetic effect, such as using figurative language to express a point of view.

mind map—*See graphic organizers.*

miscue—A reading error; a deviation from the text during oral reading. Analyzing miscues and identifying patterns of errors may help an instructor understand the nature or origin of a reading problem.

mnemonic/mnemonic device—Pertaining to memory. It is a device for remembering information. Association techniques are used to remember specific information by linking the information to a word or a phrase, such as using the first-letter mnemonic HOMES to remember the names of the Great Lakes: Huron, Ontario, Michigan, Erie, and Superior or the first-letter mnemonic PLAN for writing: pay attention to the prompt, list main ideas, add supporting ideas, and number your ideas.

modeling—Showing learners how to accomplish a task or use a strategy by demonstrating it explicitly while using think-alouds. *(See also think-aloud.)*

morpheme—The smallest unit of meaning in a word, including prefixes, root words, and suffixes. It can be free form (as in the word *pin*) or bound (as in the *s* in pins).

multicultural awareness—An understanding, sensitivity, and appreciation of the history, values, experiences, and lifestyles of groups that include but are not limited to race, ethnicity, gender, sexual orientation, religious affiliation, socioeconomic status, and mental/physical abilities.

multisensory learning—An instructional approach that combines auditory, visual, and tactile elements into a learning task (e.g., moving one's finger under each syllable of a word as the word is read and sounded out or tracing sandpaper numbers while saying a number fact aloud).

N

narrative—A text that re-creates a scene or a series of related scenes or events; a story. A narrative is often used for a personal narrative, which is an essay that re-creates an event, events, scenes, or a series of scenes that happened in the writer's experience or to someone that the writer knows, usually with a thesis. The personal narrative is also referred to as the informal essay or the reflective essay (*See also informal essay, personal narrative, and reflective essay.)*

National Reporting System (NRS)—The National Reporting System for Adult Education is an outcome-based reporting system for the state-administered, federally funded adult education program. Developed by the U.S. Department of Education's Division of Adult Education and Literacy (DAEL), the NRS continues a cooperative process through which state adult education directors and DAEL manage a reporting system that demonstrates learner outcomes for adult education. The project is conducted by the American Institutes for Research (AIR) in Washington, D.C.

O

Online Lesson Planner—The TEAL Lesson Planner is a tool to help adult educators design quality lesson plans in any content area. The Lesson Planner provides a template to help users develop lesson plans for adult education classes. It allows users to "backward" design lessons so that desired learner outcomes provide the foundation for the lesson design, stores lessons for future use, and allows sharing lessons with others. (*See also backward design.*)

organization—Clear evidence of a plan or a foundation on which writing is built. It includes an intentional introduction, internal/external transitions to connect ideas, and a conclusion.

orthography—The total writing system of spoken language. The term also refers to the established spelling rules of a written language.

P

pacing—The rate of movement and action of a narrative. Some examples of a problem with pacing include the following: the story may take a long time to build to the climax, it may have only one or two sentences about the climax, or it may end abruptly.

paragraph-level revision—Revision that employs techniques to structure paragraphs more effectively or add depth and detail at the paragraph level.

paragraph types—There are seven types of paragraphs: narration, exposition, definition, classification, description, process analysis, and persuasion.

paraphrasing—Restating the words of another writer in one's own words. An author must identify paraphrases to avoid plagiarism. *(See also summarizing.)*

peer evaluation—An evaluation of a text by a peer (a classmate, a colleague, or a workshop member) rather than by an instructor or a workshop leader. Instructors frequently provide a list of evaluation techniques or criteria for peer evaluators to follow.

peer tutoring—Having learners work in pairs, with one learner tutoring the other on a particular concept.

perception—A process involving the reception, selection, differentiation, and integration of sensory stimuli. The teacher of learners with dyslexia must teach such learners to attend actively and consciously to aspects of the perception process until it becomes automatic.

performance standards—*See standards.*

personal assessment—A writer's evaluation of his or her own writing or other classroom performance.

personal essay—Writing that is focused on a central idea about the writer or the writer's life and supported by a variety of incidents from the writer's life.

personal narrative—An essay that re-creates an event, events, scenes, or a series of scenes that happened in the writer's experience or to someone that the writer knows. It is writing about a significant incident in one's life. (*See also narrative and reflective essay.*)

persuasion—Methods that a writer uses to convince his or her reader of the validity of an argument, including appeals to emotion as well as logic.

persuasive—*See writing genres.*

phoneme—The smallest unit of speech that serves to distinguish one utterance from another in a language or dialect (as in the /b/ of *bat* and /m/ of *mat*). English is composed of 44 phonemes.

phoneme awareness—Awareness of the phonological structure of words is exemplified by the ability to manipulate or separate the sounds within words (e.g., which sounds come first or last, which words rhyme, and which sounds are the same or different), which implies meta-linguistic knowledge.

phonemic segmentation—The process of sequentially isolating the speech sounds that comprise a spoken word or syllable.

phonetics—The study of speech sounds, how they are produced (articulatory phonetics), how they are perceived (auditory phonetics), and their physical properties (acoustic phonetics).

phonics—A teaching approach that gives attention to letter-sound correspondences in the teaching of reading and spelling. Phonics is a teaching approach and should not be confused with phonetics.

phonological awareness—Speech-sound awareness is the conscious awareness of the sounds of language; the ability to reflect on the sounds in words separate from the meanings of words.

phonology—The sound system of a language; the part of grammar that includes the inventory of sounds and rules for their combination and pronunciation; the study of the sound systems of all languages.

plus-minus-interesting (PMI) chart—A device developed by Edward DeBono in which learners summarize their findings about a particular topic or idea by listing what is good about it, what is possibly negative about it, and what is interesting about it.

portfolio—A collection of learner work gathered to exhibit or demonstrate a learner's efforts, progress, or achievement in one or more areas.

portfolio assessment—A portfolio becomes a portfolio assessment when (1) the assessment purpose is defined; (2) criteria or methods are made clear for determining what is put into the portfolio, by whom, and when; and (3) criteria for assessing either the collection or individual pieces of work are identified and used to make judgments about performance. Portfolios can be designed to assess learner progress, effort, and/or achievement and encourage learners to reflect on their learning. (*See also* *assessment*.)

POW+TREE—A mnemonic strategy that helps writers approach an essay writing task and check their work as they become more independent. For example, it helps writers remember to pick an idea, pay attention to the prompt, organize, write, and say more. TREE is a memory and visualization tool that helps writers structure their essays: the topic sentence is like the trunk of the tree that supports the whole argument; reasons (at least three) are like the roots of the argument; explain is a reminder to tell more about each reason; and, finally, ending is like the earth that wraps up the whole argument.

prewriting—The first stage of the writing process, typically followed by drafting, revision, editing, and publishing. Elements of prewriting may include planning, research, outlining, diagramming, storyboarding, or clustering.

prior knowledge—*See* *background knowledge*.

problem-based learning—An approach to learning that places learners in the active role of solving problems in much the same way that adult professionals perform their jobs.

procedure—*See* *writing genres*.

process writing—A text in which a writer documents and reflects on his or her process in writing another text. It is frequently used as a method of personal assessment and is helpful to writing instructors in assessing their learners' needs and progress as writers.

proficiency level—Portrays what learners at a particular level know and can do in relation to what is being measured. Proficiency levels are not to be confused with a program's class design levels. Programs should use proficiency levels, though, to closely crosswalk with their program class design levels.

profile essay—An essay that relies on the personal experience of another as its source. Writers interview someone about his or her life and work and transform the interview into a biographical description of the person, focusing on one particular dominant impression of the person or some aspect of the person's professional life.

progress monitoring—As a type of formative assessment, it is a scientifically based practice used to assess learners' academic performance and evaluate the effectiveness of instruction. It is a set of assessment procedures for determining the extent to which learners are benefiting from classroom instruction and for monitoring the effectiveness of curriculum. Progress monitoring can be implemented either with individual learners or an entire class. (*See also assessment*.)

proofread/proofreading—To read and make corrections. It is a methodical examination of a completed text for errors in syntax, spelling, mechanics, and formatting.

proposal—A formalized plan for an essay, usually a persuasive essay, in which a writer states his or her planned argument and the ways in which he or she intends to support it.

purpose—The specific reason for writing: the goal of the writing (to entertain, express, inform, explain, or persuade). Purpose has to do with the topic and the focus the writer is addressing—its central idea, theme, or message.

Q

quick write—A method of having learners put down their thoughts without stopping for grammar, spelling, punctuation, or even organizing thoughts before writing. Learners think for one minute and write nonstop for two to three minutes about a specified topic. Quickwrites can then be used as prompts for further writing about the topic.

questions—There are two general types of questions: closed-ended, such as yes/no questions, and informational (often open-ended) questions. Informational questions begin with who, whom, what, where, when, why, how, and which. For example, "Do you like this class?" is a closed-ended question that requires a yes/no answer; "What do you like about this class?" is an open-ended question that requires learners to provide information.

questioning strategies—Effective teaching uses questioning strategies that assist learners in the development of thinking skills and increase comprehension. Teachers pose questions to learners to elicit deeper-level thinking about the subject under discussion.

> **adjusting questions**—A strategy for differentiating instruction in which a teacher adjusts questions posed to learners based on their readiness, interests, and learning profile. This strategy is an excellent strategy for teachers new to differentiated instruction because it builds on strengths and abilities readily used by most teachers.
>
> **critical questions**—Questions that an instructor should pose that will lead to discourse on learning and help the learner identify goals.

R

RAFT (role/audience/format/topic)—An after-reading activity in which learners demonstrate understanding by writing for a specific audience.

RAP (read/ask/paraphrase)—A mnemonic strategy that supports reading and comprehension. For example, read a paragraph or passage. Ask yourself, "What is the topic?" "What is the most important thing it tells me about that topic?" "What are the most important details?" Then paraphrase, or put it in your own words.

reading response—A writer's thoughts and feelings after reading a text, done in class or as homework, frequently written in a journal. It may include but is not limited to an analysis of the text.

readings—Texts that are assigned to a class by an instructor to facilitate discussion and writing by the class.

reciprocal teaching—Learners take turns being the teacher for a pair or a small group. The teacher role may be to clarify, ask questions, ask for predictions, and other related tasks.

reflection—A metacognitive activity. A learner pauses to think about and organize information gathered from reading, discussions, or other activities. It is an exploration of an idea, a text, a topic, a writing process, or one's general state of mind that is frequently written in a journal or in freewriting.

reflective essay—An essay of a personal nature in which writers use their subjective opinions, observations, thoughts, feelings, and experiences to support a thesis. (*See also informal essay, narrative, and personal narrative.*)

reflective writing—Writing that uses reflection—or careful consideration and serious contemplation of past events—as a means of idea development. Good reflective writing contains considerable analysis and insight.

report—*See writing genres.*

research—A gathering of outside materials, usually texts, that provide writers with information on their topic and support for their thesis.

researched argument—An essay that proposes an argument and supports it with evidence obtained during research.

resolution—The portion of a play or a story in which the problem is resolved. It comes after the climax and falling action and is intended to bring the story to a satisfying end.

response cards—A teacher asks a question, learners write brief answers on the cards, and then all learners hold up their cards. The teacher can scan the answers of all learners for understanding. Sometimes cards just have "yes" or "no" on them and can also be prepared by the teacher.

response journal—Learners record in a journal what they learned that day or strategies they learned or questions they have. They can share their ideas in class, with partners, and with the teacher.

response to intervention—A method of academic intervention designed to provide early, effective assistance to school-age children who are having difficulty learning. It includes frequent progress measurement and increasingly intensive research-based instructional interventions for children who continue to have difficulty.

revision—The process of looking again at a draft to ask, "Does this writing clearly say what I want it to say, and, if it does not, what changes do I need to make?" Revision is centered on audience and purpose, idea development, organization, structure, and language choice. It is not editing. (*See also holistic revision.*)

rote memory—This type of memorization is usually the most commonly required memory task for students in Grades K–12. It involves memorizing, and soon forgetting, facts that often are of little primary interest or emotional value to a student, such as a list of words. Having nothing to give these words context or relationship either to each other or to students' lives, these facts are stored in remoter areas of the brain. These isolated bits of information are more difficult to locate and retrieve later because there are fewer nerve pathways leading to these remote storage systems in the brain.

rubric—An assessment tool or scoring guide used in performance assessment. It includes well-defined criteria describing the characteristics of learner performance at each of several points on a numerical scale. For example, a four-point scale for evaluating learner writing would describe the qualities and types of errors found in typical examples of writing at each of the four rubric points. Rubrics allow learners to know in advance exactly what is required of them for a specific grade or score.

> **scoring rubric**—An evaluation tool that defines the criteria for assessment: what the criteria mean and how they are used.

S

scaffolding/scaffolded instruction—A process that involves the frequent use of connected questions and collaboratively constructed explanations to create a context for learning based on a learner's prior knowledge. Broad terms refer to various methods of supporting learners as they learn; gradually, these supports are withdrawn as they become capable of independent performance of a task or a skill. Supports may include clues, clarifying questions, reminders, encouragement, or breaking the problem down into steps. This temporary support from a teacher enables learners to take on and understand new material and tasks that they are not quite ready to do independently. The teacher models, assists, or provides necessary information, building on what learners already know; this should eventually lead to independence. (*See also guided pratice.*)

screening—A process of collecting information through a variety of sources over time that would lead to the conclusion that an individual might be significantly at risk for a specific condition, such as a learning disability.

screening instrument—An initial test in a sequence of tests that is usually quickly administered. The results are used to determine whether further testing is necessary and may possibly guide the selection of other tests to be administered.

self-advocacy—The ability of individuals with learning disabilities to explain their disabilities effectively to others, request legal accommodations, act independently, and cope positively with the attitudes of others.

self-assessment—Learners reflect on their performance and assess themselves.

self-directed learning (SDL)—Learners take the initiative and the responsibility for selecting, managing, and assessing their own learning activities, which can be pursued at any time, in any place, through any means, and at any age. SDL involves initiating personal challenge activities and developing the personal qualities to pursue them successfully. Adult education teachers can emphasize skills, processes, and systems to help learners become self-directed.

self-monitoring strategies—Plans used to increase independence in academic, behavioral, self-help, and social areas. When used in reading, the ability to self-monitor the meaning of words enables learners to select and use strategies to improve comprehension.

self-regulation—The understanding learners have about how they learn, including the strategies used to accomplish tasks, and the process by which they oversee and monitor their use of strategies and make adjustments, as needed.

self-regulated strategy development (SRSD)—An empirically validated model for supporting learners as they compose text, by helping them develop relevant cognitive and self-regulation skills. It is a flexible instructional model that helps learners explicitly learn the same kinds of planning, drafting, and revising strategies used by highly skilled writers. SRSD integrates three areas: (1) six stages of explicit writing instruction across a variety of genres; (2) explicit instruction in self-regulation strategies, including goal setting, self-monitoring, and self-instruction; and (3) the development of positive learner attitudes about writing.

sentence-level revision—Revision that focuses on meaning and clarity at the sentence level, It includes but is not restricted to syntax, word choice, and mechanics. (*See also mechanics and syntax.)*

short story—A short piece of fiction that contains some but perhaps not all of the following elements: plot (conflict, crisis, climax, and resolution), setting, character development, theme, and point of view.

short-term memory—*See working memory.*

simplified materials—Texts that are specially written for classroom use but have the style and format of authentic materials. These texts for lower-level learners use controlled or limited vocabulary and simple sentence structure. (*See also adapted materials and authentic materials.)*

small-group discussion—The discussion of an assignment, an assigned text, or learner writing by groups of usually two to six learners. The groups then usually report back to the instructor and the entire class in a full class discussion.

social development theory—A theory based on Lev Vygotsky's philosophy that learning occurs through social interactions. It emphasizes the importance of cooperative learning groups, motivation, the observation of models, and learner attitudes.

specific learning disability (SLD)—The official term used in federal legislation to refer to difficulty in certain areas of learning, rather than in all areas of learning. *(See also learning disabilities.)*

spiraling—Reusing or recycling vocabulary, grammar, or concepts throughout a text or a series of lessons.

stance—The attitude or the position an author has adopted; literally, how an author stands on the topic.

standards—Expectations that describe what learners should know and be able to do within a specific content area. It is the broadest of a family of terms referring to statements of expectations for learning, including benchmarks, content standards, and performance standards.

> **benchmarks**—Descriptions of the set of skills learners need to develop and achieve to meet the more broadly stated content standards.
>
> **content standards**—Broadly stated expectations of what learners should know and be able to do in particular subjects and grade levels. They define the knowledge, skills, processes, and other understandings that guide curriculum for learners to attain high levels of competency in various subjects, and they reflect what stakeholders of educational systems recognize as essential to be taught and learned.
>
> **performance standards**—Explicit definitions of what learners must do to demonstrate proficiency at a specific level on the content standards. For example, the performance level "exceptional achievement" on a dimension "communication of ideas" is reached when the learner examines the problem from several different positions and provides adequate evidence to support each position.

standards-based reform—A program of school improvement involving setting high standards for all learners and a process for adapting instruction and assessment to make sure all learners can achieve the standards.

standardized test—Any test that is administered and scored in a consistent, or standard, manner to all test takers. These tests are designed so that the questions, the conditions for administering, scoring procedures, and interpretations are consistent and administered and scored in a predetermined, standard manner.

standardization—A consistent set of procedures for designing, administering, and scoring an assessment. The purpose of standardization is to assure that all learners are assessed under the same conditions so that their scores have the same meaning and are not influenced by differing conditions. Standardized procedures are very important when scores will be used to compare individuals or groups.

strategy instruction—Teaching learners tools for learning how and when to use strategies. The focus is on teaching learners how to learn effectively by applying principles, rules, or multistep processes to solve problems or accomplish learning tasks. Included in strategy instruction is the process of helping learners identify personally effective strategies and encouraging them to make strategic behaviors part of their learning schema.

student-centered learning—An instructional approach that focuses on the needs of students rather than the needs of teachers or administrators. Students might not only choose what to study but also how and why that topic might be an interesting one to study. This approach centers on student responsibility and activity, in contrast to more conventional teaching approaches in which the emphasis is on teacher control and the coverage of academic content.

students with disabilities (SWD)—A broadly defined group of students with physical and/or mental impairments, such as blindness or learning disabilities, that might make it more difficult for them to do well on assessments without accommodations or adaptations. *(See also accommodations and adaptations.)*

style—The quality of a text that is determined by genre, the appropriateness and tone of word choice, the writer's audience awareness, and the individual imprint of personality that the text bears to readers. Style is often considered along with correctness, but style is distinct from correctness. *(See also correctness.)*

summary—Writing that presents the main points of a larger work in condensed form.

summarization—The restating of main ideas of a text in as few words as possible. Extensive research shows that summarization is among the top nine most effective teaching strategies in the history of education.

summarizing—The skill of abstracting and condensing essential features of a text.

summative assessment—*See assessment.*

summary and response essay—An essay in which a writer summarizes an outside text and then provides his or her own thoughts, feelings, and associations stimulated by the text. This may include but is not limited to an analysis of the text. *(See also text analysis.)*

supporting sentences—Sentences about the idea presented in the topic sentence. They should support the main idea of the paragraph.

survey essay—An essay that uses data collected from a survey designed and implemented by the writer as the source for a small, social science research report.

syntax—Usually refers to acceptable and understandable word order in a sentence.

T

text—Usually refers to a cohesive unit of words that can be read and understood. The most commonly encountered texts are classified by genre, such as a poem, a short story, and an essay. More recently, it is also taken to mean any cohesive entity that can be understood through analysis. In this context, a text can be a painting, a photograph, an advertisement, a building, a human face, and other related entities.

text (or textual) analysis—The holistic understanding (reading) of a text by examining its particular characteristics. In the context of the academic essay, it presents an argument about a text by supporting the argument.

text structures—The organizational structures used within paragraphs or texts and appropriate to writing genre and purpose. Examples of text structures include description, sequential chronology, proposition/support, compare/contrast, problem/solution, cause/effect, and investigation.

theme—The central idea, message, concern, or purpose in a literary work that may be stated directly or indirectly.

thesis—In an essay, a writer's argument or focused observation that is supported by the body of the essay. A thesis can be supported by personal experience, outside research, or logical argument. It is also the controlling idea about a topic that a writer is attempting to prove. It is a sentence that announces the writer's main, unifying, and controlling idea about a topic. A thesis statement usually contains two main elements: a limited subject (e.g., Internet), a strong verb, and the reason for it—the "why" (e.g., "The Internet provides information of varying depth and quality.").

thesis development—The process of choosing, focusing, and fine-tuning an argument that frequently employs processes such as brainstorming, freewriting, and discussion. *(See also essay planning.)*

think-aloud—A metacognitive strategy in which a teacher models his or her thinking, describing thoughts while reading aloud to the class or completing a task. By demonstrating metacognitive thought, a teacher explicitly gives learners a model of how the teacher's thinking proceeded. Examples where think-alouds are helpful include demonstrating the steps in solving a math problem, reading a story aloud and stopping at points to think aloud about reading strategies, or crafting a response to an essay prompt.

think-pair-share—Learners think individually, pair (discuss with partner), and then share ideas with the class.

tic-tac-toe extension menu or choice board—A collection of activities from which a learner can choose. It is generally presented in the form of a 3-by-3 or a 5-by-5 grid, similar to a tic-tac-toe board, with the center square often allowing for learner choice. This format can be applied to extension activities, contracts, study guides, or independent studies. Such boards allow a teacher to differentiate content, process, and product according to different levels of learner performance and readiness, interests, and learning styles.

tiered assignments—Parallel tasks at varied levels of complexity, depth, and abstractness with various degrees of scaffolding, support, or direction. Learners work on different levels of activities, all with the same essential understanding or goal in mind. Tiered assignments accommodate mainly for differences in learner readiness and performance levels and allow learners to work toward a goal or objective at a level that builds on their prior knowledge and encourages continued growth.

tone—The overall feeling or effect created by a writer's attitude, use of words, and sentence structure. It is an expression of the feelings of a writer toward a subject. Unlike *mood*, which is intended to shape the emotional response of the reader or listener, *tone* reflects the feelings of the writer or speaker. Pitch, rhythm, volume, and/or the choice of words all create the tone of a piece of writing.

topic—The general subject matter covered in a piece of writing.

topic sentence—Usually the first sentence of a paragraph that gives an idea of what the paragraph is about.

transition—A device commonly used to refer to the change from secondary school to postsecondary programs, work, and independent living typical of young adults. It is also used to describe other periods of major change, such as from early childhood to school or from more specialized to mainstreamed settings.

transitions—Connective devices in writing (words, phrases, sentences, or paragraphs) that help tie ideas together, bridging sections of a text to make it seem more cohesive.

> **transitional words or expressions**—Words or phrases often used to link sentences, subjects, or other parts of a written text. They are also used when speaking. Transitions include adding an idea *(also, in addition, further, furthermore, moreover);* contrasting *(however, nevertheless)*; providing an alternative *(instead, alternatively)*; showing similarity *(similarly, likewise)*; showing order of time or order of ideas *(first, then, next, later, meanwhile, previously, finally)*; showing result *(as a result, consequently, therefore, thus, so)*; affirming *(of course, in fact, certainly, obviously)*; giving examples *(for example, for instance)*; explaining *(in other words, that is)*; adding an aside *(by the way, incidentally)*; and summarizing *(in conclusion, above all)*.
>
> **transitional devices**—Devices such as numbering, spacing, and ellipses to enhance meaning.

U

universal design for learning (UDL)—A framework for designing the educational environment so that it offers flexible learning environments that can accommodate individual learning differences. It is a key to helping all learners achieve. This environment is accomplished by simultaneously reducing or removing barriers from teaching methods and curriculum and providing rich supports for learning.

use and usage—*Use* is how language is used in communication. *Usage* is the grammatical rules for language. For example, in the question "Have you ever eaten octopus?" *use* is to inquire about past experiences, while *usage* is a present perfect question with "ever" placed in front of the past participle. Although usage does have some part to play in adult education, use is more important. In meaningful communication, learners are more concerned with the use of language.

V

Venn diagram—*See graphic organizers.*

visual discrimination—Assuming normal visual acuity, the ability to distinguish slight differences in stimuli, especially in letters and words, that have graphic similarities.

visual perception—The ability to recognize visual stimuli. Individuals with this learning disability may have problems with such activities as reading, writing, tracking, recognizing people or items, or reading a map or a graphic display.

vocabulary web—A graphic organizer based on a single vocabulary word. The word goes in the center circle. Learners then define the word; find synonyms and antonyms; write a sentence using the word; create analogies; and analyze the word according to word families, origin, stems, and parts of speech.

voice—The feature of writing that has unique personality and conveys a sense of sincere investment from the writer; a writer's unique use of language that allows a reader to perceive a human personality in the writing. Elements of style that determine a writer's voice include word choice, sentence structure, diction, and tone. The reader feels a strong sense of interaction with the writer. When learners choose their own topics, purposes, and audiences, their writing is more likely to have strong voice.

W

word attack skills—The ability to decode words using knowledge of the sound-letter correspondence of the language.

word decoding—A process used to identify words through sounding out letters, letter patterns, or blended sounds.

working folder—A collection of a learner's work in which a learner can see evidence of growth in writing. It should include some dated samples that address a variety of writing tasks and allow learners and teachers to use past writing experiences as teaching tools for current and projected instruction. Most often, this folder contains all the drafts of a piece of writing. On a regular basis, learners should review and reflect on what has been placed in the folder to make decisions about what to keep for further development. The pieces in the working folder are springboards for the generation of possible portfolio entries.

working memory (short-term memory)—This memory can hold and manipulate information for use in the immediate future. Information is held in working memory for only about a minute. For example, looking up and repeating aloud a phone number long enough to place a call is using short-term memory; to place the number into long-term memory, one would need to make some association between the number and the person being called.

writing genres—Categories of written texts that have recognizable patterns, syntax, techniques, and/or conventions. (*See also narrative and reflective essay.*)

> **persuasive**—Writing that aims to convince readers to accept a point of view, change their minds about something, or act in a certain way. A persuasive essay is a form of writing in which a writer supports an opinion and tries to persuade an audience.
>
> **procedure**—Writing to explain a process or inform an audience of how to do something. A procedure piece presents the steps of the process in a clear, logical, easy-to-follow manner; it includes all the necessary steps; and it defines any terms the audience may not know.
>
> **report**—Writing that results from gathering, investigating, and organizing facts and thoughts on a focused topic.

writing process—An approach to writing and teaching writing that includes developing ideas, writing a rough draft, revising, editing, and completing a final product.

X–Y–Z

zone of proximal development (ZPD)—Lev Vygotsky's "zone of readiness," including the actions or topics a learner is ready to learn. It refers to the gap between a learner's current and potential levels of development. This is the set of knowledge that the learner does not yet understand but has the ability to learn with guidance.

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