

National Assessment Governing Board

Content Alignment Studies of the 2009 National Assessment of Educational Progress for Grade 12 Reading and Mathematics with SAT and ACCUPLACER Assessments of these Subjects

Submitted: April 30, 2010

Interim Report: Comparative Analysis of the Test Blueprints and
Specifications for 2009 NAEP Grade 12 Reading and
SAT Critical Reading

Submitted to:

Dr. Susan Loomis
National Assessment Governing Board
800 North Capitol Street, NW, Suite 825
Washington, DC 20002-4233
Email: Susan.Loomis@ed.gov
Phone: 202.357.6940

This study was funded by the
National Assessment Governing Board under
Contract ED-NAG-09-C-0001.

Submitted by:

WestEd
730 Harrison Street
San Francisco, CA 94107
Phone: 415.615.3400



TABLE OF CONTENTS

Introduction.....	1
Purpose and Use.....	2
Test Administration	2
Resources Available to Students.....	3
Content Organization of SAT and NAEP	3
Specificity of Content	9
Student Performance	9
Number, Proportion, and Format of Items.....	10
Scoring Rubrics and Rules for Constructed-Response Items	11
Reading Difficulty and Grade Level Targeted by Items.....	12
Information about Reading Passages	13
Summary of Content Overlap and Implications for Item Alignment	13
References.....	20
Appendix A: Objective-Level NAEP-to-SAT Content Comparison.....	21
Appendix B: Decision Rules Applied in Operational Study	31

Interim Report: Comparative Analysis of the Test Blueprints and Specifications for 2009 NAEP Grade 12 Reading and SAT Critical Reading

Introduction

WestEd has been contracted by the National Assessment Governing Board to study the extent to which the grade 12 National Assessment of Educational Progress (NAEP) is aligned in content and complexity to SAT and ACCUPLACER in reading and in mathematics. This project is part of the Governing Board's 12th grade preparedness initiative and will yield information on using the grade 12 NAEP to report on student preparedness for postsecondary activities.

As described in the study design, one component of the alignment study is an initial comparative analysis between the test blueprints for each assessment. The results of this analysis are intended to provide information about the similarities and differences in assessment design between the 2009 NAEP grade 12 Reading Assessment and the SAT Critical Reading test (hereafter NAEP and SAT, respectively). This analysis can be used to inform initial expectations for alignment, as well as to raise potential alignment issues prior to item coding. It also provides an additional view of the alignment between the two assessments, which can be used in interpreting the item alignment analysis results. For NAEP, the *Reading Framework for the 2009 National Assessment of Educational Progress* (National Assessment Governing Board, 2008) and *Reading Assessment and Item Specifications for the 2009 National Assessment of Educational Progress* (National Assessment Governing Board, 2009) were used for this analysis. For the purposes of usability for alignment coding, WestEd collaborated with the Governing Board on a presentation and organization format for the NAEP framework content that integrated components of both documents. The resulting format provides the NAEP objective numbering used in this report, and appears in the objective-level comparison table located in Appendix A. For SAT, the College Board provided test specifications containing categories, descriptions, and distributions of the content within the major item types (sentence completions and passage-based reading); these specifications were used as the basis for the analysis, and were supplemented by information available on the College Board's website.¹

This document presents the results of the comparative analysis. As described in the study design document, the report begins with an overview of each assessment's Purpose and Use, Test Administration, and Resources Available to Students. Following is a detailed discussion of the findings of the content comparison in terms of Content Organization, Specificity of Content, and Student Performance. Subsequent sections discuss the Number, Proportion, and Format of Items; Scoring Rubrics and Rules for Constructed-Response Items; Reading Difficulty and Grade Level Targeted by Items; and Information about Reading Passages. The final section provides a Summary of Content Overlap and Implications for Item Alignment. The complete side-by-side comparison charts on which the analysis is based are provided as Appendix A. The final decision rules applied in the study are provided as Appendix B.

¹ SAT specifications information included in this report is the property of the College Board.

Purpose and Use

The grade 12 NAEP Reading Assessment and the SAT Critical Reading Test are designed to measure the reading achievement of students at largely similar ages and grade levels. The grade 12 NAEP is administered to students in the 12th grade; SAT is administered primarily to high school students who are planning to apply to and attend college. “Most students take the SAT for the first time during the spring of their junior year and a second time during the fall of their senior year” (College Board, 2010b).

Although the two assessments measure the reading skills of students at similar ages and stages of academic progress, they serve different purposes for different audiences. SAT is a “standardized college entrance test” primarily designed to help “college admissions officers make fair and informed admissions decisions” about students’ college readiness (College Board, 2010c). Therefore, SAT provides results measuring the reading skills of individual students. NAEP, commonly referred to as “the Nation’s Report Card,” does not provide results for individual students but is administered to “representative samples” of students across the country and provides results for “national, regional, state, district, and subgroup achievement in reading.” The information yielded by NAEP is intended to help “the public, educators, and policymakers understand strengths and weaknesses in student performance and make informed decisions about education” (National Assessment Governing Board, 2009, p. v).

Test Administration

As mentioned previously, the NAEP reading assessment is administered to “random samples of students designed to be representative of the nation, different regions of the country, participating states, and large urban districts” (National Assessment Governing Board, 2009, p. 2). The items on the NAEP reading test are distributed across multiple test booklets “using a matrix sampling design” so that not all students taking the assessment will receive the same booklets or items (p. 3). Each student completes two “item blocks” made up of two reading passages each followed by 10–12 items. Students are expected to spend approximately one hour taking the test.

The NAEP test specifications indicate that accommodations for students with special needs that are routinely provided by schools for their own testing programs are allowed in NAEP. “Accommodations include, but are not limited to:

- one-on-one testing,
- small-group testing,
- extended time,
- oral reading of directions,
- large-print booklets, and
- use of an aide to transcribe responses.” (p. 51)

According to information on the College Board’s website, SAT is administered seven times a year in the United States at designated testing sites nationwide. All test sites are affiliated with educational institutions and proctored by professional staff. Students are given 70 minutes to complete the 67 items in a critical reading test form.

Accommodations are available for students with disabilities: “The College Board's Services for Students with Disabilities (SSD) provides a broad range of accommodations, such as Braille tests, large print, and extended time, to students who provide documentation of a disability. The College Board is committed to ensuring that students with physical or mental disabilities receive appropriate accommodations on its tests” (College Board, 2010e).

Resources Available to Students

NAEP specifications do not indicate any resources available to students other than those that may be provided as accommodations for English learners or students with disabilities, as described in the Test Administration section of this document. For SAT, students may use two No. 2 pencils (no pens or mechanical pencils), acceptable calculators, and watches without audible alarms. Students may not use cell phones, pagers, personal digital assistants, iPods, MP3 players, or any other digital or electronic equipment; scratch paper, notes, books, dictionaries, compasses, protractors, rulers, or any other aids; highlighters or colored pencils, portable listening or recording devices, cameras or other photographic equipment, timers, or watches with audible alarms. Students are not permitted to use cell phones during the breaks (College Board, 2010f).

Content Organization of SAT and NAEP

Overall, the content organization of the NAEP reading framework and test specifications is considerably more elaborate and detailed than that of the SAT specifications, incorporating many more specific topics, skills, and elements.

SAT organizes its reading test by two different types of items: sentence completion items and passage-based reading items. According to the specifications, sentence completion items vary somewhat in their emphasis, with some primarily addressing sentence reasoning and some primarily addressing vocabulary. Passage-based reading items are organized into three subcategories: Extended Reasoning, Literal Comprehension, and Vocabulary in Context. In addition to these four categories of items, the SAT test specifications provide descriptions of five more specific subtopics, or “objectives,” addressed by the Extended Reasoning items, which make up the majority of all SAT passage-based items. The structure of the SAT test specifications provided for this study by the College Board is shown below, with alphanumeric codes added by WestEd for the purposes of this alignment study:²

- A. Sentence Completion
- B. Passage-based Reading

² Source: Derived from data provided by the College Board. Copyright © 2006-2008. The College Board. All rights reserved. No further use of Data is permitted. www.collegeboard.com.

- B.1 Extended Reasoning
 - B.1.1 Primary Purpose
 - B.1.2 Rhetorical Strategies
 - B.1.3 Implication and Evaluation
 - B.1.4 Tone and Attitude
 - B.1.5 Application and Analogy
- B.2 Literal Comprehension
- B.3 Vocabulary in Context

The content of the grade 12 NAEP framework is organized by three interacting categories: type of text, aspects of text, and cognitive targets.

Type of Text

Two types of text are included in NAEP: literary text and informational text. In the grade 12 NAEP, 70% of the items are based on informational text and 30% on literary text (National Assessment Governing Board, 2009, p. 20). Within each of these two overarching types, three subtypes are identified:

- Literary
 - Fiction
 - Literary nonfiction
 - Poetry
- Informational text
 - Exposition
 - Argumentation and persuasive text
 - Procedural texts and documents

Each text subtype is defined by a list of genres appropriate at each grade level. Examples of 12th grade exposition include essay and literary analysis, while fiction examples include satire, parody, allegory, and monologue (pp. 13–14). The NAEP framework also specifies the percentage of items to be based on specific text subtypes: of the 30% of grade 12 items based on literary text, 20% are to be based on fiction, 5% on poetry, and 5% on literary nonfiction. Of the 70% of grade 12 items based on informational text, 30% are to be based on exposition, 30% on argumentation, and 10% on procedural texts (p. 20).

SAT provides a much briefer overview of the kinds of passages included in the passage-based portion of the test. The passages are drawn “from a variety of fields, including the humanities, social studies, natural sciences, and literary fiction. They vary in style and can include narrative, expository, and argumentative elements” (College Board, 2009). Fiction is the only genre of literature included on the test; the SAT does not purposely include poetry or literary nonfiction, although the latter may or may not be represented in the passages drawn from different fields. Procedural texts, included in NAEP, are not

included in the SAT specifications. SAT does not specify the percentages of passages to be drawn from the different fields or genres.

Aspects of Text

Within the NAEP reading framework, for each of the six subtypes of text, the following aspects of that text subtype are described:

- Genres and types of text (e.g., adventure stories, fantasy), referring to the idealized norm of a genre
- Text structures and features (e.g., point of view, cause and effect), referring to the ways ideas are arranged and connected to one another and to the visual and structural elements that support the reader’s comprehension of the text
- Aspects of author’s craft (e.g., voice, symbolism), referring to the specific techniques an author chooses to relay the intended message

These aspects are represented within the NAEP reading framework in matrices for each text type and grade level.

The SAT specifications do not provide comparable lists of specific text structures and features or aspects of the author’s craft to be covered by test items. However, SAT’s five more specific objectives (B.1.1–B.1.5) for Extended Reasoning in reading do make explicit reference to some elements and features of texts also included in the NAEP specifications. These include “main idea” and “author’s purpose” (SAT B.1.1; NAEP Exhibits 14 and 15), “tone and attitude” (SAT B.1.4; NAEP Exhibits 14 and 15), “rhetorical strategies” (SAT B.1.2; NAEP Exhibits 14 and 15), and “author’s views” (SAT B.1.3; NAEP Exhibits 14 and 15). While some of the latter elements—“tone and attitude” and “author’s views”—can apply to both informational and literary texts, the SAT Extended Reasoning objectives do not refer to any elements specific to literary text alone, such as plot, theme, setting, dialogue, or the use of specifically literary techniques or devices.

Cognitive Targets

The NAEP specifications also address the complex nature of reading by including cognitive dimensions applicable to literary and informational text and specific to each text subtype. These cognitive targets, or “the mental processes or kinds of thinking that underlie reading comprehension” (National Assessment Governing Board, 2008, p. 35), represent a progression from Locate/Recall to Integrate/Interpret to Critique/Evaluate. A matrix (National Assessment Governing Board, 2009, Exhibit 16) shows the application of the three cognitive targets to literary text, informational text, and both literary and informational text. Items are intended to assess all three cognitive targets at each grade level, although the distribution of cognitive targets varies across grades.

As indicated earlier, the SAT specifications describe four categories of item types and reading comprehension skills (SAT A and B.1–B.3) to be measured by items on the test, with one category, Extended Reasoning, further elaborated into five more specific

objectives (B.1.1–B.1.5). The skills and topics represented in the SAT categories and objectives are not explicitly organized in terms of cognitive complexity. However, there are some parallels between some of the content of the NAEP cognitive targets and some of the categories and objectives in the SAT blueprint.

The Locate/Recall cognitive target in the NAEP specifications refers to students' ability to identify "textually explicit information" and "answer assessment items" that involve "matching information given in the item to either literal or synonymous information in the text." In the NAEP specifications and in the framework, the Locate/Recall target is applied to elements of both literary and informational text ("facts and supporting details") and to elements specific to each text type ("sequence of events" in fiction) (National Assessment Governing Board, 2009, p. 47). SAT B.2, Literal Comprehension, refers to students' ability to understand "significant information directly stated in the passage." In contrast to the interaction of cognitive targets with text types and structures/features in NAEP, however, the SAT specifications for Literal Comprehension do not refer to any text types, genres, or text features. In addition, SAT B.2 focuses on "a small but significant portion of a reading passage"; many of the NAEP objectives for Locate/Recall refer to larger elements of texts, such as "organizing structures" in literary text and "author's purpose" in informational text. Thus, while SAT B.2 and the NAEP objectives for Locate/Recall may be related at the level of the broad skill (comprehension of explicit content), many of the text elements and features described in the NAEP specifications are not explicitly addressed by the SAT document. SAT may include items addressing these more specific topics and elements, but nothing in the SAT specifications requires (or excludes) this degree of specificity in the skills assessed.

More specific parallels can be found between the SAT category of Extended Reasoning, which SAT describes as measuring "higher-level reading skills," and the NAEP cognitive target Integrate/Interpret. The cognitive target Integrate/Interpret refers to students' ability to integrate information and ideas within and across texts and to interpret what they read by drawing complex inferences, forming conclusions, and making connections, often at an abstract level. In the NAEP specifications, this cognitive dimension is applied to elements of both literary and informational text. The SAT objectives for Extended Reasoning do not specifically refer to text types or genres, with one exception. SAT B.1.4, Tone and Attitude, includes items asking about an author's tone or attitude and items asking about the tone or attitude of "a character in a fiction passage." However, the relatively broad language of most of the SAT categories and objectives suggests that they are intended to apply to both types of text—informational and fictional passages— included in the test. For example, SAT B.1.2, Rhetorical Strategies, may include the use of a "particular word, image, phrase, example, or quotation"; this clearly has application to both literary and informational text and is quite similar to NAEP 2.1.d (which also applies across both text types): "Describe or analyze how an author uses literary devices or text features to convey meaning."

Other areas of overlap between NAEP objectives within the Integrate/Interpret dimension and SAT Extended Reasoning objectives include the following:

- SAT B.1.1, focusing on "main ideas" and "author's purpose," and NAEP 2.1.f ("author's purpose" in both literary and informational text) and 2.3.a ("major ideas" in informational text); and

- SAT B.1.3, Implication and Evaluation, focusing on implicit ideas and perspectives in passages, and NAEP 2.1.b (“Compare or connect ideas, perspectives, problems, or situations” across text types), 2.1.c (“Determine unstated assumptions in an argument” across text types), and 2.3.b (“Draw conclusions and provide supporting information” in informational texts).

SAT B.1.5, Application and Analogy, which addresses analogous ideas within and across texts, is also similar to the skill described in NAEP 2.1.b, “Compare or connect ideas, perspectives, problems, or situations.”

In contrast to the NAEP objectives for Integrate/Interpret, however, most of the SAT Extended Reasoning objectives refer to reading skills at a more generic level, with relatively few references to specific elements or features of text. This is particularly true of SAT B.1.3, which refers to a category of items requiring the analysis of “implications” in reading passages. NAEP’s 17 objectives within the Integrate/Interpret dimension also require students to interpret implications (or “make complex inferences”); however, the specific focus of those objectives may be more closely related to other SAT categories, such as Rhetorical Strategies (SAT B.1.2) or Primary Purpose (SAT B.1.1), or they may have no “match” in terms of the specific skill described. NAEP objectives such as NAEP 2.3.c, “Find evidence in support of an argument,” or 2.3.e., “Determine the importance of information within and across texts,” for example, describe specific skills within the Integrate/Interpret category that are not addressed in the SAT specifications. These objectives overlap with SAT B.1.3 at the level of the broader skill and its cognitive complexity but not at a more specific level. In addition, the SAT objectives refer to no elements specific to literary text alone; thus, the NAEP objectives describing the integration and interpretation of features and elements of literary text have no “match” in the SAT specifications. Again, it is possible that some SAT items might address the skills described in these NAEP objectives, as the more general SAT specifications neither require nor exclude this possibility.

There is limited overlap between the third cognitive target described by NAEP, Critique/Evaluate, and the SAT test specification categories. According to the NAEP specifications, this type of thinking requires students to “stand back from what they read” and “consider the text critically.” Items may “ask students to evaluate the quality of the text as a whole, to determine what is most significant in a passage, or to judge the effectiveness of specific textual features” (National Assessment Governing Board, 2009, p. 48). Specific NAEP objectives within this dimension include “Judge the author’s craft and technique” or “Evaluate the strength and quality of evidence used by the author to support his or her position.” None of the SAT categories or objectives specifically call for examinees to take a critical stance, or to judge, critique, or evaluate the quality of a text.

However, two SAT objectives include language that might indicate a potential degree of overlap with some NAEP Critique/Evaluate objectives. SAT B.1.2, Rhetorical Strategies, which includes items asking students what purpose a rhetorical element of a passage serves in a passage as a whole, could overlap with NAEP 3.2.a, “Evaluate the role of literary devices in conveying meaning.” Both objectives require students to think about the function of rhetorical or literary devices within a text; it is not clear, however, that the SAT objective requires a critical stance. SAT B.1.3, Implication and Evaluation, includes “evaluate ideas or assumptions in a passage” and “evaluate the relationships between a

pair of passages.” These elements of B.1.3 could potentially overlap with NAEP 3.3.c (“Determine the quality of counterarguments within and across texts”) or 3.3.d (“Judge the coherence or logic of an argument”). The language of the SAT objective is too broad, however, to determine whether these specific skills might be addressed in the test, nor is it clear that the word “evaluate” in the SAT objective implies the kind of critical perspective clearly called for in the NAEP objectives. In addition, the Critique/Evaluate objectives for NAEP are very likely to be reflected in constructed-response items on the test, while all SAT items are multiple-choice. For alignment purposes, the degree of overlap, if any, between the NAEP Critique/Evaluate objectives and the SAT objectives would need to be determined on the basis of individual items (e.g., some SAT items addressing SAT B.1.3 might be found to require critical evaluation).

SAT B.3, Vocabulary in Context, closely parallels NAEP 2.4.a, “Determine word meaning as used in context.” Both refer to the skills students use to understand the meaning of a word as it is used in the context of a reading passage.

SAT Sentence Completion and NAEP Vocabulary

In addition to the categories described above, the SAT specifications include a category of sentence completion items (SAT A). These items are intended to measure both vocabulary skills and sentence reasoning (students’ “ability to understand how the different parts of a sentence fit together”). All of these items require students to apply their understanding of word meanings in order to select the best word or pair of words to complete a sentence (filling in the blanks). Some sentence completion items employ more complex sentence structure and/or internal punctuation and are also intended to measure students’ understanding of these structures. Because *all* of the SAT items in this category require students to use both their knowledge of word meanings and their understanding of how a word, or words, fits in the context of the sentence, SAT A overlaps with NAEP 2.4.a. That is, the skill used to determine the meaning of a word as used in the context of a reading passage is clearly related to the skill of choosing “the word that best fits the meaning of the sentence as a whole” (College Board, 2009).

It should be noted, however, that while there is a clear relationship between the skills required by SAT A and NAEP 2.4.a, there are also some key differences in how NAEP approaches the assessment of vocabulary. As stated in the NAEP specifications, “NAEP vocabulary items should elicit readers’ sense of a word’s meaning as it relates to passage comprehension”; the words selected should be “necessary for understanding at least a local part of the context and linked to central ideas such that lack of understanding may disrupt comprehension” (National Assessment Governing Board, 2009, pp. 55, 56). This approach, which seeks to integrate vocabulary skills with passage comprehension, suggests that vocabulary be assessed through longer reading passages and not through single sentences, as in the SAT sentence completion items. In addition, the NAEP test specifications exclude specialized vocabulary related to “specific content domains (e.g., photosynthesis, fiduciary)” and require that words selected be “of general use across contexts and domains” (p. 55). The SAT specifications do not exclude specialized or domain-specific vocabulary. However, the SAT practice booklet advises students that the difficulty of sentence-completion items increases as students move through a test form. While there is overlap between the skills required by NAEP 2.4.a and SAT A, these two

objectives are less closely related than NAEP 2.4.a and SAT B.3 (which does assess vocabulary in the context of reading passages).

In summary, the NAEP test specifications and framework are considerably more elaborate and detailed than the SAT reading specifications. The NAEP specifications describe a specific range and proportion of text types, genres, and subgenres to be represented on the test. In contrast, the SAT specifications refer only to passages drawn “from a variety of fields, including the humanities, social studies, natural sciences, and literary fiction” (College Board, n.d.). NAEP also incorporates many more specific topics, skills, and elements than SAT, and it integrates these with three cognitive targets, to create a matrix of types of thinking applied to different genres and features of texts. All of the more general reading comprehension and reasoning skills described in the SAT passage-based categories (SAT B.1–B.3) have corollaries in the NAEP specifications. However, NAEP also includes some skills and objectives not represented in the SAT specifications. In particular, NAEP objectives in the Critique/Evaluate dimension are minimally reflected in the SAT categories. In addition, NAEP objectives (for all three cognitive targets) focusing on specific features of literary text (e.g., “the relations between theme, setting, plot, or characters”) have no direct “match” in the SAT. Finally, while both tests include categories for “literal comprehension” (SAT B.2 and NAEP 1.1.a–1.3.d), the NAEP objectives explicitly refer to more specific topics and elements in this dimension than the SAT objectives.

Specificity of Content

Overall, the objectives in the NAEP framework and test specifications tend to be more narrowly focused than those in the SAT specifications. The NAEP specifications include both broad categories of content to be assessed, such as the three cognitive targets and two text types, and more specific objectives, in which the cognitive targets are applied to the different text types, genres, and/or features/structures of texts or author’s craft, as well as to specific tasks. These more specific objectives, represented in Exhibit 16 (National Assessment Governing Board, 2009) and in the NAEP Framework for Alignment, typically focus on a relatively discrete skill: “infer mood or tone,” “identify figurative language,” or “distinguish facts from opinions” (National Assessment Governing Board, 2009, p. 46). Conversely, the SAT specifications describe four categories of reading skills (SAT A and B.1–B.3), with each category described in a single sentence. As indicated earlier, Extended Reasoning is subdivided into five more specific objectives (B.1.1–B.1.5), each described in a short paragraph. These objectives provide the most detailed description of content and skills in the SAT specifications but are still less specific than the NAEP objectives. SAT B.1.3, Implication and Evaluation, is the broadest of the five; SAT B.1.4, Tone and Attitude, is probably the most specific (more comparable to “infer mood or tone” in degree of specificity).

Student Performance

The NAEP and SAT test specifications describe some similar content, with similar student performance in those content areas they have in common. Both include objectives

requiring students to comprehend literal meaning, to make inferences or interpret implicit meaning, and to connect ideas within and across texts. Both also require students to determine the main idea or “primary purpose” of texts, to interpret tone or attitude, and to understand how an author uses language to achieve a purpose.

SAT B.2 covers a limited range of the content included in the NAEP cognitive target Locate/Recall. SAT’s objectives for Extended Reasoning (SAT B.1.1–B.1.5) cover much more but not all of the content of the NAEP Integrate/Interpret cognitive target, with most of the overlap in objectives addressing informational text. SAT B.1.3 addresses a very limited portion of the NAEP objectives for Critique/Evaluate, as applied to informational text only (NAEP 2.3).

Even in areas of overlapping content between the two tests, however, differences in the degree of specificity and phrasing of objectives may imply different expectations for student performance. The more specific NAEP objectives describe similar kinds of cognitive skills as applied to particular text types and tasks, calling for a more specifically defined student performance. While it is possible that some SAT items might address the more specific skills described by the NAEP objectives, there is nothing in the SAT specifications that would require this degree of specificity in the items.

In addition, the NAEP specifications call for both multiple-choice and short and extended constructed-response items. All items on the SAT are multiple-choice. The language of some of the NAEP objectives reflects this range of possible item formats. For example, to “draw conclusions and provide supporting information,” taken as a whole activity, would most commonly be addressed through a written response. While the NAEP objectives are assessed through both multiple-choice and constructed-response items, the verbs used— “Explain how rhythm, rhyme, sound, or form in poetry contribute to meaning” or “Describe or analyze how an author uses literary devices or text features to convey meaning”—reflect opportunities for students to actively construct responses (National Assessment Governing Board, 2009). Objectives and items that call for students to actively construct a response produce a performance distinctly different from that of multiple-choice items, limiting the possibilities for meaningful comparison.

Beyond the areas of overlapping content, the NAEP specifications include many more topics and skills not explicitly addressed by the SAT specifications, including the NAEP objectives applying the cognitive targets to literary texts and text features/structures and the NAEP objectives requiring students to critique or evaluate texts.

Number, Proportion, and Format of Items

The test designs for each assessment differ significantly. There are 131 total reading items in the NAEP pool, all passage-based.³ NAEP is administered through a system of sampling; no single student completes all 131 items. Rather, each student completes two “item blocks,” with each block consisting of a reading passage and 10–12 items based on

³ In addition to these 131 items, the NAEP item pool includes 21 vocabulary block items that are not linked to passages. These items are not included in the main NAEP scale score, however, and were thus excluded from this analysis.

that passage (National Assessment Governing Board, 2009, p. 28). The SAT item pool examined for this study includes two forms with 134 items total; each form includes 67 items, 48 of those passage-based and 19 sentence completion items. Individual students each complete one form including 67 items. Passage-based reading items are organized into three subcategories: Extended Reasoning (36–40 items per form), Literal Comprehension (4–6 items per form), and Vocabulary in Context (4–6 items per form). These item types are described in the College Board’s SAT Practice Booklet for students (College Board, 2009). The significant difference in the number of items completed by individual students reflects the different purposes of the two assessments; NAEP provides results for groups of students, while SAT provides individual student scores.

As discussed previously, the NAEP and SAT specifications differ in the formats of items described. NAEP includes multiple-choice, short constructed-response, and extended constructed-response items. The intended distribution of NAEP items is expressed as the percentage of time spent on each item type. For grade 12 reading, the distribution of items sampled by each student is 40% multiple choice, 45% short constructed-response, and 15% extended constructed-response (National Assessment Governing Board, 2009, Exhibit 11). The NAEP specifications document makes clear that constructed-response items are not intended to serve the same purpose as multiple-choice items. Short constructed-response items should “measure knowledge and skills in a way that multiple-choice items cannot or provide greater evidence of the depth of students’ understanding” (p. 30). Extended constructed-response items “ask students to think deeply about what they have read, to integrate concepts, to analyze a situation, or to explain a concept” (p. 31).

All (100%) of the SAT items on each form are multiple-choice items. The SAT specifications state that students are given 70 minutes to complete a 67-item form but do not specify the percentages of time expected to be spent on passage-based and sentence completion items. The SAT Practice Booklet does advise students to “work on sentence-completion items first” as they “take less time to answer than passage-based items” (College Board, 2009, p. 3).

Scoring Rubrics and Rules for Constructed-Response Items

Multiple-choice items in NAEP are scored as correct or incorrect. The NAEP specifications describe three types of scoring rubrics for constructed-response items:

- short constructed-response items scored dichotomously: “correct or incorrect”;
- short constructed-response items scored on a three-point scale: “correct, partial, and incorrect”;
- extended constructed-response items, which may have up to four scoring categories: “extensive, essential, partial, and incorrect” (National Assessment Governing Board, 2009, pp. 31–32).

Every constructed-response item on NAEP has its own scoring rubric written specifically for that item; however, all constructed-response scoring rubrics are based on “the three

categories of cognitive behaviors—Locate/Recall, Integrate/Interpret, and Critique/Evaluate—as they apply to the two text types—literary and informational texts” (National Assessment Governing Board, 2009, p. 60). In addition, all rubrics adhere to the following principles:

- Students will not receive credit for incorrect responses.
- All scoring criteria will be text based; students must support statements with information from the reading passage.
- Partial credit will be given for responses that answer a portion of the item but do not provide adequate support from the passage.
- Student responses will be coded to distinguish between blank items and items answered incorrectly.
- Responses will be scored on the basis of the response as it pertains to the item and the passage, not on the quality of writing.
- As part of the item review, the testing contractor will ensure a match between each item and the accompanying scoring guide. (NAEP Specifications, pp. 59–60)

The SAT items are multiple-choice only. Multiple-choice items are scored dichotomously as correct or incorrect.

Reading Difficulty and Grade Level Targeted by Items

The grade 12 NAEP test specifications describe reading skills (“cognitive targets”) specific to grade 12 to be applied to passages, or “stimulus material,” that are “grade appropriate” and that represent a “variety of sentence and vocabulary complexity” (National Assessment Governing Board, 2009, p. 19).

The NAEP specifications also provide detailed criteria for the selection of words used in vocabulary items: these words should “characterize the vocabulary of mature language users and characterize written rather than oral language. These will be words that convey concepts, ideas, actions, or feelings that the readers most likely know. In general, the words selected as targets for item development characterize the language of mature readers and are used in texts from a variety of content domains” (National Assessment Governing Board, 2009, p. 55).

The SAT specifications do not provide specific information about the difficulty of reading passages. However, according to the College Board, “data show that the material on the SAT and the time allocated to each section are appropriate for the intended test-taking population: (1) on average, students answer 50 to 60 percent of questions correctly; (2) 80 percent finish nearly the entire test; and (3) almost all students complete at least 75 percent of the questions” (College Board, 2010d).

Information about Reading Passages

The NAEP specifications provide highly specific criteria for the selection of reading passages to be used on the test, including specific criteria for each text type (literary and informational) and genre. These criteria are summarized in Exhibit 7 in the specifications (National Assessment Governing Board, 2009, p. 19). All passages must be from authentic sources and be grade-appropriate and well-written, with “the ability to engage readers” (p. 19). In addition to “expert judgment,” passage mapping, vocabulary mapping, and “at least two research-based readability formulas” are used in selecting passages and evaluating passage difficulty (p. 16).

NAEP also specifies a range of passage length from 500–1,500 words for the grade 12 reading test. The use of varying passage lengths is intended to “gain the most valid information about students’ reading” by using material “as similar as possible to what students actually encounter” in and out of school. In addition, all passages must be long enough to yield a minimum of “10 distinct items” (p. 15).

The SAT specifications call for four passages ranging in length from 500 words (1 passage) to 650 words (1 passage) to 800 words (2 passages) and four paragraphs (each approximately 100 words). Two passages are pairs of related paragraphs. The number of items per passage is not specified. However, information on the College Board’s website indicates that longer passages may have up to 13 items, while the paragraphs have a range of one to five items. (Examination of the actual SAT forms used in this study shows a range of 7–13 items for the longer passages and a range of two to four items for paragraphs and paragraph pairs.)

In addition, SAT reading passages are numbered by line, and many of the items refer to specific lines from the passage. NAEP reading passages do not have line numbers.

Summary of Content Overlap and Implications for Item Alignment

Table 1 shows a summary of the overlap of SAT categories and objectives with NAEP goals and objectives. The NAEP objectives included in Table 1 are those that show a clear and direct relationship to the language of the SAT categories and objectives. NAEP objectives overlapping with SAT categories and objectives only at a higher level of granularity or broad skill, but not in the application of skills to specific text types and features (i.e., less directly), are shown in Table 2.

Table 1. Overlap of SAT and NAEP Objectives

SAT ⁴	NAEP ⁵
<p>B.1 Extended Reasoning Questions “Extended Reasoning questions measure higher-level reading skills.”</p> <p>B.1.3 Implication and Evaluation “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”</p>	<p>2 Integrate/Interpret: Make complex inferences within and across texts</p> <p>2.1 Integrate/Interpret: Make complex inferences within and across both literary and informational texts</p> <p>2.2 Integrate/Interpret: Make complex inferences within and across literary texts</p>
<p>B.1.1 Primary Purpose “These questions ask about the main idea of a passage or about the author’s primary purpose in writing the passage. They address the passage as a whole, or an entire paragraph, rather than focusing on a smaller part of the passage.”</p>	<p>2.1.f Describe or analyze author’s purpose</p> <p>2.3.a Summarize major ideas</p>
<p>B.1.2 Rhetorical Strategies “These questions usually focus on a specific part of a passage, often on a particular word, image, phrase, example, or quotation. They usually ask why this particular element is present, or what purpose it serves, rather than simply what it means. Rhetorical strategy questions might also focus on a more substantial portion of a passage and ask what purpose it serves in the passage as a whole.”</p>	<p>2.1.d Describe or analyze how an author uses literary devices or text features to convey meaning</p>
<p>B.1.3 Implication and Evaluation “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”</p> <p>See also: “Items in the Extended Reasoning category may ask students to <i>identify cause and effect</i>, make inferences, recognize a main idea or an author’s tone, or follow the logic of an analogy or argument.” (College Board, 2009)</p>	<p>2.1.a Describe problem and solution, or cause and effect</p> <p>2.1.b Compare or connect ideas, perspectives, problems, or situations</p> <p>2.1.c Determine unstated assumptions in an argument</p> <p>2.3.b Draw conclusions and provide supporting information</p>

⁴ College Board, 2010a.

⁵ NAEP reading framework as formatted for alignment studies (see Appendix A)

SAT ⁴	NAEP ⁵
<p>B.1.4 Tone and Attitude “These questions ask about the author’s tone or attitude in a specific part of a passage or in a passage as a whole. They might also ask about the tone or attitude of a person quoted in a passage, or of a character in a fiction passage.”</p>	<p>2.2.a Interpret mood, tone, or voice 2.2.c Interpret a character’s conflicts, motivations, and decisions (SAT attitude of a character).</p>
<p>B.1.5 Application and Analogy “These questions may address a specific idea or relationship in a passage and ask the test taker to recognize a parallel idea or relationship in a different context. They may ask the test taker to recognize an additional example that would support an idea presented in the passage, or they may ask about an analogy that is presented in the passage. Alternately, these questions may ask how ideas presented in one passage apply to another passage, or how the author of one passage would be likely to react to an idea expressed in a related passage.”</p>	<p>2.1.b Compare or connect ideas, perspectives, problems, or situations</p>
<p>B.2 Literal Comprehension “Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.”</p>	<p>1.1 Locate or recall textually explicit information and make simple inferences within and across both literary and informational texts</p>
<p>B.3 Vocabulary in Context “Vocabulary in Context questions ask what a specific word means as it is used in a passage.”</p>	<p>2.4.a Determine word meaning as used in context</p>

As shown in the table above, most of the content of the SAT categories and objectives is also represented in the NAEP goals and objectives, with most of the skills described in the SAT objectives having fairly close parallels in the language of the NAEP objectives. The skill of determining which “additional example would support an idea presented in the passage” in SAT B.1.5 is not specifically mentioned in the NAEP objectives but is clearly related to the skill in NAEP 2.1.b (i.e., connecting ideas).

Most of the overlap between the two sets of objectives in Table 1 is between SAT B.1–B.3 and the NAEP Integrate/Interpret objectives that apply to informational text or to both informational and literary text. However, Table 1 does not include some additional NAEP objectives that overlap with the SAT categories at a higher level of generality. These NAEP objectives refer to broad skills described in the SAT specifications, such as “literal comprehension,” but apply the broad skill more narrowly, to particular features or elements of text that are not addressed in the language of the SAT specifications. In effect, all of these NAEP objectives address the broader skills described in the SAT objectives, but it is not possible to determine from the specifications whether SAT items would address the more specific NAEP objectives. The more general language of the SAT categories neither requires that these specific skills be addressed nor excludes the possibility. For alignment purposes, this means that alignment between items and frameworks of the two tests can only be determined through analysis at the item level.

Table 2 summarizes the *potential* overlap between some more specific NAEP goals and objectives and more general SAT categories and objectives. The NAEP objectives in this table are related to a broad skill described in the SAT categories. The NAEP objectives, however, describe skills applied to specific text types and features not addressed in the SAT specifications.

Table 2. Potential Overlap of SAT and NAEP Objectives at a Higher Level of Generality

SAT ⁶	NAEP ⁷
<p>A. Sentence Completions “Sentence completions are balanced between those primarily measuring reasoning and those primarily measuring vocabulary.”</p>	<p>2.4.a Determine word meaning as used in context</p>
<p>B.1.2 Rhetorical Strategies “These questions usually focus on a specific part of a passage, often on a particular word, image, phrase, example, or quotation. They usually ask why this particular element is present, or what purpose it serves, rather than simply what it means. Rhetorical strategy questions might also focus on a more substantial portion of a passage and ask what purpose it serves in the passage as a whole.”</p>	<p>2.1.e Describe or analyze how an author uses organizing structures to convey meaning 3.2.a Evaluate the role of literary devices in conveying meaning</p>
<p>B.1.3 Implication and Evaluation “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”</p>	<p>2.2.b Integrate ideas to determine theme 2.2.c Interpret a character’s conflicts, motivations, and decisions 2.2.d Examine relations between or among theme, setting, plot, or characters 2.3.d Distinguish facts from opinions 3.1.b Analyze, critique, or evaluate the author’s perspective or point of view 3.3.c Determine the quality of counterarguments within and across texts 3.3.d Judge the coherence or logic of an argument</p>
<p>B.1.5 Application and Analogy “These questions may address a specific idea or relationship in a passage and ask the test taker to recognize a parallel idea or relationship in a different context. They may ask the test taker to recognize an additional example that would support an idea presented in the passage, or they may ask about an analogy that is presented in the passage. Alternately, these questions may ask how ideas presented in one passage apply to another passage, or how the author of one passage would</p>	<p>3.1.b Analyze, critique, or evaluate the author’s perspective or point of view</p>

⁶ College Board, 2010a.

⁷ NAEP Reading Framework as formatted for alignment studies (see Appendix A)

SAT ⁶	NAEP ⁷
be likely to react to an idea expressed in a related passage.”	
<p>B.2 Literal Comprehension “Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.”</p>	<p>1.1.a Locate or recall specific information such as definition, facts, and supporting details in texts or graphics 1.2.a Locate or recall character traits 1.2.b Locate or recall sequence of events or actions 1.2.c Locate or recall setting 1.2.d Locate or recall figurative language 1.2.e Locate or recall organizing structures of literary texts 1.3.a Locate or recall the topic sentence or main idea 1.3.b Locate or recall the author’s purpose 1.3.c Locate or recall causal relations 1.3.d Locate or recall organizing structures of (informational) texts</p>

NAEP goals and objectives not addressed in the SAT specifications:

- 2.2.e Explain how rhythm, rhyme, sound, or form in poetry contribute to meaning
- 3.1.c Take different perspectives in relation to a text
- 3.2.b Determine the degree to which literary devices enhance a literary work
- 3.2.c Evaluate a character’s conflicts, motivations, and decisions
- 3.3.a Evaluate the way the author selects language to influence readers
- 3.3.b Evaluate the strength and quality of evidence used by the author to support his or her position

Implications for the Alignment Study and Related Potential Decision Rules

This section describes implications of the findings of this comparative analysis. Where potential decision rules have emerged, these are included below the related implication. The final decision rules used in the alignment study are included in Appendix B.

Different levels of granularity in the two sets of specifications

As described in detail in this report, the NAEP and SAT specifications are written at different levels of granularity. The level of detail and complexity of the NAEP documents provides a degree of specificity and clarity in understanding the intent of the framework that is not found in the SAT objectives. There are several potential effects of this on the alignment study. Panelists may align NAEP items to SAT objectives but with a greater range of diversity in the SAT objectives selected. Both SAT B.1.3 and B.1.5, for example, include skills requiring comparison between two passages, with enough overlap

in content to create ambiguity for panelists. The following proposed decision rule is provided to help panelists interpret the difference between these two broad objectives.

Proposed Decision Rule: Items based on multiple passages will be interpreted as aligning to Application and Analogy when such items require students to use information or ideas from “passage A” in order to comprehend, interpret, analyze, or evaluate “passage B.” Items that only ask students about similarities or differences between passages—without requiring them to apply information or ideas from one to the other—will not be considered to align to Application and Analogy.

Another potential source of ambiguity for coders is the lack of specific verbs in some of the SAT objectives. For example, SAT B.1.1 describes items that “ask about the main idea of a passage or about the author’s primary purpose.” The fact that this objective falls under the category of Extended Reasoning suggests that it does not refer to recall or “literal comprehension” of main idea or author’s purpose; nothing in the language of the objective itself would allow panelists to make that determination. This could lead some panelists to align NAEP recall of main idea items to SAT B.1.1, while others might align such items to SAT B.2, Literal Comprehension.

In addition, the broad language of the SAT categories compared to the more specific NAEP objectives may warrant consideration in comparing the results for the alignment of SAT items to NAEP with those for the alignment of NAEP items to SAT. For example, one might expect fewer types of items to align to a specific NAEP objective, whereas panelists may find that more types of items align to a broad SAT objective.

Variations in language used in the two frameworks

NAEP 2.1.d refers to the author’s use of “literary devices” to convey meaning in both informational and literary texts. SAT B.1.2 refers to the use of “rhetorical strategies” to serve particular purposes in passages. Although “rhetorical” devices and strategies have traditionally referred to techniques used in persuasive texts and “literary” devices have traditionally referred to techniques used in literary texts, the two terms are sometimes used interchangeably. The inclusion of “image,” in particular, in SAT B.1.2 suggests that “rhetorical strategies” is being used broadly and would include “literary devices” such as figurative language or imagery. The following decision rule will allow analysts to align NAEP items to SAT B.1.2 if they address the use of either literary or rhetorical devices.

Proposed Decision Rule: The term “rhetorical strategies” in SAT B.1.2 will be interpreted as including literary devices or techniques.

A similar decision rule for NAEP 2.1.d interprets “literary devices” broadly, as representing all of the aspects of author’s craft that are included in Exhibits 3 and 4 in the NAEP framework.

Proposed Decision Rule: The terms “literary devices or text features” in objective 2.1.d will be interpreted broadly as including all aspects of author’s craft and “text features” represented in Exhibits 3 and 4 (including “rhetorical structures”) in the full NAEP reading framework.

NAEP framework applied to SAT items

As noted previously, SAT sentence completion items are designed to measure both vocabulary and sentence reasoning skills, with some items “primarily measuring

reasoning” and some “primarily measuring vocabulary.” However, the sentence completion format requires students to select a word or pair of words to fill in the blanks in a sentence. This task always requires determining the best “match” of a given word to the context of the sentence. For this reason, all of the SAT sentence completion items will be considered to align to NAEP 2.4.a, as expressed in the following decision rule.

Proposed Decision Rule: SAT sentence completion items will be interpreted as aligned to NAEP 2.4.a on the grounds that all such items require students to determine the meaning of words in context.

As noted in the report, however, the alignment between the SAT sentence completion category and NAEP 2.4.a is not as close or precise as that between SAT B.3, Vocabulary in Context, and NAEP 2.4.a. Some SAT sentence completion items measure students’ understanding of relatively specialized vocabulary drawn from specific academic disciplines. Such vocabulary would be excluded from NAEP’s assessment of vocabulary in context. In addition, some SAT sentence completion items are designed to measure both vocabulary and sentence reasoning, the latter skill not addressed by NAEP. The difference between these types of items on SAT and NAEP’s passage-based vocabulary items should be kept in mind when evaluating the results of the alignment study.

References

- College Board. (2009). The SAT Practice Booklet. Retrieved April 29, 2010, from http://www.collegeboard.com/prod_downloads/sat/sat-practice-booklet.pdf
- College Board. (2010a). SAT content specification description. Prepared by the College Board for the NAEP Alignment Study.
- College Board. (2010b). Register for the SAT. Retrieved April 29, 2010, from <http://sat.collegeboard.com/register>
- College Board. (2010c). What is the SAT? Retrieved April 29, 2010, from <http://sat.collegeboard.com/why-sat>
- College Board. (2010d). About the SAT Reasoning Test. Retrieved April 29, 2010, from <http://professionals.collegeboard.com/testing/sat-reasoning/about>
- College Board. (2010e). Students with Disabilities. Retrieved April 29, 2010, from <http://professionals.collegeboard.com/testing/ssd>
- College Board. (2010f). Help students do their best on the SAT Reasoning Test. Retrieved April 29, 2010, from <http://professionals.collegeboard.com/testing/sat-reasoning/test-day/tips>
- College Board. (n.d.) Final Test Specifications for the New SAT. Retrieved April 29, 2010, from http://www.collegeboard.com/prod_downloads/sat/final_test_specifications.pdf
- National Assessment Governing Board. (2008). *Reading Framework for the 2009 National Assessment of Educational Progress*. Developed for the National Assessment Governing Board in support of Contract No. ED-02-R-0007, U.S. Department of Education, by American Institutes for Research.
- National Assessment Governing Board. (2009). *Reading Assessment and Item Specifications for the 2009 National Assessment of Educational Progress*. Prepared for the National Assessment Governing Board in support of Contract No. ED-02-R-0007, U.S. Department of Education, by American Institutes for Research.

Appendix A: Objective-Level NAEP-to-SAT Content Comparison

NAEP Reading	SAT Reading	Similarities and Differences
1. Locate/Recall: Locate or recall textually explicit information within and across texts, which may involve making simple inferences as needed for literal comprehension	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1 and SAT B.2 are similar in referring to “literal comprehension” of content in a text. The skill described in SAT B.2 is stated in broader terms, without reference to the skills of locating or recalling information, or making “simple inferences,” as in NAEP 1. In addition, SAT B.2 refers to a “small but significant portion” of a text. NAEP 1 does not specify the size of the content to be addressed. Overall, these two categories are similar in terms of the broad skill described but differ in some specifics.
1.1. Locate or recall textually explicit information and make simple inferences within and across <i>both literary and informational texts</i>	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.1 and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.1 is more specific in referring to the application of this skill to both literary and informational texts. SAT B.2 does not specify the type of text to be addressed.
1.1.a. Locate or recall specific information such as definitions, facts, and supporting details in text or graphics	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	As noted above, both NAEP 1.1.a and SAT B.2 refer to literal comprehension. However, NAEP 1.1.a is more specific than SAT B.2 in referring to “specific information, such as definitions, facts, and supporting details” in text. SAT B.2 only refers to a “small but significant portion” of text.
1.2. Locate or recall textually explicit information and make simple inferences within and across <i>literary texts</i>	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2 and SAT B.2 are similar in referring to “literal comprehension” of content in a text. However, NAEP 1.2 is more specific in referring to “literary texts.” SAT B.2 does not specify type of text.
1.2.a. Locate or recall character traits	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2.a and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.2.a is much more specific in describing this skill as applied to “character traits” in literary texts. SAT B.2 does not refer to any specific elements or features of text.

NAEP Reading	SAT Reading	Similarities and Differences
1.2.b. Locate or recall sequence of events or actions	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2.b and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.2.b is much more specific in describing this skill as applied to “sequence of events or actions” in literary texts. SAT B.2 does not refer to any specific elements or features of text.
1.2.c. Locate or recall setting	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2.c and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.2.b is much more specific in describing this skill as applied to “setting” in literary texts. SAT B.2 does not refer to any specific elements or features of text.
1.2.d. Locate or recall figurative language	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2.d and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.2.b is much more specific in describing this skill as applied to “figurative language” in literary texts. SAT B.2 does not refer to any specific elements or features of text.
1.2.e. Locate or recall organizing structures of literary texts, such as verse or stanza in poetry or description, chronology, comparison, etc., in literary nonfiction	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.2.e and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.2.b is much more specific in describing this skill as applied to “organizing structures” in literary texts. SAT B.2 does not refer to any specific elements or features of text.
1.3. Locate or recall textually explicit information and make simple inferences within and across <i>informational texts</i>	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.3 and SAT B.2 are similar in referring to literal comprehension of content in a text. However, NAEP 1.3 is more specific in describing this skill as applied to “informational texts.” SAT B.2 does not refer to text types.
1.3.a. Locate or recall the topic sentence or main idea	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.3.a and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.3.a is much more specific in describing this skill as applied to “the topic sentence or main idea” in informational texts. SAT B.2 does not refer to any specific elements or features of text. “Main idea” is addressed in SAT B.1.1, an Extended Reasoning objective that goes beyond “recall.”

NAEP Reading	SAT Reading	Similarities and Differences
1.3.b. Locate or recall the author's purpose	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.3.b and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.3.b is much more specific in describing this skill as applied to “the author's purpose” in informational texts. SAT B.2 does not refer to any specific elements or features of text.
1.3.c. Locate or recall causal relations	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.3.c and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.3.c is much more specific in describing this skill as applied to “causal relations” in informational texts. SAT B.2 does not refer to any specific elements or features of text.
1.3.d. Locate or recall organizing structures of texts, such as comparison/contrast, problem/solution, enumeration, etc.	B.2 Literal Comprehension questions focus on a small but significant portion of a reading passage and ask what is being said in those lines.	NAEP 1.3.c and SAT B.2 are similar in referring to the broad skill of “literal comprehension.” However, NAEP 1.3.d is much more specific in describing this skill as applied to “organizing structures” in informational texts. SAT B.2 does not refer to any specific elements or features of text.
2. Integrate/Interpret: Make complex inferences within and across texts	B.1 Extended Reasoning Questions measure higher-level reading skills B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	Both NAEP 2 and SAT B.1 describe a broad category of reading skills. The language of NAEP 2 is more specific, referring to “Integrate/Interpret” and “make complex inferences.” SAT B.1 refers only to “higher-level reading skills”; however, it encompasses the more specific skills described in SAT B.1.1–B.1.5. SAT B.1.3 specifically refers to the skill of determining what information in a passage “suggests” or what can be “inferred.”
2.1. Make complex inferences within and across <i>both literary and informational</i> texts	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	Both NAEP 2.1 and SAT B.1.3 refer to the skill of making inferences; however, the language of NAEP 2.1 is more specific in its use of “integrate/interpret” and in referring to “both literary and informational texts.” SAT B.1.3 does not refer to text types.

NAEP Reading	SAT Reading	Similarities and Differences
2.1.a. Describe problem and solution, or cause and effect	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	NAEP 2.1.a and SAT B.1.3 are similar in requiring students to use inference and understand “implications.” However NAEP 2.1.a describes a more specific skill of making “complex inferences” to “describe problem and solution, or cause and effect.” SAT B.1.3 does not specify any particular features or elements of text to be addressed. However, the description of Extended Reasoning in the SAT Practice Booklet for students specifically mentions the identification of cause and effect as one of the skills assessed (College Board, 2009).
2.1.b. Compare or connect ideas, perspectives, problems, or situations	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.” B.1.5 Application and Analogy: “These questions may address a specific idea or relationship in a passage and ask the test taker to recognize a parallel idea or relationship in a different context. They may ask the test taker to recognize an additional example that would support an idea presented in the passage, or they may ask about an analogy that is presented in the passage. Alternately, these questions may ask how ideas presented in one passage apply to another passage, or how the author of one passage would be likely to react to an idea expressed in a related passage.”	NAEP 2.1.b is similar to SAT B.1.3 in requiring students to make inferences; in addition, both objectives refer to making comparisons and connections “within and across texts” in NAEP and “between a pair of passages” in SAT. NAEP 2.1.b also overlaps with SAT B.1.5, which may require students to determine “how ideas presented in one passage apply to another” or how an author of one passage would likely “react to an idea expressed in a related passage.” In this case, the related language of SAT B.1.5 is actually more specific than that of NAEP 2.1.b, which calls for comparing or connecting “ideas, perspectives, problems, or situations.”
2.1.c. Determine unstated assumptions in an argument	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	NAEP 2.1.c and SAT B.1.3 are similar in requiring students to understand “implications” (SAT) or make “complex inferences” (NAEP) to determine “what can be inferred about an author’s views” (SAT) or “unspoken assumptions in an argument” (NAEP). The NAEP objective is more specific than SAT B.1.3 in focusing on “unstated assumptions in an argument,” but the skills described in both objectives are closely related.

NAEP Reading	SAT Reading	Similarities and Differences
2.1.d. Describe or analyze how an author uses literary devices or text features to convey meaning	B.1.2 Rhetorical Strategies: “These questions usually focus on a specific part of a passage, often on a particular word, image, phrase, example, or quotation. They usually ask why this particular element is present, or what purpose it serves, rather than simply what it means. Rhetorical strategy questions might also focus on a more substantial portion of a passage and ask what purpose it serves in the passage as a whole.”	NAEP 2.1.d and SAT B.1.2 are among the most similar of any two objectives across the two frameworks. Both focus on the skill of analyzing the purpose served by “rhetorical strategies” (SAT) or “literary devices or text features” (NAEP). The two objectives use slightly different language but appear to be describing the same kind of skill applied to similar features of texts.
2.1.e. Describe or analyze how an author uses organizing structures to convey meaning	<i>B.1.2 Rhetorical Strategies: “These questions usually focus on a specific part of a passage, often on a particular word, image, phrase, example, or quotation. They usually ask why this particular element is present, or what purpose it serves, rather than simply what it means. Rhetorical strategy questions might also focus on a more substantial portion of a passage and ask what purpose it serves in the passage as a whole.”</i> <i>(italics indicate potential but indirect overlap)</i>	The phrase “rhetorical strategies” would not typically be intended to refer to organizational structures (such as cause-effect, comparison-contrast, etc.). However, there is some potential overlap between these categories. In some cases, an author's rhetorical strategy might include using a specific organizational structure (such as extended analogy or a series of comparisons) for a specific rhetorical effect.
2.1.f. Describe or analyze author's purpose	B.1.1 Primary Purpose: “These questions ask about the main idea of a passage or about the author’s primary purpose in writing the passage. They address the passage as a whole, or an entire paragraph, rather than focusing on a smaller part of the passage.”	B.1.1 is very similar to NAEP 2.1.f; both describe the skill of determining the author's purpose. NAEP 2.1.f differs from SAT B.1.1 in explicitly requiring that students make “complex inferences” to analyze an author's purpose. Given that SAT B.1.1 is a subset of B.1 Extended Reasoning, and that a separate SAT category addresses “literal comprehension,” it is reasonable to assume that the SAT objective also requires students to determine author's purpose when it is not directly stated.
2.2. Make complex inferences within and across literary texts	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	Both NAEP 2.2 and SAT B.1.3 refer to the skill of making inferences; however, the language of NAEP 2.2 is more specific in its use of “integrate/interpret” and in referring to “literary texts.” SAT B.1.3 does not refer to text types.

NAEP Reading	SAT Reading	Similarities and Differences
2.2.a. Interpret mood, tone, or voice	B.1.4 Tone and Attitude: “These questions ask about the author’s tone or attitude in a specific part of a passage or in a passage as a whole. They might also ask about the tone or attitude of a person quoted in a passage, or of a character in a fiction passage.”	NAEP 2.2.a and SAT B.1.4 are similar in focusing on the interpretation of tone in a text. The NAEP objective is broader in also referring to elements of “mood” and “voice” and narrower in addressing only literary texts. However, NAEP includes “literary nonfiction” in literary texts, widening the scope of this text type. The SAT objective also refers to “attitude.” In SAT B.1.4, the “tone and attitude” may be those of an author (informational text) or of a character (literary text).
2.2.b. Integrate ideas to determine theme	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.	NAEP 2.2.b is similar to SAT B.1.3 in that both require inference or the interpretation of “implications.” The NAEP objective is much more specific in describing the skill of integrating ideas in a literary text “to determine theme.” None of the SAT objectives specifically refer to theme or to any other specifically literary element.
2.2.c. Interpret a character's conflicts, motivations, and decisions	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.” B.1.4 Tone and Attitude: “These questions ask about the author’s tone or attitude in a specific part of a passage or in a passage as a whole. They might also ask about the tone or attitude of a person quoted in a passage, or of a character in a fiction passage.”	NAEP 2.2.c is similar to SAT B.1.3 in that both require inference or the interpretation of “implications.” The NAEP objective is much more specific in describing the skill of interpreting “a character's conflicts, motivations, and decisions.” SAT B.1.4 includes questions about the “tone or attitude of a character in a fiction passage.” The analysis of a character's attitude, in particular, is related to the skill described in NAEP 2.2.c; attitude might be central to a character's “conflicts, motivations, and decisions.”
2.2.d. Examine relations between or among theme, setting, plot, or characters	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	NAEP 2.2.d is similar to SAT B.1.3 in that both require inference or the interpretation of “implications.” The NAEP objective is much more specific in applying this broad skill to relations between or among literary elements. The SAT objectives do not refer to any specific elements of literary text (other than tone/attitude of a character in B.1.4).

NAEP Reading	SAT Reading	Similarities and Differences
2.2.e. Explain how rhythm, rhyme, sound, or form in poetry contribute to meaning	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	NAEP 2.2.e is similar to SAT B.1.3 in that both require inference or the interpretation of “implications.” However, no SAT objectives refer to poetry or to any elements of poetry.
2.3. Make complex inferences within and across <i>informational texts</i>	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	Both NAEP 2.3 and SAT B.1.3 refer to the skill of making inferences; however, the language of NAEP 2.3 is more specific in its use of “integrate/interpret” and in referring to “informational texts.” SAT B.1.3 does not refer to text types.
2.3.a. Summarize major ideas	B.1.1 Primary Purpose: “These questions ask about the main idea of a passage or about the author’s primary purpose in writing the passage. They address the passage as a whole, or an entire paragraph, rather than focusing on a smaller part of the passage.”	NAEP 2.3.a and SAT B.1.1 are similar in focusing on “major ideas” (NAEP) and “main idea” (SAT). The NAEP objective is more specific, however, in focusing on the skill of summarizing “major ideas,” while SAT B.1.1 does not specify a particular approach to understanding “the main idea of a passage.” Both objectives can apply to a whole passage or to a subsection or paragraph of a passage. The NAEP objective is specific in focusing on informational text, while the SAT objective does not refer to text type.
2.3.b. Draw conclusions and provide supporting information	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	The skill of drawing conclusions in NAEP 2.3.b is very similar to the skill of interpreting “implication” or determining “what can be inferred about an author’s views” in SAT B.1.3. “Drawing conclusions,” in fact, is a synonym for “inferring.” The NAEP objective is broader, however, in including the skill of providing “supporting information.” The whole activity of drawing conclusions and providing support would typically require a written or oral response. The NAEP objective is also specific in referring to informational text, while the SAT objective does not refer to text type.

NAEP Reading	SAT Reading	Similarities and Differences
2.3.c. Find evidence in support of an argument	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	NAEP 2.3.c is similar to SAT B.1.3 in requiring students to draw inferences but describes a much more specific skill. No SAT objective refers to analyzing specific elements of an author's argument.
2.3.d. Distinguish facts from opinions	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	
2.3.e. Determine the importance of information within and across texts	B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.” B.1.5 Application and Analogy: “These questions may address a specific idea or relationship in a passage and ask the test taker to recognize a parallel idea or relationship in a different context. They may ask the test taker to recognize an additional example that would support an idea presented in the passage, or they may ask about an analogy that is presented in the passage. Alternately, these questions may ask how ideas presented in one passage apply to another passage, or how the author of one passage would be likely to react to an idea expressed in a related passage.”	NAEP 2.3.e is similar to SAT B.1.3 in requiring students to draw inferences but describes a more specific skill of determining “the importance of information.”

NAEP Reading	SAT Reading	Similarities and Differences
2.4. Apply understanding of vocabulary to comprehension of literary or informational texts	B.3 Vocabulary in Context questions ask what a specific word means as it is used in a passage.	NAEP 2.4 and SAT B.3 are very similar. NAEP 2.4 differs in explicitly linking the understanding of vocabulary to comprehension of both literary and informational texts.
2.4.a. Determine word meaning as used in context	B.3 Vocabulary in Context questions ask what a specific word means as it is used in a passage.	NAEP 2.4.a and SAT B.3 are nearly identical; both describe the same skill of determining “what a specific word means as it is used in a passage” (SAT) or “word meaning as used in context” (NAEP).
3. Critique/Evaluate: Consider text(s) critically		No SAT category or objective calls for students to “consider text(s) critically.”
3.1. Consider <i>both literary and informational texts</i> critically		No SAT category or objective calls for students to judge or “critique” an author’s craft.
3.1.a. Judge the author’s craft and technique		No SAT category or objective calls for students to “judge,” “critique,” or “evaluate” an author’s point of view.
3.1.b. Analyze, critique, or evaluate the author’s perspective or point of view		No SAT category or objective calls for students to “take different perspectives in relation to a text.”
3.1.c. Take different perspectives in relation to a text		
3.2. Critique/Evaluate: Consider <i>literary text</i> critically		No SAT category or objective calls for students to “consider literary text critically.”
3.2.a. Evaluate the role of literary devices in conveying meaning	B.1.2 Rhetorical Strategies: “These questions usually focus on a specific part of a passage, often on a particular word, image, phrase, example, or quotation. They usually ask why this particular element is present, or what purpose it serves, rather than simply what it means. Rhetorical strategy questions might also focus on a more substantial portion of a passage and ask what purpose it serves in the passage as a whole.”	SAT B.1.2 includes questions about the purpose served by a particular rhetorical strategy. This is similar to NAEP 3.2.a, which focuses on the “role of literary devices in conveying meaning.” However, SAT B.1.2 does not appear to require students to “evaluate” rhetorical strategies.

NAEP Reading	SAT Reading	Similarities and Differences
3.2.b. Determine the degree to which literary devices enhance a literary work		No SAT objective asks students to “determine the degree to which literary devices enhance a literary work.” SAT B.1.2 focuses on how rhetorical strategies function, not how well.
3.2.c. Evaluate a character's conflict, motivations, and decisions		No SAT objective addresses the evaluation of character.
3.3. Critique/Evaluate: Consider <i>informational text</i> critically		No SAT category or objective specifically requires students to “consider informational text critically.” However, there is some <i>potential</i> overlap between some of the specific objectives for this goal and some language in SAT B.1.3.
3.3.a. Evaluate the way the author selects language to influence readers		No SAT category or objective specifically requires students to “evaluate” the author's choice of language to “influence readers.” SAT B.1.2 includes asking students “what purpose” a rhetorical strategy serves but does not call for evaluation or address an author's attempt to influence readers.
3.3.b. Evaluate the strength and quality of evidence used by the author to support his or her position		No SAT objective addresses the evaluation of evidence used to support an argument. SAT B.1.3 calls for the evaluation of ideas or assumptions but not of evidence.
3.3.c. Determine the quality of counterarguments within and across texts	SAT B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	There is potential overlap between SAT B.1.3, evaluation of “ideas or assumptions,” and NAEP 3.3.c., which focuses on “the quality of counterarguments.” The skill described in the NAEP objective is much more specific, however. In addition, it is not entirely clear whether “evaluate” in SAT B.1.3 implies the same critical stance required by NAEP 3.3.c.
3.3.d. Judge the coherence or logic of an argument	SAT B.1.3 Implication and Evaluation: “These questions go beyond the passage by asking what the information presented in the passage suggests, or what can be inferred about the author’s views. They might also ask the test taker to evaluate ideas or assumptions in a passage, or to evaluate the relationship between a pair of passages.”	As with NAEP 3.3.c, NAEP 3.3.d describes a considerably more specific skill than that in SAT B.1.3 (“evaluate ideas”). The SAT objective could potentially include evaluating “the coherence or logic of an argument.” The more general language of the SAT objective makes it difficult to determine the degree of possible overlap.

Appendix B: Decision Rules Applied in Operational Study

NAEP READING FRAMEWORK FOR ALIGNMENT: DECISION RULES

- 1) “Simple inferences” in standard 1 and its associated objectives will be interpreted as including the understanding of close paraphrase of “explicit information” within or across texts. (Item stems or answers may paraphrase explicit content from passages.)
- 2) “Author’s purpose” in objective 1.3.b will be interpreted as referring to explicit statements of the author’s purpose within or across texts. “Author’s purpose” in 2.1.f will be interpreted as referring to the implicit purpose of a text.
- 3) “Organizing structures” in objective 1.3.d will be interpreted as referring to organizing structures that are explicitly identified in texts, through such indicators as the author’s use of enumeration (“first, second, third,” etc.) or explicit references to a problem and its solution (e.g., “The problem is . . .”), etc.
- 4) The terms “literary devices or text features” in objective 2.1.d will be interpreted broadly as including all aspects of author’s craft and “text features” represented in Exhibits 3 and 4 (including “rhetorical structures”) in the full NAEP Reading Framework.
- 5) The term “organizing structures” in objectives 1.3.d and 2.1.e will also be interpreted as referring to the organizational structures represented in Exhibits 3 and 4.
- 6) Objective 2.2.c will be interpreted as including the interpretation of character traits.
- 7) “Major ideas” in objective 2.3.a will be interpreted as including important ideas within a paragraph or portion of a text as well as ideas central to a passage as a whole.
- 8) For objective 2.3.b, items may be considered fully aligned if they ask students to “draw conclusions” without also requiring them to “provide supporting information.” (Some items may ask for both.)
- 9) When appropriate, items based on literary nonfiction may be aligned to objectives for “informational texts,” or for “literary texts,” or for objectives that apply to both literary and informational texts.

**SAT READING SPECIFICATIONS FOR ALIGNMENT:
DECISION RULES**

- 1) Items based on multiple passages will be interpreted as aligning to Applications and Analogy when such items require students to use information or ideas from “passage A” in order to comprehend, interpret, analyze or evaluate “passage B.” Items that only ask students about similarities or differences between passages—without requiring them to apply information or ideas from one to the other—will not be considered to align to Applications and Analogy.
- 2) The term “rhetorical strategies” will be interpreted as including literary devices or techniques.

SAT ITEMS TO NAEP FRAMEWORK: DECISION RULES

- 1) SAT sentence completion items will be interpreted as aligned to NAEP 2.4.a on the grounds that all such items require students to determine the meaning of words in context.