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

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

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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. The overall study includes examination of the alignment between the grade 12 NAEP in reading and mathematics and the SAT and ACCUPLACER assessments in those subjects.

As described in the study design document, the full study includes week long alignment coding sessions with replicate panels of content experts in reading and mathematics using the Web Alignment Tool. One component of the alignment study is an initial comparative analysis between the test blueprints and specifications for NAEP and each assessment, which occurs prior to the alignment coding sessions in order to inform advance expectations for alignment, as well as to raise potential alignment issues prior to item coding. The comparative analysis also provides an additional view of the alignment between the two assessments, which can be used in interpreting the item alignment analysis results, once completed. Other interim reports will compare the mathematics specifications for NAEP with those for SAT and ACCUPLACER, and the reading specifications for NAEP with those for SAT.

The results of this analysis are intended to provide information about the similarities and differences in assessment design and administration between the 2009 NAEP grade 12 Reading Assessment and the ACCUPLACER Reading Comprehension Test (hereafter NAEP and ACCUPLACER, respectively). WestEd's lead content facilitator for reading conducted this analysis. 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 in 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 ACCUPLACER, the College Board provided specifications containing descriptions and distributions of the five ACCUPLACER item types; 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.[2] To provide context for the analysis, 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

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[1] ACCUPLACER specifications information included in this report is the property of the College Board.
[2] A pilot of the study design with the reading assessments for NAEP and ACCUPLACER was conducted in December 2009. A report on that study was submitted in March 2010; in keeping with the study design, the focus of this report is the comparative analysis.

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.

Purpose and Use

NAEP and ACCUPLACER are designed to measure the reading achievement of students at largely similar ages and grade levels. NAEP is administered to students in the 12th grade; ACCUPLACER is administered to students who are entering or planning to enter college at the freshman level. This includes students who are currently in 12th grade as well as students who have recently graduated from 12th grade. ACCUPLACER is also used for older students entering or re-entering college after a gap of time (College Board, 2009a).

Although assessments measure the reading skills of students at similar ages and stages of academic progress, they serve different purposes for different audiences. ACCUPLACER is primarily used by colleges to help determine the appropriate placement of incoming freshman students in college-level courses and "to determine if developmental classes would be beneficial before the students take college-level work" (College Board, 2009a). Therefore, ACCUPLACER 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, NAEP 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. Each student completes two "item blocks" consisting of two reading passages followed by 10–12 items each. Students are expected to spend approximately one hour taking the test (p.3).

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)

ACCUPLACER is computer adaptive, and designed to be administered online. The test engine selects items for the individual based on the responses to previous questions. The test is untimed, but due to the computer-adaptive format, questions must be answered in the order they are administered.

The College Board makes a variety of presentation, responding, timing/scheduling, and setting accommodations available to eligible students taking College Board assessments. For students with disabilities, these include the following:

- Recorded tests

- Brailled versions of the tests

- Large print versions of the tests

- Calculators

- Interpreters, qualified readers or transcribers

- Screen display enlargement

- Other effective methods of making orally delivered materials available to individuals with hearing impairments (College Board, 2010).

Examinees are also directed to consult with their ACCUPLACER testing centers for information on the specific accommodations available to examinees with documented disabilities.

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 ACCUPLACER, examinees are directed to consult with schools and test centers regarding available resources.

Content Organization of ACCUPLACER and NAEP

Overall, the content organization of the NAEP reading test is considerably more detailed and complex than that of ACCUPLACER, incorporating many more specific topics, skills, and elements.

ACCUPLACER integrates a small number of text structures and features with its reading comprehension skills and organizes its contents within five broad objectives. The following content categories and abbreviated descriptions are taken from the ACCUPLACER test

specifications (College Board, 2009a), with alphabetic codes and formatting added by WestEd for the purposes of this alignment study:[3]

    A. Identifying Main Ideas, referring to the "ability to distinguish the main idea of a passage from supporting ideas or determine the central focus of a passage even when it is not explicitly stated in the passage."

    B. Direct Statements/Secondary Ideas, measuring test-takers' "ability to comprehend specific, explicit information from the passage" and involving "the skills of locating information and recognizing and comprehending key details."

    C. Inferences, measuring test-takers' "ability to comprehend details and ideas that are conveyed implicitly in a passage, and to understand connections and implications."

    D. Applications, measuring test-takers' "ability to understand how the author uses language to achieve his/her purpose in addressing his/her audience" and involving "the related skill of applying information within the bounds of the passage, including the author's assumptions as revealed within the passage, to situations outside the passage."

    E. Sentence Relationships, measuring test-takers' "ability to understand the relationships between two sentences, determining how they function with respect to one another and perceiving patterns of organization."

The ACCUPLACER specifications as shown above are structured as they will be used in the study. The NAEP framework is structured as shown in Appendix A. The content of the 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 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,

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[3] 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.

parody, allegory, and monologue (National Assessment Governing Board, 2009, pp. 13–14, Exhibits 4–5). 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 (National Assessment Governing Board, 2009, p. 20).

In contrast, the ACCUPLACER specifications refer only to "passages" and appear to be intended for informational text only. While the ACCUPLACER objectives do not explicitly exclude literary text, they do not refer to any specific types or genres of text and do not appear to be written with literary text in mind. Furthermore, while not explicitly stated, the ACCUPLACER objectives—particularly Identifying Main Ideas and Direct Statements/Secondary Ideas—appear to be intended for informational text.

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 ACCUPLACER specifications do not provide comparable lists of text structures and features or aspects of the author's craft to be covered by test items. However, ACCUPLACER's broad objectives for student achievement in reading do incorporate some elements and features of texts also included in NAEP's specifications. These include "main ideas" (ACCUPLACER A; NAEP Exhibits 14–15), "secondary ideas" and "key details" (ACCUPLACER B; NAEP Exhibits 14–15), and "tone, mood, style, rhetoric, argumentation, and language use" (ACCUPLACER D; NAEP Exhibits 14–15). While some of the latter elements—"tone, mood, style"—apply to both informational and literary text, the ACCUPLACER objectives do not refer to any elements specific to literary text alone, such as plot, character, theme, setting, dialogue, or the use of symbolism, personification, foreshadowing, or other specifically literary techniques or devices. While the ACCUPLACER objectives do not explicitly exclude literary text, they do not appear to be written with literary text in mind.

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, to informational text, and to 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.

The ACCUPLACER specifications describe five reading comprehension skills, or objectives, to be measured by items on the test. The five objectives are not explicitly described as representing a progression in terms of depth of analysis. However, there are some parallels between some of the content of the NAEP cognitive targets and the ACCUPLACER objectives.

The Locate/Recall cognitive target in the NAEP specifications refers to students identifying "textually explicit information, including main idea or supporting details" and answering assessment items that involve "matching information given in the item to either literal or synonymous information in the text" (National Assessment Governing Board, 2009, p. 47). In contrast to this NAEP cognitive target, which encompasses comprehension of both main and supporting ideas, the ACCUPLACER objectives separate the skill of recognizing "main ideas" (ACCUPLACER A) from that of recognizing "secondary ideas" or "key details" (ACCUPLACER B). As in NAEP's Locate/Recall cognitive target, both ACCUPLACER A and B refer to students' ability to recognize content from a passage even when it has been restated or paraphrased. However, ACCUPLACER A also includes the skill of determining "the central focus of a passage even when it is not explicitly stated," while the Locate/Recall cognitive target in NAEP focuses on the comprehension of "explicit information" (National Assessment Governing Board, 2009, p. 46). In sum, the skills described in ACCUPLACER B and most of the skills described in ACCUPLACER A are very similar to some of those described under the Locate/Recall cognitive target in NAEP. In contrast to the interaction of cognitive targets specific to text types and structures/features in NAEP, however, the ACCUPLACER objectives refer to only a few features of reading passages and do not refer to text types or genres. The Locate/Recall cognitive target category in NAEP, for example, explicitly mentions specific text elements, such as "characters, time, or setting" (National Assessment Governing Board, 2008, p. 36). ACCUPLACER A and B refer only to "ideas," "purposes," and "details" within reading passages.

Parallels also exist between ACCUPLACER C and D and the NAEP cognitive target Integrate/Interpret. ACCUPLACER C, Inferences, describes test takers' ability to "comprehend details and ideas that are conveyed implicitly in a passage" and to "understand connections and implications." ACCUPLACER D, Applications, describes students' ability to "understand how the author uses language to achieve his/her purpose in addressing his/her audience" *and* involves the related skill of applying "information within the bounds of the passage, including the author's assumptions as revealed within the passage, to situations outside the passage." The focus in ACCUPLACER C on items that require test-takers to "perceive connections between ideas" is echoed in the description of the NAEP Integrate/Interpret cognitive target: "As readers integrate information and interpret what they read, they frequently . . . make connections that draw on larger sections of text, often at an abstract level." The skills of understanding an author's language use and applying information from a text in ACCUPLACER D also have parallels in the NAEP Integrate/Interpret cognitive target skills of describing "how an author uses literary devices or text features" and applying "information gained from reading" (National Assessment Governing Board, 2009, pp. 46–47). In contrast to the NAEP cognitive targets, however, the

ACCUPLACER objectives do not refer to any specific text types or genres and refer to a much smaller number of text features. In addition, none of the text features or aspects of language use referred to in the ACCUPLACER objectives are specific to literary text. In contrast, the NAEP objectives for each cognitive target include Integrate/Interpret skills applied to both informational and literary text as well across all text.

There is no overlap between the third cognitive target described by NAEP, Critique/Evaluate, and any of the ACCUPLACER objectives. 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). None of the ACCUPLACER objectives call for students to take a critical stance, or to judge, critique, or evaluate the quality of a text.

There is also no overlap between ACCUPLACER E, Sentence Relationships, and any of the cognitive targets or objectives in the NAEP specifications. This objective focuses on test takers' ability to "understand the relationship between two sentences, determining how they function with respect to one another and perceiving patterns of organization." None of the cognitive targets described in the NAEP specifications are applied to text at the level of sentences.

Vocabulary
In addition to the categories previously described, the NAEP reading test includes vocabulary items intended to measure students' ability to determine "a word's meaning as it relates to passage comprehension" (National Assessment Governing Board, 2009, pp. 55–56). The words used in these items should not be defined explicitly in the text and should be "central to constructing an understanding of a local part of the context of the passage"; therefore, vocabulary items are integrated with the other types of passage-based reading comprehension items in the NAEP assessment.

In addition to these integrated vocabulary 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.

The ACCUPLACER specifications do not include the skill of determining the meaning of vocabulary as used in the context of a passage. The much broader skill described in ACCUPLACER C, Inferences, does call for students to "comprehend details and ideas that are conveyed implicitly in a passage" and to "understand connections and implications," but this higher level of generality does not specifically apply to vocabulary.

Sentence Relationships
Finally, the ACCUPLACER specifications include a topic not covered in the NAEP specifications: "Sentence Relationships." The NAEP specifications do not include the application of any of the cognitive targets to the relationships between sentences.

In summary, the NAEP framework covers most of the content included in the ACCUPLACER specifications; however, the NAEP specifications also include skills and topics not addressed by the ACCUPLACER specifications, including those related to literary text and to the critical evaluation of texts. The NAEP reading framework is considerably more elaborate and detailed

than the ACCUPLACER 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 ACCUPLACER specifications refer only to "passages" and do not refer to any specific types or genres of text. The ACCUPLACER objectives of Identifying Main Ideas and Direct Statements/Secondary Ideas appear to be intended for informational text, and although this is not explicitly stated, they overlap with NAEP objectives related to the comprehension of informational text. The NAEP framework incorporates many more specific topics, skills, and elements than do the ACCUPLACER specifications; it integrates the use of cognitive targets, which is not addressed in the ACCUPLACER specifications; and it includes a focus on assessment of vocabulary knowledge, which the ACCUPLACER specifications do not do. However, the ACCUPLACER specifications include the topic of Sentence Relationships, which is not included in the NAEP framework.

Specificity of Content

The NAEP objectives tend to be more narrowly focused than the ACCUPLACER objectives. 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 (Cognitive Targets), typically focus on a relatively discrete skill and are expressed in a single sentence, e.g., "Infer mood or tone," "Identify figurative language," or "Distinguish facts from opinions" (National Assessment Governing Board, 2009, p. 46). Conversely, the ACCUPLACER specifications provide a total of five objectives, each described in a short paragraph, with several of the objectives describing multiple skills. For example, ACCUPLACER D includes both "understand how the author uses language" and "apply information within the passage." ACCUPLACER A includes "distinguish the main idea of a passage from supporting ideas" and "determine the central focus of a passage even when it is not explicitly stated."

The skills described in most of the ACCUPLACER objectives are broader in scope than those described in the NAEP objectives. ACCUPLACER B, for example, focuses on the comprehension of "specific, explicit information" from a passage, including "key details," "secondary ideas," and "direct statements." Although not as broad in scope as the overall NAEP cognitive target of Locate/Recall (which applies to elements of literary and informational text), ACCUPLACER B is more similar in level of generality to the Locate/Recall cognitive target applied to specifically informational text (NAEP 1.3) than to any of the more specific NAEP objectives (NAEP 1.3.a–1.3.d, for example). Similarly, ACCUPLACER C focuses on students' ability to make "inferences" and to "comprehend details and ideas that are conveyed implicitly in a passage," a broad skill more similar to the Integrate/Interpret cognitive target associated with informational text (NAEP 2.3) than to specific NAEP objectives, such as 2.3.c, "find evidence in support of an argument." ACCUPLACER E, focusing on students' ability to "understand the relationships between two sentences," is more restricted in scope than the other four objectives; however, it has no corollary in the NAEP objectives. In summary, overall, the NAEP objectives are considerably more specific and fine-grained than those of ACCUPLACER in terms of the content described.

In terms of application within and across texts, the NAEP objectives are broader than the ACCUPLACER objectives, which describe skills applied to single passages. In addition, some of the NAEP objectives are broader in their application to both informational and literary text, while the ACCUPLACER objectives, without explicitly excluding literary text, do not refer to any of the characteristic features, structures, or techniques of literature. This is especially true regarding the elements and features of fiction and poetry, two genres included on the NAEP test and addressed by a number of specific NAEP objectives but not addressed in the ACCUPLACER objectives. Those NAEP objectives that apply to literary nonfiction (included as literary text in the NAEP framework) are more similar to the ACCUPLACER objectives (particularly ACCUPLACER D) that are oriented towards informational texts. The lack of reference to any genre-specific literary elements in the ACCUPLACER specifications suggests that ACCUPLACER is not intended to measure students' reading skills as applied to literary text.

Student Performance

The NAEP and ACCUPLACER test specifications describe some similar content, with similar student performance expectations in those content areas they have in common. Both include objectives requiring students to recognize literal or paraphrased main ideas in texts, to locate information and supporting ideas and details, to make inferences and connect ideas across texts, to understand how an author uses language to achieve a purpose, and to apply information from a text to situations outside a text.

ACCUPLACER A (Identifying Main Ideas) and B (Direct Statements/Secondary Ideas) cover part of the content included in NAEP's Locate/Recall cognitive target, particularly as applied to informational text (NAEP 1.3). ACCUPLACER C (Inferences) and D (Applications) cover some but not all of the content of NAEP's Integrate/Interpret cognitive target, again particularly as applied to informational text (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. ACCUPLACER C, for example, describes a very broad skill of making "inferences" and perceiving connections between ideas made—implicitly—in the passage. Many of the more specific NAEP objectives require students to "make complex inferences" and "perceive connections" and thus could be considered to align with this ACCUPLACER objective. However, 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. For example, NAEP 2.3.e requires students to "Determine the importance of information within and across texts." The skill called for would require the ability to make inferences (about what is and is not "important") and "perceive connections between ideas," requiring the application of those abilities to a specific kind of analysis with its own cognitive challenges. Thus, while ACCUPLACER C describes a broad category of skills that would also be addressed in many of the NAEP objectives, it does not define the application of those skills to specific types of tasks or text types/features. While it is possible that some ACCUPLACER items might address the more particular skills described by NAEP, there is nothing in the ACCUPLACER specifications that would require this degree of specificity in the items. In contrast, the NAEP objectives and

specifications are clearly intended to focus on the performance of specific types of interpretative, analytic, and evaluative tasks for both informational and literary text, applying the broader skills described in the cognitive targets to those tasks.

In addition, the NAEP specifications call for multiple-choice as well as short and extended constructed-response items. The language of some of the NAEP objectives reflects this range of possible item formats. For example, to "draw conclusions and provide supporting information" (NAEP 2.3.b), 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" (NAEP 2.2.e) or "Describe or analyze how an author uses literary devices or text features to convey meaning" (NAEP 2.1.d)—reflect opportunities for students to actively construct responses. All items on the ACCUPLACER are multiple-choice, a difference reflected in the verbs used in the objectives, such as "distinguish," "recognize," "understand," "perceive," and "comprehend." 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 that are not addressed by the ACCUPLACER specifications. These include the NAEP objectives specifically 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 the two assessments differ greatly. There are 131 total reading items in the NAEP pool. 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 that passage (National Assessment Governing Board, 2009, p. 28). ACCUPLACER is designed to be a computer-adaptive test, with students completing 20 items that are selected for them during the test based on their ongoing performance. ACCUPLACER is also available in a "fixed form" version with 35 items. At the College Board's request, the two fixed forms were included in this study and consist of 55 items total (35 items per form with 15 items common to both forms).

As discussed above, the NAEP and ACCUPLACER specifications differ in the format of items described. All (100%) of the 55 ACCUPLACER items are multiple-choice items. NAEP includes multiple-choice, short constructed-response, and extended constructed-response items. Intended distribution of items for students is expressed as the percentage of time spent on each item type. For grade 12 reading, the distribution of time to be spent on each specific item type is 40% multiple choice, 45% short constructed-response, and 15% extended constructed-response (National Assessment Governing Board, 2009, p. 28, Exhibit 11). In terms of the number of items in the total NAEP item pool received for review in this study, the distribution is as follows: 58% (76) multiple choice; 32% (42) short constructed-response; and 10% (13) extended constructed-response.

The NAEP specifications make clear that short 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" (National Assessment Governing Board, 2009, 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).

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, or incorrect";

- extended constructed-response items that may have up to four scoring categories: "extensive, essential, partial, or incorrect." (National Assessment Governing Board, 2009, pp. 31–32)

Every constructed-response item in 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. (pp. 59–60)

The ACCUPLACER items are multiple-choice only. The specifications do not include scoring rubrics or other scoring information.

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). Passage selection is guided by a number of methods: "Expert judgment will be the primary method for evaluating and selecting passages for inclusion on the assessment. Additional methods will be passage mapping and vocabulary mapping . . . At least two research-based readability formulas will also be used to gather additional information about passage difficulty" (p. 16).

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).

ACCUPLACER is intended to be "used by college-level academic advisors and counselors to determine course selection" for incoming students. Thus the test is not targeted to a specific grade level but is designed to give college admissions and placement staff information about "the academic readiness of the students coming to you" (College Board, 2009a). The ACCUPLACER specifications do not provide information about the difficulty of reading passages or items.

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 (p. 19). All passages must be from authentic sources and be grade-appropriate and well-written, with "the ability to engage readers" (National Assessment Governing Board, 2009, p. 19). As described earlier, "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" (National Assessment Governing Board, 2009, p. 15).

The ACCUPLACER specifications include very little information about the reading passages used in their test specifications. The passages are described as "short" and "longer," but the range of passage lengths is not specified. (A review of the assessment materials provided for the study, however, shows that the passages used on the ACCUPLACER forms are consistently shorter than those used on NAEP.) Each passage is followed by a single item.

Summary of Content Overlap and Implications for Item Alignment

This section presents a summary of the specifications content overlap identified by the comparative analysis, indicating areas where the assessments appear to have greater or lesser degrees of alignment. The comparative analysis has raised a number of considerations regarding issues that may arise in the alignment study. These issues are described here, along with proposed decision rules to address them, if necessary.

Summary of Content Overlap

Table 1 shows a summary of the overlap between ACCUPLACER objectives and NAEP goals and objectives. For clarity, the elements of the individual ACCUPLACER objectives, originally combined into one paragraph per objective, have been articulated in separate sentences. Parallels between the specific language used in both sets of objectives are in red. The complete comparative analysis tables are included as Appendix A.

Table 1. Overlap of ACCUPLACER and NAEP Objectives

ACCUPLACER	NAEP
ACCUPLACER A. Identifying Main Ideas Distinguish the main idea of a passage from supporting ideas Determine the central focus of a passage even when it is not explicitly stated Select the best summary or main focus of the passage Identify the main or primary purpose of a passage	**NAEP 1. Locate/Recall: Locate or recall textually explicit information within and across texts, which may involve simple inferences as needed for literal comprehension** 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 2.3.a Summarize major ideas
ACCUPLACER B. Direct Statements/Secondary Ideas Comprehend specific, explicit information from the passage Locate information Recognize and comprehend key details (even when paraphrased)	**NAEP 1. Locate/Recall: Locate or recall textually explicit information which may involve simple inferences as needed for literal comprehension** 1.1.a Locate or recall specific information such as definitions, facts, and supporting details in text or graphics 1.3.c Locate or recall causal relations
ACCUPLACER C. Inferences Comprehend details and ideas that are conveyed implicitly in a passage Understand connections and implications Perceive connections between ideas made—implicitly—in the passage Respond to items using the words "imply," "infer," "suggest"	**NAEP 2. Integrate/Interpret: Make complex inferences within and across texts** 2.1.a Describe problem and solution, or cause and effect 2.1.b Compare or connect ideas, perspectives, problems, or situations 2.1.c Determine unstated assumptions in an argument 2.3.a Summarize major ideas 2.3.b Draw conclusions and provide supporting information 2.3.c Find evidence in support of an argument 2.3.d Distinguish facts from opinions 2.3.e Determine the importance of information within and across texts 2.4.a Determine word meaning as used in context
ACCUPLACER D. Applications Understand how the author uses language to achieve his/her purpose Apply information within the bounds of the passage, including the author's assumptions as revealed within the passage, to situations outside the passage (e.g., "The author would agree with which of the following statements?") Answer items asking about tone, mood, style, rhetoric,	**NAEP 2. Integrate/Interpret: Make complex inferences within and across texts** 2.1.d Describe or analyze how an author uses literary devices or text features to convey meaning 2.2.a Interpret mood, tone, or voice 2.3.b Draw conclusions and provide supporting information

ACCUPLACER	NAEP
argumentation, and language use	
ACCUPLACER E. Sentence Relationships Understand the relationships between two sentences, determining how they function with respect to one another and perceiving patterns of organization	N/A

As shown in Table 1, all of the content of ACCUPLACER objectives 1–4 is also represented in the NAEP goals and objectives, with most of the skills described in the ACCUPLACER objectives having fairly explicit parallels in the language of the NAEP specifications. The skill of applying "information within the bounds of the passage . . . to situations outside the passage" in ACCUPLACER D is not explicitly mentioned in the NAEP objectives, but "applying information" is part of the larger description of "Integrate/Interpret" in the NAEP test specifications.

As Table 1 also reflects, many of the NAEP objectives describe more specific skills than those of the ACCUPLACER objectives. These NAEP objectives can be said to align to the more general category of skills described in the ACCUPLACER objectives ("Inferences," for example) but the related ACCUPLACER objectives do not explicitly include NAEP's more specific application of these skills to particular tasks or text elements/features.

Finally, most of the overlap between the two sets of objectives is between ACCUPLACER A–D and the NAEP objectives that apply to informational text or across both informational and literary text. One exception is the alignment between ACCUPLACER D ("understand how the author uses language") and NAEP 2.2.a ("interpret mood, tone, or voice"). The NAEP objective applies specifically to literary text, including literary nonfiction. The ACCUPLACER objective refers to "tone, mood, and style," elements that cross genres and text types.

NAEP objectives not addressed in the ACCUPLACER specifications are listed below:

- 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, such as verse or stanza in poetry or description, chronology, comparison, etc., in literary nonfiction

- 1.3.d Locate or recall organizing structures of texts, such as comparison/contrast, problem/solution, enumeration, etc.

- 2.1.e Describe or analyze how an author uses organizing structures to convey meaning

- 2.1 f Describe or analyze author's purpose

- 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

- 2.2.e Explain how rhythm, rhyme, sound, or form in poetry contribute to meaning

- 3.1.a Judge the author's craft and technique

- 3.1.b Analyze, critique, or evaluate the author's perspective or point of view

- 3.1.c Take different perspectives in relation to a text

- 3.2.a Evaluate the role of literary devices in conveying meaning

- 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

- 3.3.c Determine the quality of counterarguments within and across texts

- 3.3.d Judge the coherence or logic of an argument

One implication of the summary of specifications content overlap found is that NAEP items developed to assess NAEP objectives that were found to have no corresponding ACCUPLACER objective would be unlikely to demonstrate alignment with ACCUPLACER.[4]

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.

Considering different levels of granularity in specifications when reviewing results
As described in detail in this report, the NAEP and ACCUPLACER specifications are written at different levels of granularity. The level of detail and complexity of the NAEP documents provides a degree of specificity in understanding the intent of the framework that is not found in the ACCUPLACER objectives. The broad level at which the ACCUPLACER objectives are written may result in panelists' interpretation of alignment with NAEP items that is not consistent with the actual intent of the assessment as it is operationalized in the test items. An implication of this finding is that the different levels of granularity of the objectives should be taken into consideration when interpreting the alignment results.

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[4] While it is possible that individual NAEP items may diverge from their intended focus and be found to show alignment with ACCUPLACER objectives to which the corresponding NAEP objective was found to not align, such an occurrence is not expected.

<u>Alignment of NAEP items based on literary texts (fiction and poetry) to the ACCUPLACER objectives</u>

Based on the framework and specifications review, it appears that NAEP literary items, with the exception of items based on literary nonfiction, would not align to the ACCUPLACER objectives. The NAEP framework and test specifications describe objectives for students' reading achievement based on the interaction of the three cognitive targets with different text types and genres and their associated features (see National Assessment Governing Board, 2009, Exhibit 16, p. 46). While some of the NAEP objectives apply to all texts, others are described as "genre-specific cognitive targets":

> These distinctions recognize that readers often adopt their strategies and skills to the demands of different kinds of text. The matrix will serve as a reference for item writers as they write items that measure the way students think about the text structures and features of literary and informational text and the aspects of author's craft evident in the passages they read on the assessment. Depending on the kind of text, item writers can write items aligned to the cognitive targets that are applicable to both literary and informational text or to the appropriate genre-specific targets. (National Assessment Governing Board, 2009, p. 45)

The distinctions made in the NAEP framework and test specifications imply that items aligned to "genre-specific targets" are intended to measure distinct types of thinking, rather than generic skills, in response to different kinds of texts. For example, an item based on a fiction passage and aligned to a literary text objective, "Interpret a character's conflicts, motivations, and decisions" (2.2.c), would not be intended to measure skills identical to those students use to "draw conclusions and provide supporting information" (2.3.b), an informational text objective. At a higher level of generality, both objectives are integrated under the broad cognitive target of Integrate/Interpret; similarly, both require students to "understand connections and implications," as in ACCUPLACER C.

To align NAEP literary items to ACCUPLACER objectives that do not refer to literary text or to any of the structures, features, or aspects of author's craft that are specific to literary text would emphasize a relationship at the highest level of generality but mask differences in the genre-specific skills and strategies targeted by the NAEP items. To capture differences in NAEP's "genre-specific targets," the following decision rule is proposed:

Proposed Decision Rule: NAEP items based on literary text and addressing literary text objectives (1.2.a–1.2.e and 2.2.b–2.2.e) will not be considered to align to ACCUPLACER objectives. The one exception is for NAEP items based on literary nonfiction that address skills described in NAEP 2.2.a and ACCUPLACER D. [5]

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[5] During the April NAEP-to-ACCUPLACER alignment study, reading panelists encountered difficulty applying this rule when aligning actual NAEP items to the ACCUPLACER objectives. What had initially appeared to be consistent with the intent of the framework was, in practice, too restrictive. The challenge for panelists lay in determining whether a particular literature-based NAEP item was focused *primarily* on the understanding of a literary genre or on elements of that genre and not on broader reading comprehension skills that could align to the ACCUPLACER objectives. For example, a NAEP fiction-based item asking students to recall an event in a story seemed to focus primarily on students' recall of details rather than understanding of plot. Panelists found that applying this rule would require an analysis of every literary item to determine its primary intent, a process that would be inefficient, unreliable, and could mask some higher-level alignment. Thus, the reading facilitators met with

<u>Non-alignment of NAEP items requiring students to critique or evaluate text (3.1. a–3.3.d) to ACCUPLACER objectives</u>

The language used in the ACCUPLACER objectives does not suggest that any items will require the depth of thinking or the critical stance implied by the NAEP cognitive target of Critique/Evaluate. No ACCUPLACER objective asks students to "judge," "evaluate," "critique," or "analyze" (verbs used in the NAEP 3 objectives), nor do any ACCUPLACER objectives refer to qualities of text or author's craft such as "strength and quality," "coherence, logic, or credibility," etc. Similarity in topics such as "the author's use of language" in ACCUPLACER D, without similarity in the cognitive complexity or depth of skill applied, is not sufficient for alignment.

Proposed Decision Rule: NAEP items asking students to critique or evaluate text will not be aligned to any ACCUPLACER objectives.

<u>Alignment of NAEP vocabulary items requiring students to determine the meaning of words in context to ACCUPLACER C</u>

Although the ACCUPLACER objectives do not specifically address the skill of understanding vocabulary in reading passages, there is enough commonality between the content of ACCUPLACER C, Inferences, and NAEP's vocabulary objective (NAEP 2.4.a) to justify aligning NAEP vocabulary items to this ACCUPLACER objective. The NAEP vocabulary objective does not focus on the meaning of individual words in isolation (as in measuring students' knowledge of word definitions). Rather, items addressing this objective require students to show comprehension of word meaning as used in the context of a passage; such items should be "central to constructing an understanding of a local part of the context of the passage" (National Assessment Governing Board, 2009, p. 55). This task requires students to make inferences, to "perceive connections between ideas," and to "understand connections and implications," as in ACCUPLACER C.

Proposed Decision Rule: NAEP items asking students to determine the meaning of a word as used in the context of a passage will be aligned to ACCUPLACER C.

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the project director early in the coding session and refined the rule as noted below, to exclude just two types of NAEP literary items from alignment to ACCUPLACER objectives, thus retaining the genre-specific intent of the NAEP objectives when it was appropriate:

> The ACCUPLACER objectives will be interpreted as not including items addressing the literary element of theme in fiction and poetry or items addressing the unique literary characteristics of poetry (rhythm, rhyme, meter, verse and stanza, sound devices, etc.).

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

NAEP Reading	ACCUPLACER 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. Direct Statements/Secondary Ideas: These items measure test-takers' ability to comprehend specific, explicit information from the passage and involve the skills of locating information and recognizing and comprehending key details (even when paraphrased). A note on paraphrase: Main Idea questions may require test-takers to recognize a paraphrase of a main idea or summary; Direct Statements/Secondary Idea questions may require test-takers to recognize a paraphrase of a secondary idea or detail. There is no overlap between the two categories: to repeat, each item belongs to one and only one category.	ACCUPLACER B is similar to NAEP 1.1.a in asking students to use skills of "locating information and recognizing and comprehending key details (even when paraphrased)." ACCUPLACER B is different in not specifically including the skill of making "simple inferences." NAEP 1.1.a is broader in its potential application "across texts" while ACCUPLACER B refers to "a passage."
1.1. Locate or recall textually explicit information and make simple inferences within and across *both literary and informational texts*		No reference to text types in ACCUPLACER.
1.1.a. Locate or recall specific information such as definitions, facts, or supporting details in text or graphics	B. Direct Statements/Secondary Ideas	ACCUPLACER B is similar to NAEP 1.1.a in asking students to use skills of "locating information and recognizing and comprehending key details (even when paraphrased)." NAEP 1.1.a asks students to locate and recall "definitions, facts, or supporting details." The inclusion of "simple inferences" at the related NAEP goal level (1.1.a) clearly allows the NAEP objective to include items that paraphrase "definitions, facts, or supporting details." NAEP 1.1.a is broader than ACCUPLACER B in encompassing skills applied "across texts" at the goal level while ACCUPLACER B refers to "a passage." The NAEP objective also applies to both literary and informational text. The ACCUPLACER objective does not exclude literary text but appears geared towards informational text.
1.2. Locate or recall textually explicit information and make simple inferences within and across *literary texts*		No ACCUPLACER objectives refer to literary text.
1.2.a. Locate or recall character traits		

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
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, such as verse or stanza in poetry or description, chronology, comparison, etc., in literary nonfiction		
1.3. Locate or recall textually explicit information and make simple inferences within and across *informational texts*	B. Direct Statements/Secondary Ideas	See NAEP 1 note.
1.3.a. Locate or recall the topic sentence or main idea	A. Identifying Main Ideas: These items measure test-takers' ability to distinguish the main idea of a passage from supporting ideas OR determine the central focus of a passage even when it is not explicitly stated in the passage. This latter skill often involves the recognition of paraphrase; in short, test-takers must select the option that represents the best summary or main focus of the whole passage, often restated in terms that are not present in the passage. This category includes items that ask test-takers to identify the main or primary purpose of a passage.	ACCUPLACER A is similar to NAEP 1.3.a in that it includes items that ask students to locate or recall the main idea as explicitly stated in a passage or in a close paraphrase of the explicit statement. ACCUPLACER A is broader than NAEP 1.3.a in including items that ask students to identify the author's purpose. NAEP 1.3.a is broader in that the skill described may be applied "across texts."
1.3.b. Locate or recall the author's purpose	A. Identifying Main Ideas	ACCUPLACER A is similar to NAEP 1.3.b in that it includes items that ask students to identify the author's purpose based on explicit content in the passage. ACCUPLACER A is broader than NAEP 1.3.b in also including the skill of identifying the main idea. NAEP 1.3.b is broader in its possible application "across texts."

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
1.3.c. Locate or recall causal relations	A. Identifying Main Ideas or B. Direct Statements/Secondary Ideas	The skill of locating or recalling "causal relations" could be covered under ACCUPLACER A if the causal relations in a text represent the "main idea" or "main focus" of a passage. They could be covered by ACCUPLACER B if the causal relations represent "secondary details." The NAEP objective is more specific than either ACCUPLACER objective in focusing only on "causal relations" and broader in its potential application to multiple texts.
1.3.d. Locate or recall organizing structures of texts, such as comparison/contrast, problem/solution, enumeration, etc.		
2. Integrate/Interpret: Make complex inferences within and across texts	C. Inferences: These items measure test-takers' ability to comprehend details and ideas that are conveyed implicitly in a passage, and to understand connections and implications. Most inference items include the key words "imply," "infer," or "suggest." They are restricted to asking only about information within the bounds of the passage (in contrast to Application items, which we will discuss in a minute). Inference items should not be mere paraphrases of key details (those would be classified as Direct Statements/Secondary Ideas); they should require test-takers to perceive connections between ideas made—implicitly—in the passage. D. Applications: These items measure test-takers' ability to understand how the author uses language to achieve his/her purpose in addressing his/her audience AND involves the related skill of applying information within the bounds of the passage, including the author's assumptions as revealed within the passage, to situations outside the passage (e.g., "The author would agree with which of the following statements";	There is some overlap between NAEP 2 and both ACCUPLACER C and D. ACCUPLACER C focuses on making "inferences" and perceiving "connections between ideas" within text. NAEP 2 calls for students to make "complex inferences." ACCUPLACER D includes the skill of understanding "how an author uses language to achieve his/her purpose," a skill related to interpretation in NAEP 2. However, NAEP 2 is broader in its application to both literary and informational text and across multiple texts.

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
	"The author would continue the passage by elaborating on which point"). Applications items include items asking about tone, mood, style, rhetoric, argumentation, and language use.	
2.1. Integrate/Interpret: Make complex inferences within and across *both literary and informational texts*		No reference to text types in ACCUPLACER.
2.1.a. Describe problem and solution, or cause and effect	C. Inferences	ACCUPLACER C items "should require test takers to perceive connections between ideas made—implicitly—in the passage." The "problem and solution, or cause and effect" described in NAEP 2.1.a are examples of relationships between ideas in a text. Both the NAEP objective and ACCUPLACER C call for students to make inferences—that is, to go beyond what is implicitly conveyed rather than explicitly stated in a passage. The NAEP objective is more specific in focusing on these two types of conceptual relationships, while ACCUPLACER C is a broader objective, encompassing inferences about many types of connections between ideas in a text.
2.1.b. Compare or connect ideas, perspectives, problems, or situations	C. Inferences	ACCUPLACER C items "should require test takers to perceive connections between ideas." NAEP 2.1.b is very similar in calling for students to "compare or connect ideas" in a text. Both the NAEP objective and ACCUPLACER C call for students to make inferences—that is, to go beyond what is explicitly conveyed in a passage.
2.1.c. Determine unstated assumptions in an argument	C. Inferences	ACCUPLACER C calls for students to comprehend ideas that are "implicit" in a text. NAEP 2.1.c calls for students to "determine unstated assumptions in an argument," a form of implicit ideas as described in ACCUPLACER C. The NAEP objective is more specific in focusing on this category of implicit content, while the ACCUPLACER objective is much broader.
2.1.d. Describe or analyze how an author uses literary devices or text features to convey meaning	D. Applications	ACCUPLACER D includes the skill of understanding "how the author uses language to achieve his/her purpose." This would include an author's use of literary devices to convey meaning, as in NAEP 2.1.d. ACCUPLACER D is a more broadly stated objective. It also includes the skill of applying information from a passage to a situation outside the passage. The NAEP objective is more specific in its focus on the use of language to convey meaning.

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
2.1.e. Describe or analyze how an author uses organizing structures to convey meaning		
2.1.f. Describe or analyze author's purpose		
2.2. Integrate/Interpret: Make complex inferences within and across *literary texts*		
2.2.a. Interpret mood, tone, or voice	D. Applications	ACCUPLACER D includes the skill of understanding mood, tone, and "style." The NAEP objective is focused specifically on literary text, including literary nonfiction. The broader ACCUPLACER objective does not specify text type and does not refer to any features/elements that are specific to literary text alone. However, the elements of "mood, tone, and style" can be found in both nonfiction and literary texts.
2.2.b. Integrate ideas to determine theme	See notes	ACCUPLACER C includes the understanding of "details and ideas" and "implications and connections" in a passage. The word "theme" is not used; the objective refers to "details and ideas" but not to any literary features. There is some parallel between the skill of "integrating ideas to determine theme" in NAEP 2.2.b, which involves making complex inferences across a passage, and "perceiving connections between ideas" in ACCUPLACER C. However, the NAEP objective is specifically focused on "theme" in literary text, while none of the ACCUPLACER objectives refer to theme or to literary text. The NAEP test specifications describe the "genre-specific cognitive targets for literary and informational text" as recognizing "that readers often adopt their strategies and skills to the demands of different kinds of text" (p. 45). This implies that even when skills are similar at the more general level, they may differ significantly in their application to a given text type. Note that the skill of determining "the central focus of a passage even when not explicitly stated" in ACCUPLACER may appear similar to "determine theme" in NAEP 2.2.b. However, "central focus" is more like a topic than a "theme"; "integrating ideas to determine theme" in a literary text would typically require more in-depth thinking and complex inferences.
2.2.c. Interpret a character's conflicts, motivations, and decisions		
2.2.d. Examine relations between or among theme, setting, plot, or characters		

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
2.2.e. Explain how rhythm, rhyme, sound, or form in poetry contribute to meaning		ACCUPLACER D refers to the skill of understanding an author's use of language to achieve a purpose. However, no language used in ACCUPLACER D refers to poetry or to the literary devices specific to poetry, such as "rhythm" and "rhyme." NAEP 2.2.e is highly specific, referring only to the use of such literary devices in poetry. Although there may be a relationship between the skills described at a very general level, the two objectives are too different in their level of specificity to be comparable.
2.3. Integrate/Interpret: Make complex inferences within and across *informational texts*	C. Inferences and D. Applications	NAEP 2.3 is similar to ACCUPLACER B in describing a broad category of skills: making inferences within texts. NAEP 2.3 is broader in applying to multiple texts. ACCUPLACER D also describes some skills encompassed by NAEP 2.3 but is more specific in its focus on author's use of language and applying information.
2.3.a. Summarize major ideas	A. Identifying Main Ideas or C. Inferences	ACCUPLACER A includes items in which students are asked to recognize the best summary of main ideas based on explicit content from a text, often (though not always) stated in "terms that are not present in the text." In this way, ACCUPLACER A appears to overlap with NAEP 2.3.a; both may include items asking students to recognize the best summary of the (explicitly conveyed) main idea of a passage, expressed in language that differs from that in the passage. However, the skill described in NAEP 2.3.a must go beyond recall (requiring "complex inferences"), while ACCUPLACER A appears to encompass both recall items and items going beyond recall (asking students to recognize paraphrased main ideas, different enough from the terms of the text to require some degree of interpretation). ACCUPLACER C includes the skill of inferring ideas (presumably including implied main ideas) that are implicit in passages. Although broader in scope than 2.3.a (which focuses only on "main ideas"), ACCUPLACER C is more consistent with NAEP 2.3.a in emphasizing skills beyond recall or recognition of paraphrase.
2.3.b. Draw conclusions and provide supporting information	C. Inferences or D. Applications	Both NAEP 2.3.b and ACCUPLACER require students to make inferences from information within the text. However, NAEP 2.3.b focuses on a much more specific skill. The skill of "applying information" in a passage to "situations outside a passage" would typically require "drawing a conclusion." Although not identical, these skills are closely related.

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
2.3.c. Find evidence in support of an argument	C. Inferences	Determining which evidence supports an argument would involve inferring "details and ideas" and/or "connections and implications," as in ACCUPLACER C. However, NAEP 2.3.e is more specific than ACCUPLACER C.
2.3.d. Distinguish facts from opinions	C. Inferences	Distinguishing facts and opinions is a skill that typically involves making inferences, as in ACCUPLACER C. However, NAEP 2.3.d is much more specific.
2.3.e. Determine the importance of information within and across texts	C. Inferences	Same as 2.3.d above, although NAEP 2.3.e has more potential breadth in its application across texts.
2.4. Integrate/Interpret: Apply understanding of vocabulary to comprehension of *both literary and informational texts*		
2.4.a. Determine word meaning as used in context	C. Inferences	This skill could be considered a type of inference as described in ACCUPLACER C. However, no ACCUPLACER objective specifically addresses vocabulary. The only overlap between the skills described is at a very high level of generality.
3. Critique/Evaluate: Consider text(s) critically		ACCUPLACER D focuses on the skill of "understanding" how an author uses language to achieve his or her purpose. The objective does not refer to evaluating or critiquing the effectiveness of an author's craft (or how well an author uses his or her craft). The skills described in NAEP objectives 3.2.a–3.2.d and 3.3.a–3.3.e appear to call for a greater degree of cognitive complexity than those described in ACCUPLACER D.
3.1. Critique/Evaluate: Consider *both literary and informational texts* critically		
3.1.a. Judge the author's craft and technique		
3.1.b. Analyze, critique, or evaluate the author's perspective or point of view		No ACCUPLACER objective describes the skill of critiquing or evaluating text. That is, no ACCUPLACER objective requires students to consider text critically or to form a judgment about the effectiveness or quality of the text or of the author's craft.
3.1.c. Take different perspectives in relation to a text		
3.2. Critique/Evaluate: Consider *literary text* critically		
3.2.a. Evaluate the role of literary devices in conveying meaning		

NAEP Reading	ACCUPLACER Reading	Similarities and Differences
3.2.b. Determine the degree to which literary devices enhance a literary work		
3.2.c. Evaluate a character's conflict, motivations, and decisions		
3.3. Critique/Evaluate: Consider *informational text* critically		
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		
3.3.c. Determine the quality of counterarguments within and across texts		
3.3.d. Judge the coherence or logic of an argument		
N/A	E. Sentence Relationships: These items measure test-takers' ability to understand the relationships between two sentences, determining how they function with respect to one another and perceiving patterns of organization.	

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.

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 in the full NAEP reading framework. See examples below.

   Literary Devices/Aspects of Author's Craft: Exaggeration, figurative language (simile, metaphor, symbolism), imagery, connotation, personification, irony, foreshadowing, flashback, comic relief, and dialogue.

   Rhetorical Structures/Author's Craft: Parallel structure, repetition, quotations, analogy, emotional appeal, paradox, contradictions, sarcasm, and irony.

   Text Features: Titles, headings, charts and graphs, italics, bold text, and illustrations.

5) The term "organizing structures" in objectives 1.3.d and 2.1.e will be interpreted as referring to the organizational structures represented in Exhibits 3 and 4 (comparison, chronology, cause/effect, description, problem/solution, etc.). These objectives will also be interpreted as referring to an author's organization of a larger unit of text (i.e., a paragraph or whole passage), not to the relationship between two sentences.

6) Objective 2.2.c will be interpreted as including the interpretation of character traits or feelings.

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.

ACCUPLACER READING FRAMEWORK FOR ALIGNMENT: DECISION RULES

1) The ACCUPLACER objectives will be interpreted as *not* including the skill of critiquing or evaluating text.

2) ACCUPLACER C may be interpreted as including items asking students to determine the meaning of a word as used in the context of a passage.

3) The ACCUPLACER objectives will be interpreted as not including items addressing the literary element of theme in fiction and poetry or items addressing the unique literary characteristics of poetry (rhythm, rhyme, meter, verse and stanza, sound devices, etc.).

4) ACCUPLACER objectives may be interpreted as including items based on literary nonfiction.

5) ACCUPLACER D may be interpreted as including items addressing mood, tone, or style or an author's use of language.