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Literacy Challenges and Opportunities for Students with Learning Disabilities in Social Studies and History

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The Common Core State Standards for literacy in history and social studies present opportunities and challenges for teachers of and adolescents with learning disabilities (LD). In addition to reading challenges, students must engage in higher order thinking and reasoning. To provide opportunities for students to successfully respond to such challenges, teachers must have an understanding of the expectations in the Standards, and of the learning needs of students with LD. Teachers can assure success for adolescents with LD by selecting proven instructional procedures and engaging in collaboration to provide students with the supports they need. Examples of one evidence-based practice, Content Enhancement, are provided to illustrate instructional protocols for teachers of diverse classes that include adolescents with LD.

INTRODUCTION

As the bar for educational achievement continues to rise in core content areas, significant pressures are felt by all students. For adolescents with learning disabilities (LD), however, these pressures are even greater. For many students with LD, their literacy attainment has not kept pace with the increased demands. Compared with literacy demands that they had to meet in earlier grades, students now find that their texts are significantly longer and more complex, present greater conceptual demands and barriers, contain more detailed graphics, and demand a greater ability to manipulate and synthesize information across a broad array of text genres (Carnegie Council on Advancing Adolescent Literacy, 2010). As the complexity and volume of text demands grow, the expectations for students to apply higher order thinking and reasoning skills also increase.

Challenges related to higher order literacy demands are found in many content areas. The Common Core State Standards (CCSS) for Literacy in History and Social Studies (2010) provide examples of these challenges. To illustrate, as adolescents read history and social studies texts and primary sources, they must engage in a number of processes that require higher order thinking and reasoning. In the area of history and social studies, students are challenged to determine and summarize central ideas; analyze how a text presents information sequentially, comparatively, and causally; compare and contrast points of view; and reason about premises and evidence to evaluate an author's claim. These are major challenges for adolescents with LD and for their teachers, especially at the secondary level.

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Secondary teachers often assume that most students bring to their classes the necessary prerequisite skills and knowledge, as well as appropriate dispositions, for engaging in challenging learning activities and discussions in their content areas (Biancarosa & Snow, 2006). However, secondary teachers have reported that they do not have confidence that students with LD can successfully master the required higher order thinking behaviors specified in increased academic standard policies (Bulgren et al., 2006). As a result, secondary teachers instructing in diverse classrooms can benefit from recommendations for instructional procedures and interventions that support students' achievement in the CCSS.

The purpose of this article will be to (1) unpack and explain the standards and the challenges and opportunities for students with LD inherent in the Common Core State Standards (CCSS) for Literacy in History and Social Studies, (2) describe the challenges content and special education teachers face in assuring success for adolescents with LD, (3) describe evidence-based instructional procedures and recommendations from research that will facilitate student access to and success in the general education curriculum, and (4) present recommendations for future research.

THE COMMON CORE STATE STANDARDS FOR LITERACY IN HISTORY AND SOCIAL STUDIES

The CCSS for literacy in history and social studies present challenges for all students, including adolescents with LD. Specifically, the standards challenge students to engage more in higher order thinking and reasoning than in acquisition of factual information. Four general areas in the CCSS are repeated across reading, writing, listening, and science, as well as in history and social studies: key ideas and details, craft and structure, integration of knowledge and ideas,

and the ability to comprehend a range of literary and informational text independently and proficiently. Repeating this four-part structure highlights commonalities across the CCSS, while simultaneously allowing each area to focus on the discipline specific higher order thinking and reasoning unique to that area.

To illustrate, in history and social studies in grades 9 and 10, the first focus is on *key ideas and details*. This area emphasizes that students must cite evidence from texts to analyze primary and secondary sources, determine central ideas and details, summarize how the ideas are developed, and analyze a series of events to determine causation. It is immediately apparent that the focus is not primarily on facts such as dates, names, and events. Rather, the focus is on higher order thinking and reasoning critical to student success.

Second, a focus is placed on *craft and structure*. In this area, students must interpret words and phrases in text vocabulary to describe political, social or economic aspects of history and social studies, analyze text structure to determine and explain key points, and compare points of view about the same topic. Again, after an initial recognition of the importance of reading and vocabulary development, this section of the CCSS places great emphasis on higher order thinking and reasoning.

A third focus is on *integration of knowledge and ideas*. This represents goals of higher order thinking and reasoning in which students must integrate and evaluate content in different formats, compare and contrast treatments of the same topic in primary and secondary sources, and assess the reasoning and evidence that an author uses to support a claim. Finally, students must *comprehend literary and informational text independently and proficiently.* In addition, they are challenged to write arguments focused on discipline-specific content. This continuum presents both challenges and new opportunities, especially related to higher order thinking skills.

Challenges for Students with LD

The focus on higher order reasoning skills, at the core of today's CCSS for literacy in history and social studies, has long been recognized as a challenge for students with LD (e.g., Pressley et al., 1992; Vaughn, Gersten, & Chard, 2000). Specifically, Brownell, Mellard, and Deshler (1993) noted that adolescents with LD have difficulties with tasks that relate to higher order processing or problem solving. Students with LD may lack skills for processing and organizing information, making inferences, understanding relationships, and distinguishing main ideas from details (DiCecco & Gleason, 2002).

Swanson (2001) noted that one of the most important aspects of cognitive development during adolescence is problem solving; problem solving requires increased efficiency in specific information-processing skills, cognitive learning strategies, and metacognitive skills. Unfortunately, in earlier grades, students with LD may not have mastered low-level skills; this in turn, contributes to later problems in higher order processing. Therefore, later problems may occur for adolescents with LD because of a combination of higher order demands across content areas and a lack of necessary skills that are required to support higher level thinking. As a result, it is often a struggle to prepare adolescents to respond to curriculum challenges at the middle school and high school levels (Swanson & Deshler, 2003).

Opportunities for Students with LD

On the other hand, the goals of the CCSS also present *opportunities* for students with LD. The standards recognize the needs of students with LD and make recommendations to support their learning needs (http://www.corestandards.org/the-standards/). Information is provided on instructional practices, supports, and services. Specifically, instruction for students with LD must include supports to enable access to the general curriculum, an Individualized Education Program designed to attain grade-level standards, and specialized teachers prepared to deliver support services. Supports and services may include Universal Design for Learning (CAST, 2011) (e.g., provide multiple means of representation, action and expression, and engagement). They may also include instructional supports (e.g., explicit instruction in strategies, a supplemental or comprehensive reading program), instructional accommodations (e.g., adaptations to presentation formats, alternate response modes, and accessibility), and assistive technology devices and services. Therefore, recognition of the needs of students with LD is already highlighted within the CCSS. These explicit recommendations present opportunities for students and their parents, special education teachers, and general education teachers to dialogue with each other about and collaborate on goals and supports for students with LD that will help them meet the CCSS. Thus, the CCSS reinforces the goals of the Individuals with Disabilities Education Act (IDEA, 2004) with the recognition of the modifications, accommodations, and opportunities that students with disabilities may need to succeed in the general education curriculum.

Opportunities for students with LD are also based on the fact that common expectations regarding thinking and reasoning in the CCSS occur across content areas. This is a distinct advantage because it provides the opportunity for students to experience similar reinforcements on thinking and reasoning from one content area to another. For example, similar types of thinking challenges are repeated across anchor standards for reading, for literature and informational text, and for literacy in history and social studies, science, and technical subjects. Examples of higher order thinking and reasoning include comprehending critical ideas and using those ideas to engage in comparing and contrasting, exploring causation, and evaluating conclusions across content areas. Each content area then specifies how these common ways of thinking and reasoning are exemplified within discipline-specific learning demands.

In the case of history and social studies, discipline specific learning involves abilities related to sourcing, contextualizing and corroboration as students read primary and secondary sources. In other words, students must understand what is

being said in the source, analyze the context within which a source was written, and corroborate claims and information by comparing and contrasting it to other sources. Therefore, the common underlying thinking structures emphasized in the CCSS (e.g., analysis, comparing and contrasting, exploration of causes and effects, and evaluating outcomes) are types of thinking that are emphasized within content areas such as history and social studies; they are, however, tailored to the discipline-specific demands and habits of thinking in each area.

In addition, the CCSS are constructed to provide for the incremental development of thinking and reasoning skills from one grade to another. The reading standards for literacy in history and social studies associated with the integration of knowledge and ideas illustrate this progression. For example, in grades 6–8, students are asked to *distinguish* among fact, opinion, and reasoned judgment in a text. In grades 9 and 10, students must *assess* the extent to which the reasoning and evidence in a text support the author's claims. Finally, in grades 11 and 12, students are challenged to *evaluate* an author's premises, claims, and evidence by corroborating or challenging them with other information. The complex task of evaluation is presented after students have received instruction, practice, and feedback on assessing and distinguishing information at earlier grade levels. This building of prior knowledge may be particularly beneficial to students with LD.

Finally, the CCSS address even the most challenging higher order thinking and reasoning tasks; this is important because higher order thinking and reasoning are becoming increasingly emphasized in today's global economy (Zhao, 2012). Many thinking tasks such as making comparisons or determining causation are, of course, challenging. However, one of the most challenging tasks is that of engaging in argumentation. The components of argumentation include identifying a claim and the evidence, facts, and opinion presented in support of the claim, and engaging in evaluation of and reasoned judgment about the claim (Toulmin, Rieke, & Janik, 1984; Bulgren & Ellis, 2012).

In the CCSS for history and social studies, the components of argumentation are addressed in several areas and grade levels. Throughout grades 6–12, students are supported as they engage in incrementally more challenging uses of the components of argumentation. Students consider facts, opinions and evidence as they reason about and evaluate claims and premises, and corroborate or challenge them. Building incremental supports for all students, including students with LD, to engage in argumentation is a powerful contribution of the CCSS, as exemplified by those in history and social studies.

CHALLENGES FOR TEACHERS

Content area teachers and special education teachers face several challenges as they attempt to successfully integrate the CCSS into their practices. Most of these challenges are shared; others are unique to each group of teachers. The following sections will describe some of these challenges.

Challenges Faced by Both Content and Special Education Teachers

Challenges associated with costs as well as benefits must be considered for teachers. At one level, these "costs" may involve the time and effort needed to make changes in instructional practices and interactions with other teachers; at another level, they may involve changes in thinking about goals for students and roles for teachers. For example, consideration must be given to the "costs" that teachers bear relative to totally giving up, or integrating into their existing teaching practices, the activities, materials, and methods associated with the new set of instructional practices. It is an error to assume that all teachers can easily and willingly make a shift from one instructional reality to another (Deshler, Deshler, & Biancarosa, 2007).

While many teachers are already responding to the needs of students with LD in their classes, others may benefit from additional supports. Therefore, to help teachers acquire the necessary new skills and dispositions required for successfully helping students with LD meet the CCSS (as well as to assist teachers through the transition process), careful thought must be given to providing the strong professional development (PD) and instructional coaching supports that will be essential to make required changes.

Differentiate Between Technical and Adaptive Changes

Planning, implementing, and sustaining educational initiatives such as the CCSS require changes by teachers that can be both complex and challenging. The changes that teachers are expected to undergo can be considered along two dimensions: (1) technical and (2) adaptive (Heifetz & Linsky, 2002). Technical change involves acquiring new knowledge and/or skills to perform one's role as a teacher in a different way (e.g., learning a new instructional routine for teaching vocabulary to students). In the case of CCSS, teachers must acquire the technical skills of teaching that will enable them to have students meet both the complementary anchor and the grade-specific standards by teaching students how to understand key ideas and details, learn craft and structure of various content areas, and integrate knowledge and ideas across varying levels of complexity.

Adaptive change, on the other hand, involves altering beliefs, values, expectations, and attitudes relative to one's role as a teacher (e.g., embracing the notion of collaborating with other teachers to plan and deliver instruction as a team rather than individually). While learning the necessary skills to meet technical challenges can be difficult, addressing adaptive issues may prove to be even more difficult. When standards, such as the CCSS, require educators to embrace a new philosophy of education or dramatically redefine their roles, resistance may emerge. Sophisticated leadership strategies may be required for averting or overcoming resistance to such adaptive changes. For example, Spillane, Reiser, and Reimer (2002) emphasize the importance of allowing individuals who are the targets of change initiatives to have sufficient time for "human sense-making" of the new

realities and expectations (e.g., to raise questions, reflect, and determine how to integrate new knowledge). Thus, opportunities for staff discussions and personal reflection about the intent, supports, and challenges of implementation must take place consistently to support their human sense making.

Create Opportunities and Supports for Learning New Skills

Both content area teachers and special education teachers must significantly expand their existing skill sets in order to successfully help students meet CCSS. Among other things, helping students meet these new standards requires that teachers must learn how to: (1) amend their course, unit, and lesson planning; (2) incorporate new formative assessments and teaching routines into their instruction; (3) provide powerful rationales to adolescents for *why* they should invest their time and energy into meeting the CCSS; and (4) collaborate with other teachers since the complexity of all that is involved in successfully helping students with LD meet the CCSS requires varying perspectives and skill sets of both content and special education teachers.

Create Opportunities for Collaboration

Given the extensive and complex nature of the CCSS, and given the fact that in secondary schools students with LD are taught by multiple teachers throughout a school day, it is important that ways be found for content and special education teachers to collaborate with one another on a regular basis. Content teachers possess vital content knowledge, and special education teachers possess important learner variability and pedagogical knowledge. The knowledge and skills of each are very important. Teachers need dedicated time to collaborate for lesson planning, problem solving around specific students, and informing one another about how to best organize and teach critical content to increase the probability that adolescents with LD will successfully learn that content.

Ensure Instructional Integrity in Each RtI Tier

Increasingly, schools are organizing their instruction to provide students with a tiered system of instructional supports that affords students an opportunity to receive increased instructional attention and intensity if they struggle to learn and perform. This increased attention may be critical in Tier 1 learning environments that are often less structured and less intensive (e.g., Ehren, Deshler, & Graner, 2010; Mellard & Johnson, 2008). Such systems are generally referred to as response to intervention (RtI) or multitier systems of supports (MTSS). In order for such systems to work effectively, each tier must be clearly conceptualized and implemented with integrity.

Successful support for students happens when both teachers with *primary* responsibility for instruction at the various tiers (e.g., the content teacher in Tier 1, the special education teacher in Tier 3, etc.), perform their roles as expected. That is, content teachers make the necessary adjustments and accommodations in academically diverse classrooms to optimize the chances of all students mastering critical content regardless of the students' literacy skills. In other words, content teachers do not act as if their lone responsibility is to meet the needs of only the average and high achieving students, allowing support teachers to assume responsibility for the learning of those who struggle in learning. On the other hand, when special education teachers are providing Tier 3 supports, they provide intensive instruction in those skills and strategies required for students to be successful in the general education classroom. If each teacher does not fulfill his or her expected role, the system will not realize its full potential to help all students and may, indeed, ultimately collapse (Ehren, Deshler, & Graner, 2010).

Challenges Faced by Content Teachers

Teach on the Diagonal

Disciplinary literacy plays a key, if understated, role in the CCSS. For students to develop literacy in a particular discipline, they must grow on two dimensions simultaneously. Students must acquire disciplinary content knowledge, *and* they must learn how to think about and learn in that discipline. This has been referred to as "learning on the diagonal" (Geisler, 1994; McConachie & Petrosky, 2010). Therefore, knowledge and thinking must go hand in hand. When students "learn on the diagonal," they learn how to use content-specific habits of thinking to develop understanding of the critical conceptual content of each discipline.

To support students in reaching the goal, content teachers must be able to "teach on the diagonal." In other words, they must teach students *both* the conceptual knowledge *and* the habits of thinking in their discipline. The model of teaching on the diagonal has the potential of directly addressing the dual expectations embodied in the CCSS of acquiring critical content and habits for successfully learning that content. This work is grounded in research on learning as assisted performance (Tharp & Gallimore, 1988), cognitive apprenticeship (Collins, Brown, & Newman, 1989), and legitimate peripheral participation (Lave & Wenger, 1991). Furthermore, as content teachers analyze the knowledge and habits of thinking in each of their areas, they have the opportunity to emphasize foundational types of thinking (e.g., analyzing concepts, making comparison, determining causation, and evaluating statements) that are common across content areas.

Challenges Faced by Special Education Teachers

Resist Pressures to Become a Content Tutor

One of the most common traps that special education teachers fall into in middle and high school settings is that of being an academic tutor (Deshler, Robinson, & Mellard, 2009). That is, when students with LD have difficulty responding to the demands placed on them in their content classes, they often turn to the special education teacher for tutoring assistance

to help them "survive" in their content classes. Having the special educator provide tutoring support to students with LD is often broadly embraced; that is, students, parents, content teachers, and principals are pleased because the students' chances of getting a passing grade in a required course are increased.

However, there are many problems with this approach. First, special education teachers seldom have proper training in the various content areas in which they provide academic tutoring. Second, when they spend their time tutoring academic content, they do not spend time teaching students the underlying skills and strategies that students so desperately need to learn in order to independently thrive in content classes. Finally, when they agree to provide academic tutoring, they deliver a message to content teachers that it isn't necessary for them to adjust their instructional methods to more effectively meet the broad array of needs of students in their academically diverse classes. In short, having special education teachers spend their time teaching students the kinds of skills, strategies, behaviors, and dispositions that they will need to succeed in rigorous content classes is of critical importance in enhancing the probability that students with LD will be able to meet CCSS.

RECOMMENDATIONS FOR SUPPORTS FOR STUDENTS WITH LD

A small body of research exists in the area of history and social studies instruction especially for older students. A compact literature base developed in the last two decades around domain-specific instruction in history and social studies will be addressed first as it highlights efforts made by various researchers.

A discussion of the few evidence-based interventions used successfully with students with LD in history and social studies classes and available for teachers follows. Teachers can apply the interventions in their own their history and social studies classrooms including De La Paz's historical reasoning strategy and the University of Kansas Center for Research on Learning's Content Enhancement Routines and Learning Strategies.

An emerging literature base in the 1990s focused on various methods and tools to prompt social studies understanding. Kinder and Bursuck (1993) focused on textbook reading with sixth to eighth grade students with disabilities by teaching students to analyze textbook selections for problem–solution–effect through a question–answer process. Students learned to determine vocabulary meaning in context, write definitions and develop timelines and improved their performance on textbook focused tests. Harmon, Katims, and Whittington (1999) addressed prediction, reading and note taking, and clarifying important vocabulary using their Person–Effect–Place map (PEP) strategy. Students improved in answering multiple-choice questions from the text and students' notes appeared to be more complete.

Multimedia played a role beginning in the late 1990's. Ferretti and Okolo (1996) and Okolo and Ferretti (1996) investigated project-based inquiry employing multimedia presentations and a variety of sources to understand multiple perspectives. Later, Ferretti, MacArthur, and Okolo (2001) developed strategy-supported project-based learning (SSPBL) as a curriculum model for fifth-grade students with and without LD to understand historical thinking processes. Gersten, Baker, Smith-Johnson, Dimino, and Petrson (2006) instructed middle schools students with LD in the civil rights movement by utilizing short multimedia selections paired with peer dyad activities to support and facilitate learning. The performance of students with LD was similar to average performing peers in the comparison condition. These researchers encouraged instructors to experiment with any of the techniques used in their study, recommending that most of the techniques are feasible to implement, and all of the researchers found promise for students with LD.

In an extensive review of science and social studies research for students with disabilities, Mastropieri, Okolo, & Scruggs (2008) contended that little emphasis has been placed on the development of instruction in social studies, given its low priority in educational reform. As a result, their review included recommendations for various instructional practices that are relevant to social studies and applicable for teachers instructing students with LD.

A strategy researched specifically in history and social studies and with students with disabilities is De La Paz's historical reasoning strategy (De La Paz, 2005; De La Paz, Morales, & Winston, 2007) using Harris and Graham's (1996) self-regulated strategy development (SRSD) (1996) as the instructional model to address historical reasoning and persuasive writing with 70 eighth-grade students. Implementing her strategy across 22 days (12 for the historical reasoning strategy and 10 for writing instruction), students were instructed in how to read and take notes from primary source documents and to produce an opinion essay based upon those notes. Student products were rated for length, persuasive quality, number of arguments, and historical accuracy. Students with LD, on average, produced shorter papers than other students, but by the posttest condition were writing longer papers than in the pretest condition. Additionally, for persuasion, students with LD scored as well on the posttest as talented writers scored on the pretest. Two areas that showed some improvement for students with LD were the number of arguments presented and historical reasoning. Not surprisingly, the students with LD had a smaller fund of knowledge from the beginning and a gap remained after instruction was concluded; however, considerable improvement was noted.

Promoting the success of students with LD in general education core content classes can be enhanced by the use of other evidence-based procedures shown to support learning, thinking, and higher order reasoning, and to increase learning for all students as recommended by Torgesen et al., (2007). Strategic Instruction Model (SIM) Content Enhancements (CERs) and Learning Strategies developed at the University of Kansas Center for Research on Learning (KUCRL) respond to some of the main challenges from the CCSS (Bulgren & Lenz, 1996).

Particularly relevant to the challenges in the CCSS are practices found in instructional procedures associated with Content Enhancement (Bulgren, Deshler, & Lenz, 2007). "Content enhancement" is a way of teaching an

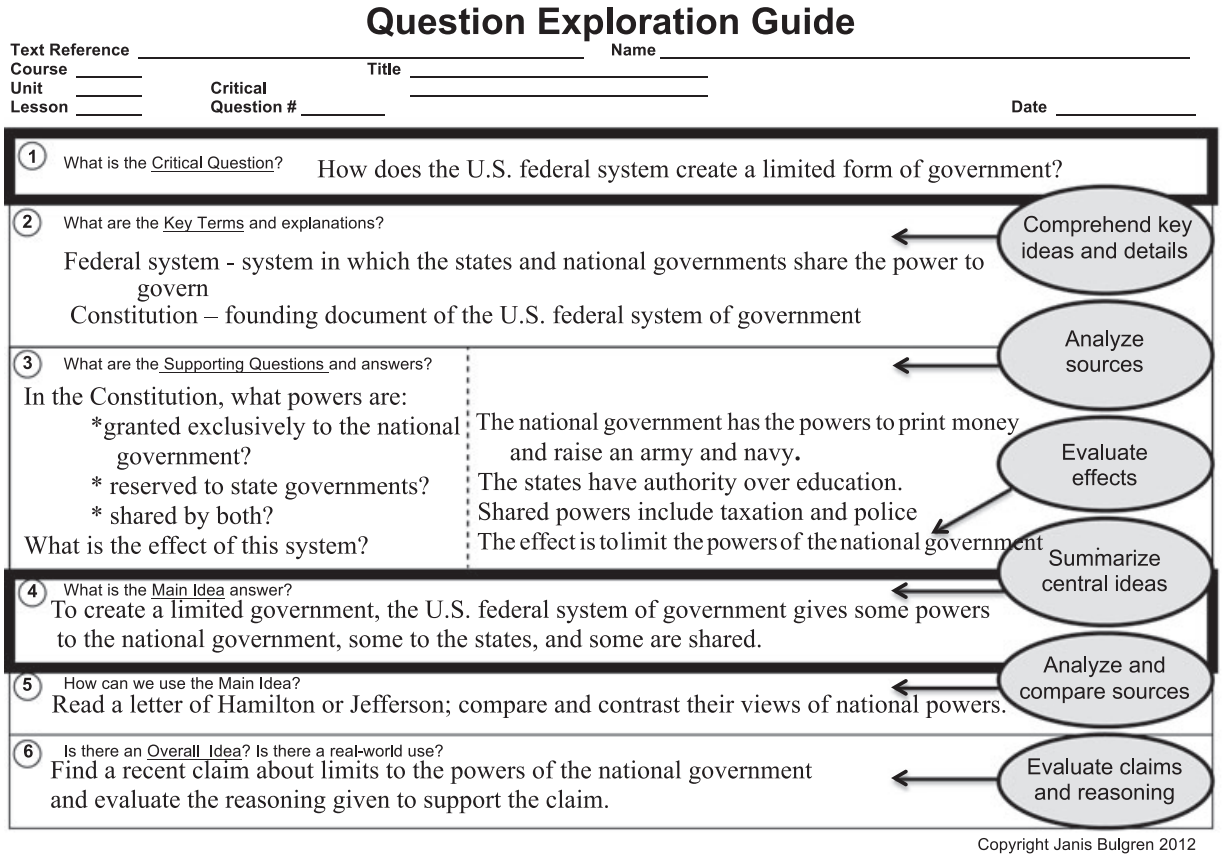

FIGURE 1 Sample Question Exploration Guide.

academically diverse group of students that incorporates ways to help teachers select and transform critical features of the content to promote learning, maintain the integrity of the content, and engage students in a coconstructive partnership that meets the needs of both the group and the individuals in the group (Bulgren et al., 2007). CERs consist of a common set of instructional procedures based on components shown to help students with LD succeed. Among those are the use of advance organizers, graphic organizers, embedded strategy steps, interactive learning, and post organizers. These are components of organizing and delivering instruction supported by analyses from the What Works Clearinghouse (Kamil et al., 2008; Pashler et al., 2007).

For example, the Question Exploration Routine (QER) is a CER that can support comprehension of key ideas and details, analysis of sources, summarization of central ideas and how they develop, determination of causes and effects, and explanation of understandings. One study resulted in findings of significant differences representing large to very large effect sizes in favor of students in the experimental condition who received instruction with the QER, including students with LD (Bulgren, Marquis, Lenz, Deshler, & Schumaker, 2011). Another study supported the use of the QER as a way to help students write five-paragraph essays as well as acquire critical knowledge (Bulgren, Marquis, Lenz, Schumaker, & Deshler, 2009). See Figure 1 for an example of a Question Exploration Guide associated with the QER that is used to interactively construct an answer to a question about the federal system of government in the United States. Specifically, after introduction of a critical question in Step 1, students and teachers interactively explore, define, and explain key ideas and details in Step 2, analyze sources and information in Step 3, summarize a main idea in Step 4, and expand their reasoning skills with challenges such as analyzing and comparing sources in Step 5. In Step 6, students and teachers collaborate to evaluate claims about government in today's world, that is, they generalize or extend use of the main idea. Note that the arrows and ovals on Figure 1 illustrate how the QEG is used to highlight the higher order reasoning components of the CCSS history and social studies standards.

Another CER, the Concept Comparison Routine (Bulgren, Lenz, Schumaker, Deshler, & Marquis, 2000), provides supports for teachers and students as they respond to CCSS challenges to compare and contrast conceptual information. See Figure 2 for an example of a Comparison Table to help students and teachers identify and understand similarities and differences in two forms of government, federalism and a confederacy, that our founding fathers considered. Development of that understanding is guided by the identification of the key concepts of a federalist or confederate form of

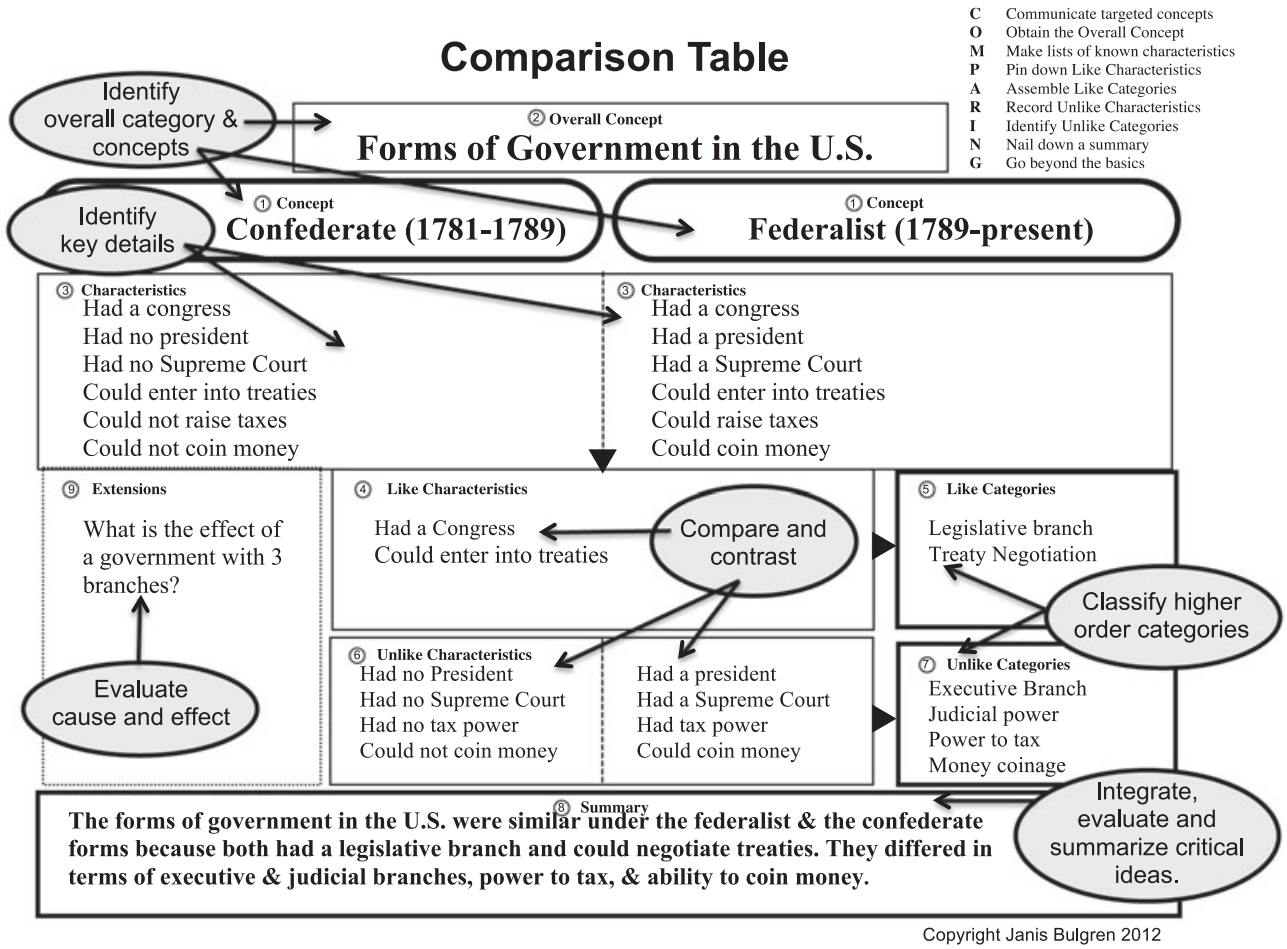

FIGURE 2 Sample Comparison Table.

government in Step 1, followed by selection of the overall concept or larger category into which those fit in Step 2, that is, that they are both forms of government in the United States. Then, key details about each of those concepts are identified in Step 3. Next, higher order thinking associated with comparing is prompted in Step 4, contrasting is prompted in Step 6, and higher order reasoning to determine categories of those characteristics is explored in steps 5 and 7. The integration, evaluation, and summarization of the critical idea is created in Step 8, and a thinking challenge, in this case, determining causes and effects, is explored in Step 9. Note that the arrows and ovals on Figure 2 illustrate how the Comparison Table is used to highlight the higher order reasoning components of the CCSS history and social studies standards. A study indicated that teachers easily incorporated the Concept Comparison Routine into their instruction, and that use of the routine led to significantly better retention and expression of information by students, including those with LD, in the experimental condition compared with students participating in a traditional lecture-discussion format (Bulgren et al., 2000).

These examples of CERs illustrate only two of a series of evidence-based CERs that can be used to help respond to the reasoning challenges in the CCSS in Tier 1 settings. For example, the Concept Mastery Routine (Bulgren, Schumaker, & Deshler, 1988) is used by teachers to help students analyze and comprehend critical concepts; the Concept Anchoring Routine (Bulgren et al., 2000) is used for comprehending a difficult concept by developing analogies; and the Recall Enhancement Routine (Bulgren, Deshler, & Schumaker, 1997) is used to acquire and recall the key ideas and details necessary to engage in higher order thinking and reasoning.

Furthermore, the Argumentation and Evaluation Routine (Bulgren & Ellis, 2012) helps students and teachers analyze claims, the evidence presented to support a claim, the reasoning used, and counterarguments and rebuttals. A study in this line of research suggests that students with LD can learn to analyze and evaluate a claim related to socioscientific as well as scientific topics (Ellis & Bulgren, 2009). In addition, other evidence-based CERs help students to trace causal reasoning and make decisions (Bulgren, Deshler,

& Schumaker, 1998). Other CERs support teachers as they plan and organize courses, units and lessons (Lenz, Marrs, Schumaker, & Deshler, 1993; Lenz, 1994; Lenz, 1998).

Research on CERs has been conducted in history and social studies classes as well as other inclusive general education classes. Specifically, the Recall Enhancement Routine (Bulgren et al., 1997) was studied in junior high school history classes; the Concept Mastery Routine research (Bulgren et al., 1988) was conducted in history and social studies classes as well as science classes, and teachers in history and social studies classes were shown to use the Concept Anchoring Routine (Bulgren et al., 2000) with fidelity when teaching regularly scheduled content. Research has also been conducted using socioscientific topics such as the effect of human actions on the ozone layer (Bulgren et al., 2009), in science classes, (Bulgren et al., 1988, Bulgren et al., 2000; Bulgren et al., 2002; Bulgren et al., 2011; Bulgren & Ellis, 2012), and in literature classes (Bulgren, Marquis, Lenz, Deshler, & Schumaker, (2012). Furthermore, an integrated set of Content Enhancement Routines for use in a social studies course has been developed to illustrate the further potential for research and instruction in this area (Bulgren et al., 2007). Nevertheless, some students, such as those with LD, will benefit from additional support such as that provided by instruction in learning strategies.

If students with LD are to succeed in the CCSS climate, they will require effective learning strategies viewed through both "curricular and learner characteristics" (Scruggs, Mastropieri, Berkeley, & Graetz, 2010) to ensure that they are prepared for this new climate. Learning strategies have been defined as ". . .an individual's approach to a task. It includes how a person thinks and acts when planning, executing, and evaluating performance on a task or its outcomes" (Schumaker & Deshler, 2006, p. 132). In short, a learning strategy can be viewed as the development, execution, and reflection on a plan for successfully accomplishing a complex task or learning goal.

In an RtI context, Learning Strategies fit into tiers 2 and 3 and should be taught to students who require more learning supports than others, especially if they are to participate in rigorous content classes (Ehren, Deshler, & Graner, 2010). At Tier 2 and/or Tier 3, intensive, explicit strategy instruction is delivered to a smaller group of students by a support teacher who follows a specific research-validated instructional sequence. For example, a student who struggles to correctly make inferences based upon known information might be instructed in the Inference Strategy (Fritschmann, Schumaker, & Deshler, 2007) over 6 weeks of instruction. More intensive strategy instruction might be necessary for a student who struggles in many areas of reading comprehension and who may need to participate in a semester or year-long course to learn a variety of reading comprehension strategies.

Ultimately, recognizing that at each tier, unique instructional options will be necessary for some students to succeed in a CCSS scenario, each tier should be differentiated from the others by what is taught, by whom, and by how the instruction is provided.

IMPLICATIONS AND FUTURE RESEARCH

Future research for adolescents with LD as it relates to the CCSS must be designed to address instructional and structural challenges present in most secondary school settings.

Instructional Challenges

First, the learning experiences of adolescents in secondary schools are quite fragmented. That is, students have several teachers daily. As a result, the likelihood of content or skills/strategies taught in one class being built upon, reinforced, and integrated with learning in other classes is quite remote. Research is needed to determine ways to have high leverage learning strategies (e.g., comprehension monitoring) taught and reinforced by a critical mass of teachers across core content classes. The repeated use and reinforcement of these high leverage strategies by a large percentage of the teaching faculty in a secondary school would reduce the fragmentation that students experience and would help them acquire important habits of thinking for navigating secondary school environments.

Second, an array of evidence-based CER have emerged during the past two decades for teaching students such things as how to analyze and compare critical concepts and how to unpack complex discipline-specific questions in social studies and language arts (e.g., Bulgren et al., 2007). In light of the CCSS emphasis on other higher order thinking areas such as reasoning, making decisions, and analyzing arguments in support of claims, there is a need to develop other CERs to support teachers in teaching these kinds of behaviors. Additionally, research is needed on ways to effectively integrate together several CERs within a given unit of instruction. Currently, most research has been on the application of single routines. Given the complex and diverse nature of the content that teachers are expected to teach in their classes, it would be important to determine the effects of an integrated array of instructional routines that would accommodate the breadth of content within a unit of instruction.

Third, strategies for teaching students how to more effectively generalize, transfer, and continue to use various learning strategies across settings, teachers, and years in school are needed. Instructional routines that can be used by both content and special education teachers need to be designed and validated.

Finally, much has been learned about how to teach adolescents with LD during the past two decades (Deshler & Schumaker, 2006; Vaughn et al., 2011; Wanzek, Wexler, Vaughn, & Ciullo, 2010); however, motivation to learn continually surfaces as a critical contributor to overall achievement (Biancarosa & Snow, 2006; Porche, Tabors, Harris, & Snow, 2007). While learning strategies and effective teaching practices are critical, if students lack the motivation to engage in learning, growth will be limited (Guthrie & Wigfield, 1997). It is motivation that activates the behavior to engage in learning. Because of repeated failure and

disappointment, adolescents with LD frequently feel marginalized in the learning process and often choose to disengage. Learning about and being able to measure adolescents' motivation to learn is an important element in being able to design more effective learning experiences for them in middle and high school settings.

Structural Challenges

The following issues need to be addressed relative to the structural realities of middle and high school environments. First, the research conducted on on-track indicators as a predictor of high school graduation by Allensworth and Easton (2009) at the Consortium on Chicago School Research underscore a major challenge encountered by adolescents in secondary schools. The "on-track" indicator that emerged from their research has become a measure of progress during the first year of high school to determine if, indeed, a student is on-track to graduate from high school. They have found a high correlation between successful core course completion in the ninth grade and on-time high school graduation. If students fail one or more classes in their freshman year of high school, their chances of graduation plummet. In light of this, research is needed on instructional and transitional strategies to better prepare students with LD when they are in middle school to be able to successfully respond to the academic rigors that they encounter during their first year of high school.

Second, as more demands are placed on existing school budgets, one of the first areas to be cut is PD. Research should be conducted on the potential efficacy of a range of responses to PD needs and realities. Some research suggests that delivery of PD be a blended and multimodal, dynamic and responsive process supported by online resources and technologies to support or add to face-to-face interactions (Clark & Mayer, 2011). To illustrate, one suggestion has been the use of flipped models of instruction in PD (Bull, Ferster, & Kjellstrom, 2012). This model of learning is one in which more time is devoted to hands-on learning. Lectures, screencasts, and videos are available for learners to view outside of class or the PD. When learners assemble together, they spend their time problem solving, applying, asking questions, etc. The potential of having teachers learn the content of a new instructional routine by independently watching a video and then coming together with colleagues (e.g., in a professional learning community) to debrief and discuss what was learned and then to observe models of the practice, engage in controlled practice experiences, and to provide and receive feedback may be a model that is as effective as traditional face-to-face PD and potentially less expensive. Certainly, online facilitation of PD supported by webinars, conference calls, and web2.0 technologies can provide access to collaborative environments and educationally relevant resources to extend the learning experience and be convenient to the learner. These are only a few suggestions for utilizing new technologies and models of PD that may serve teachers and students as they face new challenges such as those presented in the CCSS.

CONCLUSION

In summary, the bar for educational achievement in core content areas has been raised based on challenges such as those found in the CCSS in Literacy in History and Social Studies. The result is both challenges and opportunities for students, including those with LD. A corollary set of challenges and opportunities exist for general education teachers and special education teachers. Positive outcomes can be achieved if teachers understand the scope of the challenges. These challenges include focusing on higher order thinking and reasoning, incorporating innovative evidence-based instruction in classes such as history and social studies, and creating an atmosphere of openness to collaboration across grade levels and content areas.

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