Focus on questions about reading comprehension:

- What is reading comprehension?
- Why is it not possible to accurately predict how students will perform on reading comprehension standardized assessments, even when a school campus has outstanding teachers and school leadership, positive and productive school climate, excellent student attendance, active parent involvement, and unlimited educational resources?
- Why is the percentage of students on a school campus reading on grade level according to evaluation studies through informal reading inventories not a predictor of reading comprehension standardized assessment performance?
- Why do American students rank 17th in the world on literacy assessments? 1
- How is reading comprehension tested on standardized assessments at state, national, and international levels?
- What are the critical components of a reading comprehension lesson?

For the past 16 years I have tried to answer these and other questions about reading comprehension. Since founding Kilgo Consulting, Inc., in 1996, I have spent over 40,000 hours researching and studying reading comprehension. Now, as we enter a new era for literacy in 21st century America with the Common Core State Standards (CCSS), I would like to share my research model and findings in support of strong, effective implementation of the CCSS across the nation.

Kilgo Research Model, Process, and Findings

Purpose and Focus: To research and study state and national curriculum standards in reading comprehension from the viewpoint of reading standardized assessments without reviewing multiple-choice options or test-taking strategies, and to answer the following questions from the standardized assessment viewpoint:

- How is reading comprehension tested on standardized assessments?
- What are the cognitive connections between the reading selection, the comprehension question/test item, and the correct answer (constructive response, not selective response, multiple-choice options)?
- What is the source of the question/test item?
- Is the correct answer stated or implied in the reading selection?
- What are the steps in thinking when the correct answer is stated?
- What are the steps in thinking when the correct answer is implied in the reading selection?
- What is the role of prior knowledge in answering the question correctly?

Using the constructive, open-ended response (OER) assessment process exclusively by identifying the cognitive connections between the question and correct answer removes only the false assumptions of test-taking strategies, including the elimination strategy, and focuses on higher-level thinking, reasoning, and reading comprehension skills required in reading comprehension while reading and interacting with a text selection.

Initial Findings from Studying Assessment Viewpoint: During my first two years (1996–1998) of studying the reading comprehension state and national standards from the viewpoint of standardized tests (assessment viewpoint), I documented the following research findings:

- The standardized tests are testing the reading comprehension standards.
- Each reading comprehension question on a standardized test is aligned with the accurate interpretation of a specific reading comprehension standard.

- In the era of individual state reading standardized assessments, only the reading standards on the state reading standards list are tested. If a reading comprehension skill is not on the state reading standards list, that specific skill is not tested on the state standardized assessment.
- The reading comprehension standards list determines the quality of the reading comprehension standardized test. A state or national reading standardized test is only as strong and effective in evaluating student performance in reading comprehension as the reading standards list. For example, on one state standardized test for Grade 4 I researched, there were no main idea questions. A careful review of the state reading comprehension standards revealed that the Grade 4 list of standards did not have a main idea standard. However, there were main idea standards in Grades 3 and 5 with aligned main idea questions on the reading state standardized assessments.
- All inferred correct answers are based on accurate, relevant, explicit text evidence in the reading selection, not on the reader's prior knowledge unrelated to the reading selection.

Research Process Based on Initial Findings:

1. Read carefully the reading selection.
2. Identify the reading comprehension standard tested with the comprehension question. Which standard did the question test?
3. Study the question and the correct answer from the answer key. What are the steps in thinking required to answer the question correctly?
4. When the correct answer is implied in the selection, find the text evidence in the reading selection that proves the correct answer.
5. Study the cognitive alignment between the correct answer and the evidence in the text proving the correct answer. What is the role of text evidence in
determining unstated correct answers, including logical inferences and implied main ideas?
6. Describe the relationship between the reading comprehension standard, the comprehension question, the text evidence, and the correct answer.
7. Record the research findings.

Research Findings of Study of Standards-Based Assessments:

Following the steps in the Research Process I outlined on the previous page, I share my research findings from over a 14-year period (1998–2012):

1. All correct answers to comprehension questions/test items on state and national standardized assessments are based on accurate, relevant, and explicit text evidence.
2. The higher-level thinking required to determine what is inferred by the student in a reading selection is rereading the selection to “find text evidence” that is directly connected to a logical inference that is the correct answer for the question asked.
3. To determine the implied main idea in a selection, the reader must
   a. engage in sorting to identify the most important events in fiction or the most important facts in informational text, and
   b. classify the important or key events or facts to determine what they have in common.
4. Correct answers do not vary because there is only one correct answer based on accurate, relevant, explicit text evidence and the reader’s prior knowledge directly connected to the reading selection.
5. The reading comprehension tested in reading comprehension standardized assessments is close, text-dependent reading comprehension, which requires reading from the author’s viewpoint, not the reader’s personal opinion, personal schema, or prior knowledge without connections to the text selection.
6. The higher-level thinking required in close, text-dependent reading comprehension is deductive reasoning, defined as “based on reason and logical analysis of available facts,” with the logical inference reached by connecting accurate text evidence and prior knowledge directly with the selection, not adding other ideas or information outside the selection.
7. Close, text-dependent reading comprehension requires strong intellectual discipline because the reader must self-monitor comprehension to avoid using prior knowledge and experiences not connected to the text selection.
8. The relationship between each test item question and correct answer tests an accurate interpretation of the wording in a specific reading comprehension standard with the cognitive connections (steps in thinking) between the reading standard, question/test item, and correct standards-based answer.
   • Cognitive Alignment: The comprehension questions/test items are designed to prompt the thinking required by the verb in the standard. Interpretation of the meaning of the verb is based on the dictionary definition of the verb not on Bloom’s Taxonomy, which requires the reader to think and add information outside of the reading selection.
   • Reading Comprehension Skill Alignment: The reading comprehension skill in the standard is the skill tested in the question with accurate, relevant, explicit text evidence providing the implied correct answer.
   • Context Alignment: The standards often specify the terms of the context for exactly how the reading comprehension skill in a specific standard will be tested.
   • Vocabulary: The vocabulary words in the standard are used in various forms in the questions.

Achieving Exemplary Performance in Reading Comprehension for Students

9. Although the standardized assessments align 100% with the exact wording in the state or national standards, not all verbs, reading comprehension skills, context, and vocabulary in a specific standard are tested in one test item.

10. Many of the state standardized reading comprehension assessments over-test the easier verb with a reading comprehension skill when there is a choice of two or more verbs in a specific reading standard.

11. Text selections were weighted heavily toward fiction, both literary and narrative. The majority of the informational reading selections in Grades 3-5 were either literary nonfiction (biography) or news articles.

Effective Implementation of the 2010 Common Core State Standards (CCSS) Based on the Kilgo Research Model Findings

Applying Reading Comprehension Research Findings

Recommendations for Effective Implementation of the 2010 Common Core State Standards (CCSS) at the Campus and School District Levels:

1. Base reading comprehension lessons on an accurate interpretation of the exact wording of the grade level CCSS with questions, text evidence, and correct answers (75% inferred and implied).

2. Reading comprehension lessons should be a minimum of 50% of all reading instruction beginning in kindergarten and first grade.

3. Teaching reading comprehension through standards-based questioning after reading text selections should require constructive, open-ended responses (OER), not selective, multiple-choice answers.

4. Balance reading selections between the Literature and Informational genre standards and meet the CCSS criteria for increasingly complex text.

5. Students should have elaborate rehearsal in the higher-level thinking and deductive reasoning required in close, text-dependent reading comprehension. Students must learn how to find accurate, relevant, explicit text evidence and cite the text evidence found to support inferred and implied correct answers to questions.

6. Evaluation of students’ progress in reading comprehension performance should be based on a combination of
   a. finding and citing text evidence, and
   b. identifying correct answers to comprehension questions.

7. Provide equity and consistency in the reading comprehension program across all grade levels, classrooms, and school campuses with the same high-level of comprehension questions for all recommended reading text selections.

8. Provide reading teachers with an effective professional development program focused on the CCSS and close, text-dependent reading comprehension.

Comparing Previous State Reading Comprehension Standardized Assessments to the New CCSS State Standardized Assessments