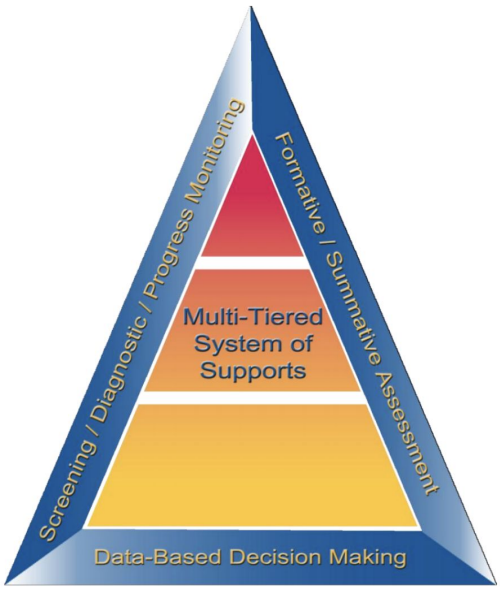

MODULE 11
Overview of Secondary RTI

Participant Workbook

ARKANSAS RESPONSE TO INTERVENTION MODULE SERIES

AIR
American Institutes for Research

State Personnel Development Grant
Arkansas
Building RTI Capacity

Module 11: Overview of Secondary RTI

Activity 1: Essential Components of Tiered Systems of Support - Note Taking Resource

Directions: As the essential components of RTI are discussed, use this note taking resource to record what you would like to remember and any questions you may still have.

Essential Component	What Do I Want to Remember?	What Questions Do I Still Have?
Screening		
Progress Monitoring		
Multi-level Prevention System		
Data-based Decision Making		

Activity 2: Creating a Focus Statement and Identifying Root Causes

Directions: With your team, create a focus for RTI implementation by reflecting on the outcomes you would like to improve. Use the guiding questions for support as you determine the purpose and scope of RTI. After creating a focus statement, begin to identify potential root causes and develop a statement to reflect the analysis of information.

Contextual Factor: Focus	**Guiding Questions**
The design and implementation of all the essential components are dependent on a school's focus for tiered interventions. At the secondary level, this focus may not always include all students or all content areas. Each school must determine its purpose and scope of tiered interventions, keeping in mind that no standard application of the framework exists for secondary schools. Schools may already have some initiatives in place that support tiered intervention implementation.	• What is the purpose and scope of tiered interventions in the school? • How do existing initiatives fit into the tiered interventions framework? • How do current special education and instructional support practices align with tiered interventions? • Do other initiatives hinder the implementation of tiered interventions? • If the school is structured using academies, how do the academies affect the focus of the tiered interventions framework?

Focus Statement:

We are implementing RTI to _____

because our data suggest _____.

Root Cause Statement:

Our analysis suggests that students are struggling with _____

because of the following _____.

Activity 3: Benefits and Concerns of Implementing RTI

Directions: Using the T-Chart below, brainstorm potential benefits and challenges one might encounter when implementing RTI**.** Use the following questions to guide your thinking.

COLUMN 1: How can RTI benefit students, teachers, and leaders?
COLUMN 2: What are potential challenges to implementing RTI in our school?

Potential Benefits	Potential Challenges

Activity 4: Schoolwide Literacy Recommendations

Directions: As you watch the video, write a description of each recommendation in your own words in the first column. During the video, you may also include examples of what the literacy recommendation looks like in practice. After the video, your team will have an opportunity to discuss what you are already doing related to this recommendation and select a recommendation you would like to learn more about or pursue in your school.

IES Literacy Recommendation*	What would this look like in secondary?	What are we already doing related to this recommendation?	Available or Needed Resources
Provide explicit vocabulary instruction			
Provide direct and explicit comprehension strategy instruction			
Provide opportunities for extended discussion of text meaning and interpretation			
Increase student motivation and engagement in literacy learning			

Resource: IES Practice Guide
Improving Adolescent Literacy: Effective Classroom and Intervention Practices

Checklist for carrying out the recommendations

Recommendation 1. Provide explicit vocabulary instruction

- ☐ Dedicate a portion of regular classroom lessons to explicit vocabulary instruction.
- ☐ Provide repeated exposure to new words in multiple contexts, and allow sufficient practice sessions in vocabulary instruction.
- ☐ Give sufficient opportunities to use new vocabulary in a variety of contexts through activities such as discussion, writing, and extended reading.
- ☐ Provide students with strategies to make them independent vocabulary learners.

Recommendation 2. Provide direct and explicit comprehension strategy instruction

- ☐ Select carefully the text to use when beginning to teach a given strategy.
- ☐ Show students how to apply the strategies they are learning to different texts.
- ☐ Make sure that the text is appropriate for the reading level of students.
- ☐ Use a direct and explicit instruction lesson plan for teaching students how to use comprehension strategies.
- ☐ Provide the appropriate amount of guided practice depending on the difficulty level of the strategies that students are learning.
- ☐ Talk about comprehension strategies while teaching them.

Recommendation 3. Provide opportunities for extended discussion of text meaning and interpretation

- ☐ Carefully prepare for the discussion by selecting engaging materials and developing stimulating questions.
- ☐ Ask follow-up questions that help provide continuity and extend the discussion.
- ☐ Provide a task or discussion format that students can follow when they discuss text in small groups.
- ☐ Develop and practice the use of a specific "discussion protocol."

Recommendation 4. Increase student motivation and engagement in literacy learning

- ☐ Establish meaningful and engaging content learning goals around the essential ideas of a discipline as well as around the specific learning processes used to access those ideas.
- ☐ Provide a positive learning environment that promotes student autonomy in learning.
- ☐ Make literacy experiences more relevant to student interests, everyday life, or important current events.
- ☐ Build classroom conditions to promote higher reading engagement and conceptual learning through such strategies as goal setting, self-directed learning, and collaborative learning.

Recommendation 5. Make available intensive individualized interventions for struggling readers that can be provided by qualified specialists

☐ Use reliable screening assessments to identify students with reading difficulties and follow up with formal and informal assessments to pinpoint each student's instructional needs.

☐ Select an intervention that provides an explicit instructional focus to meet each student's identified learning needs.

☐ Provide interventions where intensiveness matches student needs: the greater the instructional need, the more intensive the intervention. Assuming a high level of instructional quality, the intensity of interventions is related most directly to the size of instructional groups and amount of instructional time.

Recommendation 1. Provide explicit vocabulary instruction

Teachers should provide students with explicit vocabulary instruction both as part of reading and language arts classes and as part of content-area classes such as science and social studies. By giving students explicit instruction in vocabulary, teachers help them learn the meaning of new words and strengthen their independent skills of constructing the meaning of text.

Level of evidence: Strong

The panel considers the level of evidence supporting this recommendation to be *strong*, based on six randomized controlled experimental studies and three well designed quasi-experiments that demonstrated group equivalence at pretest.[1] An additional six studies with weaker designs provided direct evidence to support this recommendation.[2] A single subject design study also provided evidence about the effect of vocabulary instruction on students' outcomes.[3] The research supporting explicit vocabulary instruction includes students in upper elementary, middle, and high schools from diverse geographic regions and socioeconomic backgrounds and addresses a wide variety of strategies of vocabulary instruction.

1. Barron and Melnik (1973); Baumann et al. (2002); Baumann et al. (2003); Bos and Anders (1990); Brett, Rothlein, and Hurley (1996); Lieberman (1967); Margosein, Pascarella, and Pflaum (1982); Nelson and Stage (2007); Xin and Reith (2001).

2. Beck, Perfetti, and McKeown (1982); Jenkins, Matlock, and Slocum (1989); Koury (1996); Ruddell and Shearer (2002); Stump et al. (1992); Terrill, Scruggs, and Mastropieri (2004).

3. Malone and McLaughlin (1997). The standards for judging the quality of a single subject design study are currently being developed.

One caveat is critical to interpreting the research on vocabulary instruction. While all of these studies show effects on vocabulary learning, only some show that explicit vocabulary instruction has effects on standardized measures of reading comprehension. Although reading comprehension is clearly the ultimate goal of reading instruction, it is important to note that the construct of comprehension includes, but is not limited to, vocabulary. While it is likely that the cumulative effects of learning vocabulary would eventually show effects on reading comprehension, we believe additional research is necessary to demonstrate this relationship.

Brief summary of evidence to support the recommendation

In the early stages of reading most of the words in grade-level texts are familiar to students as part of their oral vocabulary. However, as students progress through the grades, print vocabulary increasingly contains words that are rarely part of oral vocabulary. This is particularly the case for content-area material. In many content-area texts it is the vocabulary that carries a large share of the meaning through specialized vocabulary, jargon, and discipline-related concepts. Learning these specialized vocabularies contributes to the success of reading among adolescent students. Research has shown that integrating explicit vocabulary instruction into the existing curriculum of subject areas such as science or social studies enhances students' ability to acquire textbook vocabulary.[4]

Children often learn new words incidentally from context. However, according to a meta-analysis of the literature, the probability that they will learn new words while reading is relatively low—about 15 percent.[5] Therefore, although incidental

4. Baumann et al. (2003); Bos and Anders (1990).

5. Swanborn and de Glopper (1999).

learning helps students develop their vocabulary, additional explicit instructional support needs to be provided as part of the curriculum to ensure that all students acquire the necessary print vocabulary for academic success. In many academic texts, students may use context clues within the text, combined with their existing semantic and syntactic knowledge to infer the meaning of unfamiliar words.[6] Explicit vocabulary instruction may be essential to this development of these types of inference skills.

Words are best learned through repeated exposure in multiple contexts and domains. Many content-area texts, such as those in biology and physics, however, include specialized vocabulary, jargon, and discipline-related concepts that students may not encounter outside their textbooks. This aspect of presenting content-area material limits the amount of exposure students will have with these unfamiliar terms. If students encounter unknown words in almost every sentence in a textbook, learning the content becomes daunting and discouraging. Explicit instruction in specialized vocabularies is an important way to contribute to successful reading among adolescent students.[7]

Research has shown that integrating explicit vocabulary instruction into the existing content-area curriculum in content areas such as science or social studies enhances students' ability to acquire textbook vocabulary.[8] Additional studies that examined students' scores on the vocabulary subtests of standardized reading tests demonstrated that explicit vocabulary instruction had a substantial effect on students' vocabulary acquisition in the context of a variety of texts, including prose, expository texts, and specialized word lists.[9]

Explicit vocabulary instruction is a name for a family of strategies that can be divided into two major approaches: direct instruction in word meaning and instruction in strategies to promote independent vocabulary acquisition skills. Direct instruction in word meaning includes helping students look up definitions in dictionaries and glossaries, read the words and their definitions, match words and their definitions, participate in oral recitation, memorize definitions, and use graphic displays of the relationships among words and concepts such as semantic maps. Strategies to promote independent vocabulary acquisition skills include analyzing semantic, syntactic, or context clues to derive the meaning of words by using prior knowledge and the context in which the word is presented. Research shows that both approaches can effectively promote students' vocabulary.[10] The first approach can add to students' ability to learn a given set of words, whereas the second approach has the added value of helping students generalize their skills to a variety of new texts in multiple contexts. In that respect, the two approaches are complementary rather than conflicting.

Some students acquire words best from reading and writing activities, whereas other students benefit more from visual and physical experiences.[11] For example, short documentary videos may help students learn new concepts and terms because they provide a vivid picture of how the object looks in the context of its

6. Swanborn and de Glopper (1999).

7. Beck et al. (1982).

8. Baumann et al. (2003); Bos and Anders (1990)

9. Barron and Melnik (1973); Baumann et al. (2002); Beck et al. (1982); Brett et al. (1996); Nelson and Stage (2007)

10. Baumann et al. (2003); Bos and Anders (1990); Jenkins et al. (1989)

11. Barron and Melnik (1973); Xin and Reith (2001).

environment or specialized use.[12] Using computer software to teach vocabulary is an effective way to leverage instructional time and provide a variety of practice modes—oral, print, and even multimedia elaborations of words and concepts. Programs that allow students to engage in independent practice can free teachers to work with other students in other instructional modes.

Other studies have shown that students also learn vocabulary through rich discussions of texts (see recommendation 3). For instance, one study showed that discussion improved knowledge of word meanings and relationships for students reading biology texts.[13] Discussion was also used in another study as part of the intervention.[14] Discussion seems to have its effects by allowing students to participate as both speakers and listeners. While this is not explicit instruction, it does have some additional benefits. For example, discussion might force students to organize vocabulary as they participate, even testing whether or not the vocabulary is used appropriately. It also presents opportunities for repeated exposure to words, shown to be a necessary condition for vocabulary learning. Vocabulary learning in these cases did not result from explicit instruction, but teachers who recognize potential of this kind of learning can supplement these interactions with new vocabulary with brief, focused explicit instruction to ensure that students share a common understanding of unfamiliar words and terms and have an opportunity to practice new vocabulary.

Although the research noted so far demonstrates the positive effects of explicit vocabulary instruction on vocabulary acquisition, there are mixed results with respect to the effects of such instruction on general measures of comprehension. Only a small number of the studies on explicit vocabulary instruction included comprehension outcome measures and found meaningful increases in students' reading comprehension. It may be that whereas limited vocabulary interferes with comprehension, additional literacy skills are needed for successful reading comprehension.

How to carry out the recommendation

1. Dedicate a portion of the regular classroom lesson to explicit vocabulary instruction. The amount of time will be dictated by the vocabulary load of the text to be read and the students' prior knowledge of the vocabulary. Making certain that students are familiar with the vocabulary they will encounter in reading selections can help make the reading task easier. Computer instruction can be an effective way to provide practice on vocabulary and leverage classroom time.

2. Use repeated exposure to new words in multiple oral and written contexts and allow sufficient practice sessions.[15] Words are usually learned only after they appear several times. In fact, researchers[16] estimate that it could take as many as 17 exposures for a student to learn a new word. Repeated exposure could be in the same lesson or passage, but the exposures will be most effective if they appear over an extended period of time.[17] Words that appear only once or twice in a text are typically not words that should be targeted for explicit instruction because there may never be enough practice to learn the word completely. Students should be provided with the definitions of these infrequent words.

12. Xin and Reith (2001).
13. Barron and Melnik (1973).
14. Xin and Reith (2001).
15. Jenkins et al. (1989).
16. Ausubel and Youssef (1965).
17. Ausubel and Youssef (1965).

3. Give sufficient opportunities to use new vocabulary in a variety of contexts through activities such as discussion, writing, and extended reading. This will ensure that students begin to acquire a range of productive meanings for the words they are learning and the correct way to use those words in addition to simply being able to recognize them in print.

4. Provide students with strategies to make them independent vocabulary learners. One way is to give them strategies to use components (prefixes, roots, suffixes) of words to derive the meaning of unfamiliar words; another is to make use of reference material such as glossaries included in their textbooks.[18]

Potential roadblocks and solutions

1. Students may vary in their response to different vocabulary instruction strategies. For example, some students respond better to sensory information than to verbal information about word meaning. Teachers need to combine multiple approaches in providing explicit vocabulary instruction.[19] For instance, as described above, it is helpful to expose students to vocabulary numerous times either in one lesson or over a series of lessons. It is also helpful to combine this repeated exposure with a number of different explicit instruction strategies, such as using direct instruction techniques (getting students to look up definitions in dictionaries), helping promote students to independently acquire vocabulary skills (using context clues to derive meaning), offering students the opportunity to work on the computer using various software, and allowing students to discuss what they have read.

2. Teachers may not know how to select words to teach, especially in content areas. Content-area textbooks are loaded with too much specialized vocabulary and jargon. Teachers need to select carefully the most important words to teach explicitly each day. Several popular methods of selecting words for vocabulary instruction are available. Two methods seem important for adolescent readers:

- One method uses as a criterion the frequency of the words in instructional materials.[20] This, again, is more important for elementary materials where the vocabulary is selected from a relatively constrained set of instructional materials. For most adolescents, this constraint on vocabulary in instructional materials diminishes over time, making the frequency method of selecting words less useful for teaching adolescent students reading content. However, for adolescent students who have limited vocabularies, selecting high-frequency, unknown words remains an important instructional strategy.

- Another method uses three categories of words: Tier I, Tier II, and Tier III. This concept has been applied most effectively for literary texts with students at elementary levels. Tier I words are those typically in readers' vocabularies and should not be the focus of instruction. These high-frequency words are usually acquired very early. Tier III words are rare words that are recommended for instruction only when they are encountered in a text. That leaves Tier II words as the focus of explicit vocabulary instruction prior to reading a text. The criteria for what constitutes membership in each tier are not sharply defined, but are loosely based on frequency and the utility for future reading.[21]

18. Baumann et al. (2002); Baumann et al. (2003).

19. Lieberman (1967).

20. Biemiller (2005); Hiebert (2005).

21. Beck et al. (1982).

- For adolescent readers of content materials, vocabulary should be selected on the basis of how important the words are for learning in the particular discipline, rather than the tier in which the word is located. For example, in a 9th-grade biology text, the word "cytoskeleton" might be a target for prereading instruction in a chapter on cell biology, even though it would generally be considered a Tier III word because it almost never appears in general reading or conversation. Most of the words for adolescent readers should be selected on the basis of how important they are to understanding the content that students are expected to read. For much content material, the words that carry the burden of the meaning of the text are rare words, except in texts and materials related to a specific discipline. Despite the rarity of the words, they are often critical to learning the discipline content and thus should be the subject of explicit instruction, which is almost the only way they can be learned.

3. Teachers may perceive that they do not have time to teach vocabulary. Teachers are often focused on the factual aspect of students' content-area learning and find little time to focus on other issues in reading. Whenever reading is part of a lesson, a few minutes spent on explicit vocabulary instruction will pay substantial dividends for student learning. Some effort in teaching students to become independent vocabulary learners will lessen the amount of time required by teachers as part of the lesson.[22] Making students even slightly more independent vocabulary learners will eventually increase the amount of content-area instructional time.

Using computers can give teachers the opportunity to provide independent practice on learning vocabulary. Teachers will be able to leverage instructional time by having students work independently, either before or after reading texts.

22. Baumann et al. (2002); Baumann et al. (2003).

Recommendation 2. Provide direct and explicit comprehension strategy instruction

Teachers should provide adolescents with direct and explicit instruction in comprehension strategies to improve students' reading comprehension. Comprehension strategies are routines and procedures that readers use to help them make sense of texts. These strategies include, but are not limited to, summarizing, asking and answering questions, paraphrasing, and finding the main idea. Comprehension strategy instruction can also include specific teacher activities that have been demonstrated to improve students' comprehension of texts. Asking students questions and using graphic organizers are examples of such strategies. Direct and explicit teaching involves a teacher modeling and providing explanations of the specific strategies students are learning, giving guided practice and feedback on the use of the strategies, and promoting independent practice to apply the strategies.[23] An important part of comprehension strategy instruction is the active participation of students in the comprehension process. In addition, explicit instruction involves providing a sufficient amount of support, or scaffolding, to students as they learn the strategies to ensure success.[24]

23. Brown, Campione, and Day (1981); Dole et al. (1991); Kame'enui et al. (1997); Pearson and Dole (1987); Pressley, Snyder, and Cariglia-Bull (1987).

24. Brown et al. (1981); Palincsar and Brown (1984); Pearson and Gallagher (1983).

Level of evidence: Strong

The panel considers the level of evidence supporting this recommendation to be *strong*, on the basis of five randomized experimental studies[25] and additional evidence from a single subject design study[26] that examined the effects of teaching main idea summarization on adolescents' comprehension of narrative and informational texts. In addition, this body of research is supported by numerous other studies that vary in research design and quality and by additional substantive reviews of the research.[27]

Brief summary of evidence to support the recommendation

Approaches for teaching reading comprehension to adolescents are a common concern among middle and high school teachers because many adolescent students have a hard time comprehending their content-area textbooks.[28] Therefore, helping students comprehend these texts should be a high priority for upper elementary, middle, and high school teachers. Using comprehension strategies may be a new idea for many teachers. However, comprehension strategy instruction has been around for some time and is the topic of a number of resource books available

25. Hansen and Pearson (1983); Katims and Harris (1997); Margosein et al. (1982); Peverly and Wood (2001); Raphael and McKinney (1983).

26. Jitendra et al. (1998). The standards for judging the quality of a single subject design study are currently being developed.

27. Dole et al. (1991); Gersten et al. (2001); National Reading Panel (2000b); Paris, Lipson, and Wixson (1983); Paris, Wasik, and Turner (1991); Pearson and Fielding (1991); Pressley, Johnson et al. (1989); Pressley, Symons et al. (1989); Rosenshine and Meister (1994); Rosenshine, Meister, and Chapman (1996); Weinstein and Mayer (1986).

28. Biancarosa and Snow (2006); Chall and Conrad (1991); Kamil (2003); Moore et al. (1999).

to help teachers teach strategies to their students.[29] Four ideas about teaching comprehension strategies that are important for teachers to understand can be gleaned from the research:

The effectiveness of a number of different strategies has been demonstrated in the small set of experimental studies meeting the WWC standards. These strategies included having students summarize main ideas both within paragraphs and across texts, asking themselves questions about what they have read, paraphrasing what they have read, drawing inferences that are based on text information and prior knowledge, answering questions at different points in the text, using graphic organizers, and thinking about the types of questions they are being asked to answer. It appears that teaching these specific strategies is particularly powerful. However, other strategies have been evaluated in the literature and demonstrated to be useful as well.[30] The point here is that it may not be the particular strategies that make the difference in terms of student comprehension. Many researchers think that it is not the specific strategy taught, but rather the active participation of students in the comprehension process that makes the most difference on students' comprehension.[31] The strategies listed above might be particularly useful for middle and high school teachers students who are passive readers. These students' eyes sometimes glaze over the words on the page because they are not actively processing the meaning of what they are reading. Instruction in the application of comprehension strategies may help these students become active readers.

Most of the research studies compared the use of one or more strategies against a control condition that typically included traditional, or "business as usual" instruction. So, it is really not possible to compare one or more strategies against another. We cannot say that paraphrasing is more powerful than main-idea summarizing, or that drawing inferences on the basis of text information and prior knowledge is better than answering questions at different points in the text. Very little research tells us that. We can say that it appears that asking and answering questions, summarizing, and using graphic organizers are particularly powerful strategies. But even with these strategies we cannot say which ones are the best or better than others for which students and for which classrooms.

It appears that multiple-strategy training results in better comprehension than single-strategy training. All the strong studies that support this recommendation include teaching more than one strategy to the same group of students. For example, one study used finding the main ideas and summarizing to help students comprehend texts better.[32] Another study taught students to make connections between new text information and prior knowledge, make predictions about the content of the text, and draw inferences.[33] This finding is consistent with those from the National Reading Panel, which also found benefits from teaching students to use more than one strategy to improve their reading comprehension skills.[34]

29. Blanchowicz and Ogle (2001); Harvey and Goudvis (2000); Keene (2006); Keene and Zimmerman (1997); McLaughlin and Allen (2001); Oczkus (2004); Outsen and Yulga (2002); Stebick and Dain (2007); Tovani (2004); Wilhelm (2001); Zwiers (2004).

30. Brown et al. (1996); Cross and Paris (1988); Dewitz, Carr, and Patberg (1987); Idol (1987); Klingner, Vaughn, and Schumm (1998); Paris, Cross, and Lipson (1984); Pressley (1976); Reutzel (1985).

31. Gersten et al. (2001); Pressley et al. (1987).

32. Katims and Harris (1997).

33. Hansen and Pearson (1983).

34. National Reading Panel (2000a).

Direct and explicit instruction is a powerful delivery system for teaching comprehension strategies. This finding comes from one of the five strong studies and from a number of other studies.[35] Direct and explicit instruction involves a series of steps that include explaining and modeling the strategy, using the strategy for guided practice, and using the strategy for independent practice. Explaining and modeling include defining each of the strategies for students and showing them how to use those strategies when reading a text. Guided practice involves the teacher and students working together to apply the strategies to texts they are reading. This may involve extensive interaction between the teacher and students when students are applying the strategies to see how well they understand the particular text they are reading. Or, it may involve having students practice applying the strategies to various texts in small groups. Independent practice occurs once the teacher is convinced that students can use the strategies on their own. At that point, students independently practice applying the strategies to a new text.

How to carry out the recommendation

Upper elementary, middle, and secondary school teachers can take several action steps to implement explicit strategy instruction, which involves helping students actively engage in the texts they read. A number of different strategies can be taught directly and explicitly to students and applied to content-area texts they read. Assisting students in learning how to apply these strategies to their texts will empower them and give them more control over their reading and understanding. Specifically, to implement explicit strategy instruction, teachers can do the following:

35. Duffy et al. (1987); Fuchs et al. (1997); Klingner et al. (1998); Schumaker and Deshler (1992).

1. Select carefully the text to use when first beginning to teach a given strategy. Although strategies can be applied to many different texts, they cannot be applied blindly to all texts. For example, using main-idea summarizing is difficult to do with narrative texts because narrative texts do not have clear main ideas. Main-idea summarizing should be used with informational texts, such as a content-area textbook or a nonfiction trade book. Similarly, asking questions about a text is more easily applied to some texts than to others.

2. Show students how to apply the strategies they are learning to different texts, not just to one text. Applying the strategies to different texts encourages students to learn to use the strategies flexibly.[36] It also allows students to learn when and where to apply the strategies and when and where the strategies are inappropriate.[37]

3. Ensure that the text is appropriate for the reading level of students. A text that is too difficult to read makes using the strategy difficult because students are struggling with the text itself. Likewise, a text that is too easy eliminates the need for strategies in the first place. Begin teaching strategies by using a single text followed by students' applying them to appropriate texts at their reading level.

4. Use direct and explicit instruction for teaching students how to use comprehension strategies. As the lesson begins, it is important for teachers to tell students specifically what strategies they are going to learn, tell them why it is important for them to learn the strategies,[38] model how to use the strategies by thinking aloud with a text,[39] provide guided practice with feedback so that students have opportunities to practice

36. Pressley and Afflerbach (1995).

37. Duffy (2002); Paris et al. (1983).

38. Brown et al. (1981)

39. Bereiter and Bird (1985)

using the strategies, provide independent practice using the strategies, and discuss with students when and where they should apply the strategies when they read and the importance of having the will to use the strategies along with the skill. Even if students know how to use strategies as they read, research demonstrates that they have to make the effort to actually use them when they read on their own.[40]

5. Provide the appropriate amount of guided practice depending on the difficulty level of the strategies that the students are learning. For example, the strategy of predicting can be demonstrated briefly and with a few examples. However, summarizing a paragraph or a passage may require several steps within guided practice. First, provide support for students in cooperative learning groups. As students work in these groups, assist them directly if necessary by modeling how to use a given strategy again or by asking questions to generate ideas about how they would use it. If necessary, give students direct answers and have them repeat those answers. Second, as students become better at using the strategies, gradually reduce the support, perhaps by asking them to break the cooperative learning groups into pairs so they have fewer peers to rely on. Third, reduce support further by asking students to use the strategies on their own with texts they read independently.[41]

6. When teaching comprehension strategies, make sure students understand that the goal is to understand the content of the text. Too much focus on the process of learning the strategies can take away from students' understanding of the text itself.[42] Instead, show students how using the strategies can help them understand the text they are reading. The goal should always be comprehending texts—not using strategies.

40. Paris et al. (1991); Pressley et al. (1987)

41. Brown et al. (1981)

42. Pearson and Dole (1987)

Potential roadblocks and solutions

1. Most teachers lack the skills to provide direct and explicit comprehension strategy instruction. Most teacher education programs do not prepare preservice teachers to teach strategies. In addition, teachers may find it particularly challenging to model their own thinking by providing thinkaloud of how they use strategies as they read. Many teachers use various strategies automatically as they read and are not aware of how they use the strategies they are teaching. Professional development in direct and explicit instruction of comprehension strategies will assist all teachers, including language arts and content-area teachers, in learning how to teach strategies. One component of professional development should be coaching teachers in the classroom as they teach. In addition, it is often helpful for teachers to practice thinking aloud on their own. They can take a text and practice explaining how they would go about summarizing the text or finding the main idea. Teachers will need to become conscious of many of the reading processes that are automatic for them.

2. Content-area teachers may believe that they are not responsible for teaching comprehension strategies to their students. They may also believe that they do not have enough time to teach these strategies because they have to cover the content presented in their curriculum guides and textbooks. Because teaching comprehension strategies improves students' ability to comprehend their textbooks, it is a valuable classroom activity for content-area teachers, not just language arts teachers. Teaching comprehension strategies should expand students' long-term learning abilities. Although it may take a short time to teach several strategies, that time should pay off in the long term by helping students learn more independently from their textbooks and other source material they are asked to read in their classrooms. After all, the goal of using comprehension strategies is improved comprehension—of all text materials that students read.

3. Some teachers and students may "lose the forest for the trees." Teachers may misunderstand or misinterpret the research on teaching comprehension strategies, such that they think teaching comprehension is all about teaching a specific sequence of comprehension strategies, one after the other. Likewise, students too may misunderstand and misinterpret teachers' emphasis on strategies, such that they inappropriately apply strategies to the texts they are reading. Teachers and students may miss the larger point of the strategies, that is, active comprehension.

A critically important part of professional development is the focus on the end goal of comprehension. As teachers learn how to teach the various strategies, they need to keep this goal in mind. Likewise, teachers need to emphasize to students the idea that the end goal of strategy use is comprehension, not just the use of many strategies. It is important for teachers to ensure that students understand that using strategies is a way to accomplish the goal of comprehension.

Recommendation 3. Provide opportunities for extended discussion of text meaning and interpretation

Teachers should provide opportunities for students to engage in high-quality discussions of the meaning and interpretation of texts in various content areas as one important way to improve their reading comprehension. These discussions can occur in whole classroom groups or in small student groups under the general guidance of the teacher. Discussions that are particularly effective in promoting students' comprehension of complex text are those that focus on building a deeper understanding of the author's meaning or critically analyzing and perhaps challenging the author's conclusions through reasoning or applying personal experiences and knowledge. In effective discussions students have the opportunity to have sustained exchanges with the teacher or other students, present and defend individual interpretations and points of view, use text content, background knowledge, and reasoning to support interpretations and conclusions, and listen to the points of view and reasoned arguments of others participating in the discussion.

Level of evidence: Moderate

The panel considers the level of evidence for this recommendation to be *moderate*, on the basis of four small quasi-experimental studies[43] and one large correlational study.[44] A potential limitation in one of the quasi-experimental studies[45] as well as the large correlational study is that the quality of written responses to writing prompts was the outcome assessment, rather than a more direct standardized test of reading comprehension. Among the four quasi-experimental studies, one used rigorous design that demonstrated pretest group equivalence[46] and the other three used less rigorous designs with low internal validity.[47] The small body of research identified to directly support this recommendation is supplemented by a recently completed meta-analysis of 43 studies that used slightly more lenient inclusion criteria than the literature search for this practice guide,[48] as well as a large descriptive study of middle and high schools that were selected because they were "beating the odds" in terms of their student literacy outcomes.[49]

Brief summary of evidence to support the recommendation

Arguably the most important goal for literacy instruction with adolescents is to increase their ability to comprehend complex text. Further, the goal is not simply to enable students to obtain facts or literal meaning from text (although that is clearly desirable), but also to make deeper interpretations, generalizations, and conclusions. Most state and national literacy standards require middle and high school students to go considerably beyond literal comprehension to be considered proficient readers. For example, the revised framework for the NAEP indicates that 8th graders who read at the proficient level should be able to "summarize major ideas, provide evidence in support of an argument,

43. Bird (1984); Heinl (1988); Reznitskaya et al. (2001); Yeazell (1982).

44. Applebee et al. (2003).

45. Reznitskaya et al. (2001).

46. Reznitskaya et al. (2001).

47. Bird (1984); Heinl (1988); Yeazell (1982).

48. Murphy et al. (2007).

49. Langer (2001).

and analyze and interpret implicit causal relations."[50] They should also be able to "analyze character motivation, make inferences…, and identify similarities across texts."[51]

The theory underpinning discussion-based approaches to improve reading comprehension rests on the idea that students can, and will, internalize thinking processes experienced repeatedly during discussions. In high-quality discussions students have the opportunity to express their own interpretations of text and to have those positions challenged by others. They also have the opportunity to defend their positions and to listen as others defend different positions. Good discussions give students opportunities to identify specific text material that supports their position and to listen as other students do the same. In the course of an effective discussion students are presented with multiple examples of how meaning can be constructed from text. Thus, for teachers one key to improving comprehension through discussion is to ensure that students experience productive ways of thinking about text that can serve as models for them to use during their own reading.

A challenge to finding empirical research to demonstrate the unique value of high-quality discussions in improving comprehension is that in instructional research, discussion is often combined with strategy instruction. Most successful applications of strategy instruction involve extended opportunities for discussing texts while students are learning to independently apply such strategies as summarizing, making predictions, generating and answering questions, and linking text to previous experience and knowledge. In effect, students' interactions with one another, and with the teacher as they apply various strategies give students multiple opportunities to discover new ways of interpreting and constructing the meaning of text. One brief study of strategy instruction with a diverse group of 4th graders mentioned explicitly that the assignment to practice making predictions, clarifying confusions, and paraphrasing in small groups was a very useful way to stimulate high-quality discussions of the meaning of texts.[52]

The most convincing evidence for the effectiveness of discussion-oriented approaches to improve reading comprehension comes from studies that focused on developing interpretations of text events or content or on a critical analysis of text content.[53] Within these general guidelines, one feature of effective discussions is that they involve sustained interactions that explore a topic or an idea in some depth rather than quick question and answer exchanges between the teacher and students.[54] One large study of the extent of this type of sustained discussion in language arts classes in middle and high schools found, on average, only 1.7 minutes out of 60 devoted to this type of exchange, with classrooms varying between 0 and slightly more than 14 minutes. Classrooms that were more discussion-oriented produced higher literacy growth during the year than those in which sustained discussions were less frequent.[55]

Another characteristic of high-quality discussions is that they are usually based on text that is specifically selected to stimu-

50. National Assessment Governing Board (2007, p. 46).

51. National Assessment Governing Board (2007, p. 46).

52. Klingner et al. (1998).

53. Murphy et al. (2007).

54. Applebee et al. (2003); Reznitskaya et al. (2001).

55. Applebee et al. (2003).

late an engaging discussion.[56] Questions that lead to good discussions are frequently described as "authentic" in that they ask a real question that may be open to multiple points of view, such as "Did the way John treat Alex in this story seem fair to you?" or "What is the author trying to say here?" or "How does that information connect with what the author wrote before?"[57] Very different from questions asked primarily to test student knowledge, this type of question is designed to provide an opportunity for exploration and discussion. Although it should be possible to identify expository texts that could be the basis for productive discussion, most experimental studies of discussion-based approaches thus far have used narrative texts, a limitation in the research base at present.

Discussions that have an impact on student reading comprehension feature exchanges between teachers and students or among students, where students are asked to defend their statements either by reasoning or by referring to information in the text.[58] In a large-scale investigation of classrooms that produced strong literacy outcomes, it was noted that teachers provided many opportunities for student to work together to "sharpen their understandings with, against, and from each other."[59]

How to carry out the recommendation

To engage students in high-quality discussions of text meaning and interpretation, teachers can:

1. Carefully prepare for the discussion. In classes where a choice of reading selections is possible, look for selections that are engaging for students and describe situations or content that can stimulate and have multiple interpretations. In content-area classes that depend on a textbook, teachers can identify in advance the issues or content that might be difficult or misunderstood or sections that might be ambiguous or subject to multiple interpretations. Alternatively, brief selections from the Internet or other sources that contain similar content but positions that allow for critical analysis or controversy can also be used as a stimulus for extended discussions.

Another form of preparation involves selecting and developing questions that can stimulate students to think reflectively about the text and make high-level connections or inferences. These are questions that an intelligent reader might actually wonder about—they are not the kind of questions that teachers often ask to determine what students have learned from the text. Further, the types of discussion questions appropriate for history texts would probably be different from those for science texts, as would those for social studies texts or novels. Because part of the goal of discussion-based approaches is to model for students the ways that good readers construct meaning from texts, it seems reasonable to suggest that discussions of history texts might be framed differently from those of science texts.

2. Ask follow-up questions that help provide continuity and extend the discussion. Questions that are used to frame discussions are typically followed by other questions about a different interpretation, an explanation of reasoning, or an identification of the content from the text that supports the student's position. In a sustained discussion initial questions are likely to be followed by other questions that respond to the student's answer and lead to further thinking and elaboration.

56. Bird (1984); Heinl (1988); Reznitskaya et al. (2001); Yeazell (1982).

57. Applebee et al. (2003); Bird (1984); Heinl (1988); Reznitskaya et al. (2001); Yeazell (1982).

58. Bird (1984); Heinl (1988); Reznitskaya et al. (2001); Yeazell (1982).

59. Langer (2001, p. 872).

If the reading comprehension standards that students are expected to meet involve making inferences or connections across different parts of a text or using background knowledge and experience to evaluate conclusions, students should routinely have the opportunity to discuss answers to these types of questions in all their reading and content-area classes.

3. Provide a task, or a discussion format, that students can follow when they discuss texts together in small groups. For example, assign students to read selections together and practice using the comprehension strategies that have been taught and demonstrated. In these groups students can take turns playing various roles, such as leading the discussion, predicting what the section might be about, identifying words that are confusing, and summarizing. As these roles are completed, other students can then respond with other predictions, other things that are confusing, or different ways of summarizing the main idea. While students are working together, the teacher should actively circulate among the groups to redirect discussions that have gone astray, model thinking strategies, or ask students additional questions to probe the meaning of the text at deeper levels.

4. Develop and practice the use of a specific "discussion protocol." Because it is challenging to lead the type of discussion that has an impact on students' reading comprehension, it may be helpful for teachers to identify a specific set of steps from the research or best practice literature.[60] This could be done either individually or collaboratively in grade-level or subject-area teams. An example of a discussion protocol is provided in one of the research studies used to support this recommendation.[61] In this study teachers were trained to follow five guidelines: ask questions that require students to explain their positions and the reasoning behind them, model reasoning processes by thinking out loud, propose counter arguments or positions, recognize good reasoning when it occurs, and summarize the flow and main ideas of a discussion as it draws to a close. To be effective these types of discussions do not need to reach consensus; they just need to give students the opportunity to think more deeply about the meaning of what they are reading.

Potential roadblocks and solutions

1. Students do not readily contribute their ideas during discussions because they are either not engaged by the topic or afraid of getting negative feedback from the teacher or other students. Students might not actively participate in text-based discussions for a number of reasons, but these two are the most important. One strategy to deal with the first problem is to create opportunities for discussion by using text that has a very high interest level for students in the class but may only be tangentially related to the topic of the class. For example, a newspaper article on the problem of teen pregnancy might be integrated in a biology class, one on racial profiling in a social studies class, or one on child labor practices in a history class. Students typically find discussion and interaction rewarding, and once a good pattern is established, it can be generalized to more standard textbook content.

It is also important to establish a nonthreatening and supportive environment from the first class meeting. As part of this supportive environment, it is important to model and encourage acceptance of diverse viewpoints and discourage criticism and negative feedback on ideas. Teachers can help students participate by calling on students who may not otherwise contribute, while asking questions they know these students can answer.

Student-led discussions in small groups can be another solution for students who

60. Adler and Rougle (2005); Beck and McKeown (2006).

61. Reznitskaya et al. (2001).

are hesitant to engage in whole-classroom discussions. As mentioned before, the quality of these discussions can be increased, and student participation broadened, if teachers provide an organizing task or activity that students can focus on as discuss the content of a text.

2. Discussions take classroom time, and too much time spent on an extended discussion of a single topic may interfere with coverage of all the content in the curriculum. This problem may require district- or state-level intervention. If curriculum standards require shallow coverage of a very wide range of content, the pressure teachers feel to teach the curriculum may limit opportunities for extended discussion of particular issues. Pressure to cover a very broad curriculum could also limit teachers' freedom to bring in additional material on a specific topic that might help stimulate more engaging discussions. However, if literacy standards require students to think deeply (that is, to make connections, criticize conclusions, and draw inferences), many students will require the opportunity to acquire these skills by being able to observe models of this type of thinking during discussions. In the absence of adjustments to the curriculum, teachers should carefully identify a few of the most important ideas in their content area for deeper consideration through extended classroom discussion that focuses on building meaning from text.

3. Teachers lack the skills in behavior management, discussion techniques, or critical thinking to guide productive discussion and analysis of text meanings. Leading instructive discussions requires a set of teaching skills that is different from the skills required to present a lecture or question students in a typical recitation format. It is also true that discussions can create challenges for classroom control that may not occur in other instructional formats. Most teachers will need some form of professional development to build their skills as discussion leaders or organizers. Within schools, it could be very helpful for content-area teachers to experience these kinds of discussions themselves as a way of learning what it feels like to participate in effective, open discussions. Also, a number of useful books on this topic can be the basis for teacher book study groups. The following resources provide helpful information and strategies related to improving the quality of discussions about the meaning and interpretation of texts:

- Adler, M., & Rougle, E. (2005). *Building literacy through classroom discussion: Research-based strategies for developing critical readers and thoughtful writers in middle school.* New York: Scholastic.

- Applebee, A. N. (1996). *Curriculum as conversation: Transforming traditions of teaching and learning.* Chicago: University of Chicago Press.

- Beck, I. L., & McKeown, M. G. (2006). *Improving comprehension with Questioning the Author: A fresh and expanded view of a powerful approach.* New York: Guilford.

- Beers, K. (2003). *When kids can't read—what teachers can do: A guide for teachers 6–12.* Portsmouth, NH: Heinemann.

- Langer, J. A. (1995). *Envisioning literature: Literary understanding and literature instruction.* New York: Teachers College Press.

Recommendation 4. Increase student motivation and engagement in literacy learning

To foster improvement in adolescent literacy, teachers should use strategies to enhance students' motivation to read and engagement in the learning process. Teachers should help students build confidence in their ability to comprehend and learn from content-area texts. They should provide a supportive environment that views mistakes as growth opportunities, encourages self-determination, and provides informational feedback about the usefulness of reading strategies and how the strategies can be modified to fit various tasks. Teachers should also make literacy experiences more relevant to students' interests, everyday life, or important current events.

Level of evidence: Moderate

The panel considers the level of evidence to support this recommendation to be *moderate*, on the basis of two experiments[62] and one quasi-experimental study that had no major flaws to internal validity other that lack of demonstrated baseline equivalence.[63] Three studies of weaker design,[64] six experimental and quasi-experimental studies with low external validity,[65] and two meta-analyses[66] also provided additional evidence to support this recommendation.[67] The recommendation to improve adolescent literacy through classroom instructional practices that promote motivation and engagement is further supported by substantial theoretical support for the role of motivation and engagement to support long-term growth in complex literacy skills.[68]

Brief summary of evidence to support the recommendation

Although the words motivation and engagement are often used interchangeably, they are not always synonymous. Whereas motivation refers to the desire, reason, or predisposition to become involved in a task or activity, engagement refers to the degree to which a student processes text deeply through the use of active strategies and thought processes and prior knowledge. It is possible to be motivated to complete a task without being engaged because the task is either too easy or too difficult. Research shows that the messages teachers communicate to students—intentionally or unintentionally—can affect students' learning goals and outcomes.[69]

Correlational evidence suggests that motivation to read school-related texts declines as students progress from elementary to

62. Schunk and Rice (1992). This article contains two studies.

63. Guthrie et al. (1999).

64. Graham and Golan (1991); Grolnick and Ryan (1987); Guthrie, Wigfield, and VonSecker (2000).

65. Mueller and Dweck (1998). The external validity of the six studies detailed in this article was considered low because the reasoning measures included did not directly measure literacy skills.

66. Deci, Koestner, and Ryan (1999); Tang and Hall (1995). The meta-analyses described in these two articles were considered to have low external validity because they focused on the general psychological concept of the motivation to learn rather than the motivation to read or improvement in literacy skills.

67. Graham and Golan (1991); Grolnick and Ryan (1987); Guthrie et al. (2000).

68. See, for example, Sweet, Guthrie, and Ng (1998).

69. Graham and Golan (1991).

middle school.[70] The strongest decline is observed among struggling students.[71] To promote students' motivation to engage in literacy activities, teachers should use instructional strategies that spark students' interest. Initial curiosity (or "situational interest") can then serve as a hook to create long-term, personal interest (or "generative interest").

Teachers may believe that they can encourage students' learning by emphasizing external incentives and reminding students of the impact of learning on grades. However, research has suggested that this strategy actually has detrimental effects on students' motivation and engagement. When teachers put pressure on students to work hard to achieve good grades, students' levels of text recall and reading comprehension are lower than when teachers note that they are interested in the amount of information that students can remember and understand and that it is up to students to determine how much they would like to engage in learning.[72] Two meta-analyses of the literature have shown that providing extrinsic rewards to students may increase students' initial motivation to read as well as their pleasure and interest in learning about the world.[73] Earning tangible rewards, such as toys, food, and prizes, and avoiding punishments were found to have more detrimental effects than receiving verbal rewards.[74]

Verbal rewards or praises for student educational performance can be categorized by focus: ability or effort. Praising students for being smart, fast, or knowledgeable can lead to students' perception that their achievement is an indicator of their intelligence or ability. These students are likely to develop performance goals—for example, the goal of achieving good grades or looking smart. When faced with failure, students with performance goals might infer that they do not have the required ability and seek only those opportunities that make them look smart. On the other hand, students praised for their effort might view ability as an expandable entity that depends on their effort. These students are likely to develop learning goals—for example, the goal of enjoying explorations and challenges or acquiring new skills and knowledge. They might interpret failure as an indicator of their lack of effort rather than lack of ability. [75]

Research also shows that when teachers stress performance outcomes, students develop performance goals. Likewise, when teachers put more emphasis on the learning process and provide a supportive environment where mistakes are viewed as growth opportunities instead of failures, students are more likely to develop learning goals. Studies have consistently shown that students who have learning goals are more motivated and engaged and have better reading test scores than students who have performance goals.[76] In one experimental study researchers randomly assigned students to one of two conditions. In the first condition they told students that many people make mistakes at the beginning of a task and become better with practice. They encouraged students to see the task as a challenge and to have fun trying to master it. In the other condition students were told that people are either good or not so good at certain tasks and that their completion of the task would indicate how good they are at it. The researchers found that stu-

70. Gottfried (1985).

71. Harter, Whitesell, and Kowalski (1992).

72. Grolnick and Ryan (1987).

73. Deci et al. (1999); Tang and Hall (1995).

74. Deci et al. (1999).

75. Mueller and Dweck (1998).

76. Graham and Golan (1991); Grolnick and Ryan (1987); Schunk (2003).

dents in the first condition put more effort into deep processing of semantic meaning of words and had better memory of the words learned.[77]

The points raised above emphasize the importance of helping students acquire authentic, personally meaningful learning goals. An important part of the process involves teacher feedback. Students' motivation is highest when they receive feedback that is informational but not controlling—for example, when it is not perceived as pressure to attain a particular outcome.[78] Students benefit from informational feedback that conveys realistic expectations, links performance to effort, details step by step how to apply a reading strategy, and explains why and when this strategy is useful and how to modify it to fit different tasks.[79] Students who receive such feedback believe more in their ability to apply reading strategies in different contexts and have better reading performance than students who do not receive this kind of feedback.[80] This is not to say that teachers should prioritize the process over the desired outcome—increased knowledge and skill. On the contrary, teachers should help students engage in a process that achieves stronger outcomes by developing learning rather than performance goals.

How to carry out the recommendation

1. Establish meaningful and engaging content learning goals around the essential ideas of a discipline as well as the specific learning processes students use to access those ideas. Monitor students' progress over time as they read for comprehension and develop more control over their thinking processes relevant to the discipline. Provide explicit feedback to students about their progress. When teachers set goals to reach a certain standard, students are likely to sustain their efforts until they achieve that standard. Learning goals may be set by the teacher or the student. However, if students set their own goals, they are more apt to be fully engaged in the activities required to achieve them.

2. Provide a positive learning environment that promotes students' autonomy in learning. Allowing students some choice of complementary books and types of reading and writing activities has a positive impact on students' engagement and reading comprehension.[81] Empowering students to make decisions about topics, forms of communication, and selections of materials encourages them to assume greater ownership and responsibility for their engagement in learning.[82]

3. Make literacy experiences more relevant to students' interests, everyday life, or important current events.[83] Look for opportunities to bridge the activities outside and inside the classroom. Tune into the lives of students to find out what they think is relevant and why, and then use this information to design instruction and learning opportunities that will be more relevant to students.[84] Consider constructing an integrated approach to instruction that ties a rich conceptual theme to a real-world application. For example, use a science topic in the news or one that students are currently studying, such as adolescent health issues, to build students' reading, writing, and discourse skills.

4. Build in certain instructional conditions, such as student goal setting, self-directed learning, and collaborative learning, to

77. Graham and Golan (1991).

78. Ryan (1982).

79. Henderlong and Lepper (2002); Schunk and Rice (1992).

80. Schunk and Rice (1992).

81. Guthrie et al. (1999).

82. Guthrie and McCann (1997).

83. Guthrie et al. (2000).

84. Biancarosa and Snow (2004).

increase reading engagement and conceptual learning for students.[85] This type of implementation has several common themes:

- Connections between disciplines, such as science and language arts, taught through conceptual themes.
- Connections among strategies for learning, such as searching, comprehending, interpreting, composing, and teaching content knowledge.
- Connections among classroom activities that support motivation and social and cognitive development.

Potential roadblocks and solutions

1. Some teachers think that motivational activities must entertain students and therefore create fun activities that are not necessarily focused on learning. Rewarding students through contests, competitions, and points might entice them to do homework, complete tasks, and participate in class. Though meaningful goals, these might not result in meaningful learning. Teachers are often exhausted from running contests to get students to read, and the external motivation of such activities often makes students dependent on the teacher or activity to benefit from reading.[86] Teachers should help students become more internally motivated. They should closely connect instructional practice and student performance to learning goals. Teachers should set the bar high and provide informational feedback for depth of learning, complex thinking, risk taking, and teamwork. Students should be encouraged to reflect on how they learn, what they do well, and what they need to improve on. The more students know themselves as learners, the more confident they will become and the better able they will be to set their own goals for learning.

2. Some students may think that textbooks are boring and beyond their ability to understand. Many high school texts do not have enough supplementary explanation that fleshes out disconnected information, which might contribute to difficulty in comprehension. If students cannot comprehend the text that they read and the textbook is the basis of curriculum, their sense of failure grows larger. Complementary materials should be available to students, including a set of reading materials on the same topic that range from very easy to very challenging or supplemental trade materials, to provide resources on various content topics to help students develop deeper background knowledge relevant to course content.

3. Many content-area teachers do not realize the importance of teaching the reading strategies and thinking processes that skilled readers use in different academic disciplines and do not recognize the beneficial effects of such instruction on students' ability to engage with their learning. Too few content-area teachers know how to emphasize the reading and writing practices specific to their disciplines, so students are not encouraged to read and write and reason like historians, scientists, and mathematicians. Literacy coaches should emphasize the role of content-area teachers, especially in secondary schools in promoting literacy skills, and the role of reading skills in promoting performance in various content areas such as history, science and social sciences. This can be accomplished through a coordinated schoolwide approach that provides professional development in content literacy. Many resources available on the Internet provide information about strategic reading in content areas. Content-area teachers should also develop formative assessments that allow students to make their thinking visible and that provide evidence of the problem-solving and critical-thinking strategies students use to comprehend and construct meaning. Teachers can use these assessments to make informed decisions about lesson planning, instructional practices and materials, and

85. Guthrie et al. (1999); Guthrie et al. (2000).

86. Guthrie and Humenick (2004).

activities that will be more appropriate and engaging for students.

4. Adolescent students who struggle in reading do not expect to do well in class. As these students progress through school, most teachers do not expect them to do well either and often remark that they should have learned the material in earlier grades. Many adolescents do not express confidence in their own ability—they do not trust or value their own thinking. The strengths of students can be identified through interest surveys, interviews, and discussions, and through learning about and understanding students' reading histories. These activities will help teachers get to know their students. For many students, having a personal connection with at least one teacher can make a difference in their response to school. Knowing students' interests makes it easier for teachers to choose materials that will hook students and motivate them to engage in their own learning. Teachers should provide multiple learning opportunities in which students can experience success and can begin to build confidence in their ability to read, write, and think at high levels.

Activity 6: Action Planning

Directions: With your team, use the Contextual Factors of Implementation Planning Template to answer the guiding questions and establish action steps.

Contextual Factors of Implementation Planning Template - Middle and High School Settings

USING THIS TEMPLATE

This process should be collaborative, in which all members of the team share their experiences, vision, and ideas to answer the guiding questions and establish action steps.

1. Read and discuss the description of each middle and high school contextual factor in the left column of the template to ensure that all members of the team understand the definition.
2. Review and discuss the guiding questions in the middle column of the template to help the team consider current resources and changes needed for successful tiered intervention implementation.
3. Use the answers from the guiding questions to develop concrete action steps. Consider including in the action steps the timeframe for completion and the name of the person who will follow up.

Contextual Factors of Implementation Planning Template

HIGH SCHOOL CONTEXTUAL FACTORS	GUIDING QUESTIONS	ACTION STEPS
FOCUS		
The design and implementation of all the essential components are dependent on a school's focus for tiered interventions. At the secondary level, this focus may not always include all students or all content areas. Each school must determine its purpose and scope of tiered interventions, keeping in mind that no standard application of the framework exists for high schools. Schools may already have in place some initiatives that support tiered intervention implementation.	• What is the purpose and scope of tiered interventions in the school? • How do existing initiatives fit into the tiered interventions framework? • How do current special education and instructional support practices align with tiered interventions? • Do other initiatives hinder the implementation of tiered interventions? • If the school is structured using academies, how do the academies affect the focus of the tiered interventions framework?	
SCHOOL CULTURE		
School culture plays an integral role in the adoption and implementation of any initiative. A school's culture provides implicit (and sometimes explicit) guidance about beliefs, behaviors, and what is acceptable. Adopting a tiered framework may require a significant shift in a school's culture. For example, staff members may need to collaborate in new ways, examine data together regularly and think about implications for practice, and agree that the success of all students is the responsibility of all staff members.	• In what ways do current practices, beliefs, and behaviors align with the goals and purposes of the tiered intervention framework? • Where did the motivation for adopting the framework originate, and how might that affect staff buy-in? • How do current prevention efforts map onto a tiered framework? • What changes might be required for staff members to collaborate, examine student data, and act on what they learn? • What changes might be required to ensure that all students' needs are met?	

HIGH SCHOOL CONTEXTUAL FACTORS	GUIDING QUESTIONS	ACTION STEPS
IMPLEMENTATION AND ALIGNMENT		
With the numerous initiatives and activities that high schools simultaneously implement, it is critical to align efforts to support and accelerate the implementation of tiered interventions. A detailed scaling-up plan may be useful for incrementally expanding the focus and scope of the framework.	• What current or planned instructional and student support initiatives does the school integrate to support the focus of tiered interventions? • How do these efforts align with the tiered interventions, especially in Tiers II and III? • What options exist for scaling up the implementation of tiered interventions over time to broaden the number of students, content areas, and/or interventions? • How does the school leverage existing human and fiscal resources to facilitate the implementation and scaling up of tiered interventions? • How are district departments (Curriculum and Instruction, Title I, etc.) involved in school-level implementation of tiered interventions?	
INSTRUCTIONAL ORGANIZATION		
Organizing instruction in middle or high schools can create challenges and require flexibility in the scheduling and delivery of interventions and collaborative time for teachers. Single-period and block (extended or double-period) schedules require different strategies for delivering tiered interventions in a classroom or in concurrent classrooms. The master schedule, as well as the school calendar, should be addressed when implementing tiered interventions.	• How does the staff create and/or adapt a master schedule that addresses the needs of the students and the school? • How do single class periods, block scheduling, or a combination of the two best support the focus and delivery of tiered interventions? • Does the current infrastructure present obstacles? • Does the school provide additional instructional interventions through extended days, Saturdays, and summer programs? • How does the school support teachers in designating time to collaboratively make data-based decisions?	

HIGH SCHOOL CONTEXTUAL FACTORS	GUIDING QUESTIONS	ACTION STEPS
STAFF ROLES		
Determining which staff member is best qualified to deliver the additional interventions and how to train teachers to deliver high-quality instruction in all of the tiers depends on a school's available staff and its purpose for implementing tiered interventions. Middle and high school teachers often view themselves as teachers of content and not necessarily equipped to teach struggling students, students with disabilities, and/ or English language learners (ELLs). Small schools may have less access to instructional specialists.	• Who provides the additional interventions? How does the school support this new role? • How do special education, ELL, and/or behavioral specialists support the implementation of tiered interventions? • If tiered interventions are implemented in more than one content area, how does the school support content teachers in becoming more than "teachers of content?" • What supports, if any, do teachers need to deliver Tier I, II, or III instruction?	
STUDENT INVOLVEMENT		
With assistance, secondary students could help to select appropriate interventions and monitor their progress, resulting in students feeling more involved in their educational experience.	• How are students involved in the implementation of tiered interventions? • How do students monitor their own progress? • What role do students play in determining movement between tiers? • How do students learn about the tiered interventions framework?	

HIGH SCHOOL CONTEXTUAL FACTORS	GUIDING QUESTIONS	ACTION STEPS
PROMOTION AND GRADUATION REQUIREMENTS		
A goal of middle school is to ensure students are prepared for the rigor of college and career pathways provided in high schools. Goals of high schools are for students to graduate and successfully pursue postsecondary education and career opportunities.	• How does participation in tiered interventions affect students' promotion to the next grade or transition to high school? • How do the additional tiered interventions affect graduation requirements? • What credit do students receive for the intervention classes? • How does the tiered interventions framework support career and education pathways	
STAKEHOLDER ENGAGEMENT		
Schools frequently engage a variety of external stakeholders, including parents and family members, community and business partners, tutors, and volunteers, in supporting instructional and extracurricular activities. Some students also receive “wraparound” services from social service agencies. These various stakeholders can provide valuable support for a school’s tiered interventions framework.	• How does the school involve stakeholders in the design and implementation of tiered interventions? • How does the school disseminate information and communicate with stakeholders about the implementation of the tiered intervention framework? • How does the school engage the appropriate stakeholders early enough to ensure buy-in for the tiered interventions framework? • Do in-school and wraparound services for students with disabilities align and coordinate with one another? • What types of training and support are needed to engage and prepare stakeholders?	

HIGH SCHOOL CONTEXTUAL FACTORS	GUIDING QUESTIONS	ACTION STEPS
INSTRUCTION AND ASSESSMENT RESOURCES		
A paucity of research on the efficacy of core, supplemental, and intensive instruction with struggling learners in grades 6–12 exists. Similarly, few measures appropriate for screening or progress monitoring in academics and behavior have been validated for use with middle and high school students.	• How do school leaders and teachers determine the quality of Tier I instruction? • How do school leaders select interventions? • What data support the use of these interventions? • What evidence informs the selection of data sources for screening and progress monitoring? • How does the school determine whether selected measures are reliable and valid? • How is educational technology used in assessment or interventions?	