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**Comparing the  
Achievement of  
Nations and  
Students**

## Introduction

Since colonial times, Americans have seen literacy as an essential requirement for citizens in a democracy. In the 20th century, the American people have shown a continuing concern for improving the literacy levels both of students in school and of adults. The U.S. government regularly measures the reading skills of our school-age population and takes a similar, though less frequent, interest in the literacy levels of adult Americans.

The results of these studies are not always encouraging. The National Assessment of Educational Progress (NAEP) has tracked the reading performance of students periodically since 1969. Its 1992 national report concludes that while most students at grades 4, 8, and 12 have mastered basic competencies, too few have reached levels likely to be required for the 21st century work place.<sup>3</sup> The results of the National Adult Literacy Study (NALS) are no more encouraging. Large percentages of adults demonstrate limited skills that may restrict their opportunities for gaining access to and achieving in many occupations.<sup>4</sup>

The information from the IEA International Reading Literacy Study, however, seems to contradict NAEP's finding about the reading abilities of American students. On all three dimensions of reading literacy included in the study (narrative, expository, and documents), American students are either second among the nations or their scores are not significantly different from the scores of students from other advanced nations. (Analyses reporting international comparisons are available in several publications.<sup>5</sup>)

## Organization of This Report

Although we begin with international comparisons, the primary focus of *Reading Literacy in the United States: Findings From the IEA Reading Literacy Study* is on the reading comprehension of 4th and 9th grade American students. The report follows three separate lines of inquiry. In the first, we compare the performance of American students on the IEA Reading Literacy Test to that of students in other nations. Because our students did better than might have been expected given U.S. performance on other international comparative assessments and reports from the U.S.-only National Assessment of Education Progress, we looked at differences between the test instruments in order to explain the apparent discrepancy. In addition to looking at comparisons across nations, the comparisons were extended to determine whether all sectors of our student population demonstrate the

same high levels of literacy. Our second line of inquiry focuses on the relationships between reading comprehension and aspects of family, schooling, and community. Using complex statistical procedures, we more finely examine the complex relationship among the variables that may have an impact on the development of reading comprehension skills. Finally, in the third section, we examine the nature of reading instruction in American classrooms so that we might present a quick snapshot of the current state of the art in instruction. In this manner, we create three separate complementary pictures of reading comprehension and instruction in the United States.

### International Comparisons

Charts that rank nations according to the achievement levels of their students capture much public attention, probably because they touch on matters of national pride and arouse concerns about the nation's reserves of human capital. The International Association for the Evaluation of Educational Achievement has been the primary source of such comparisons over the past 30 years. In most, the United States has lagged behind other nations, especially in mathematics and science.

### Dimensions of the IEA Reading Literacy Study

In 1989, popular interest in the reading skills of American students, and the question of where we stood relative to other nations with regard to reading literacy, led the United States government to join 31 other nations in an international study of reading literacy sponsored by IEA. **Exhibit 1** lists the participating nations.\*

**Assessing Reading Literacy.** To ensure fairness in international comparisons, IEA studies begin with a search for curricular elements common to the participating nations. Achievement tests are then developed based on these common elements. This process is designed to ensure that each nation's students have an equal chance to demonstrate their skill.

Within this context, IEA defined reading literacy in the following way:

*. . . the ability to understand and use those written language forms required by society and/or valued by the individual.*<sup>6</sup>

\*Although 32 countries participated in the study as a whole, only 30 countries collected data related to 9-year-olds (4th grade in the United States) and only 27 provided usable data. Similarly, 32 nations collected data related to 14-year-olds (9th grade in the United States), but only 31 nations entered the analyses.

Exhibit 1	
Participating Countries	
Belgium (French)	Netherlands
Botswana	New Zealand
Canada (British Columbia)	Nigeria
Cyprus	Norway
Denmark	Philippines
Finland	Portugal
France	Singapore
Germany (East)	Slovenia
Germany (West)	Spain
Greece	Sweden
Hong Kong	Switzerland
Hungary	Thailand
Iceland	Trinidad & Tobago
Indonesia	United States
Ireland	Venezuela
Italy	Zimbabwe

Table 1

Countries Ranked by 4th Grade Reading Achievement: Total Score

Country	Mean	Standard Error
Finland	569	3.4
United States	547	2.8
Sweden	539	2.8
France	531	4.0
Italy	529	4.3
New Zealand	528	3.3
Norway	524	2.6
Iceland*	518	0.0
Hong Kong	517	3.9
Singapore	515	1.0
Switzerland	511	2.7
Ireland	509	3.6
Belgium (French)	507	3.2
Greece	504	3.7
Spain	504	2.5
Germany (West)	503	3.0
Canada (British Columbia)	500	3.0
Germany (East)	499	4.3
Hungary	499	3.1
Slovenia	498	2.6
Netherlands	485	3.6
Cyprus	481	2.3
Portugal	478	3.6
Denmark	475	3.5
Trinidad/Tobago	451	3.4
Indonesia	394	3.0
Venezuela	383	3.4

\*Iceland tested all students, therefore no standard error was calculated.

- Mean achievement higher than United States
- Mean achievement equal to United States
- Mean achievement lower than United States

SOURCE: Elley, Warwick B., *How in the World Do Students Read?*, The Hague: International Association for the Evaluation of Educational Achievement, 1992.

The designers applied this definition of literacy to the three text forms that students most often encounter in school and in everyday life:

- *narrative prose*—text in which the writer tells a story, whether fact or fiction;
- *expository prose*—text in which the writer describes, explains, or otherwise conveys factual information or opinion; and
- *documents*—information displays such as charts, maps, tables, graphs, lists, or sets of instructions.

IEA developed tests for each of the three forms of literacy. Students responded to most questions in a traditional multiple-choice format, although they had to write brief answers to a few questions.\*

**Questionnaires.** The students, along with their teachers and the principals of their schools, also completed questionnaires that sought information on the attributes of families and schools related to these essential skills.\*\*

**Student Populations Sampled.** In each of the 32 participating nations, national samples of classes at the grade level containing the most 9-year-olds and 14-year-olds were selected to take part in the study. The selected classes included students who were all full-time, mainstreamed members of regular classes. The United States tested students in grades 4 and 9 because these grades generally contain 9-year-olds and 14-year-olds. At the 4th grade, we sampled regular classes; at the 9th grade, we sampled English/language arts classes.

**Comparisons with All IEA Participating Countries**

**Tables 1 and 2**, adapted from the IEA international report *How in the World do Students Read?*<sup>7</sup>, show the national averages for 9-year-olds and 14-year-olds, respectively. In each table, countries are ranked in descending order on a measure of overall reading comprehension—one that combines the scores on narrative, expository, and documents comprehension.

\*For a full description of the test instrument, see Chapter 7 of *Reading Literacy in the United States: Technical Report*.

\*\*For a full description of the questionnaires used to collect these data, see Chapter 11 of *Reading Literacy in the United States: Technical Report*.

The message of these tables seems straightforward at first glance: U.S. 4th graders place second after Finland, and our 9th graders place ninth after Finland, France, Sweden, New Zealand, Hungary, Iceland, Switzerland, and Hong Kong. The picture, however, is not as clear cut as it might appear. National means are based on samples of students, not whole student populations,\* and thus have a degree of sampling variation associated with them. When we consider the effect of such sampling variation (as measured by the standard error) on national averages, as well as the very small differences between countries, the ranked differences could be due to such variability rather than to real differences in the achievement of national populations.

Within this context, Finland's 9-year-olds continue to outperform 9-year-olds in the United States, and Sweden's national average is not reliably different from that of the United States. However, the United States does have a national average reliably greater than the remaining countries.

In the case of 14-year-olds, Finland's mean score is reliably greater than that of the United States. But the performance levels of 15 of the 30 remaining countries are not reliably different from that of the United States. The 15 are France, Sweden, New Zealand, Hungary, Iceland, Switzerland, Hong Kong, Singapore, Slovenia, East Germany, Denmark, Portugal, Canada (British Columbia), West Germany, and the Netherlands. This leaves U.S. students outperforming those in the remaining 14 countries: Norway, Italy, Ireland, Greece, Cyprus, Spain, Belgium (French), Trinidad and Tobago, Thailand, Philippines, Venezuela, Nigeria, Zimbabwe, and Botswana.

Since Tables 1 and 2 report the combined scores on narrative, expository, and documents reading comprehension, they may obscure the national differences that occur for each domain. Reading experts believe that the three domains require somewhat different types of reading and thinking. They also assume that national educational systems and cultures may differ in their relative emphasis on each type of reading task.

\*Iceland is an exception; the whole 4th grade population was tested.

Country	Mean	Standard Error
Finland	560	2.5
France	549	4.3
Sweden	546	2.5
New Zealand	545	5.6
Hungary	536	3.3
Iceland	536	0.0
Switzerland	536	3.2
Hong Kong	535	3.7
United States	535	4.8
Singapore	534	1.1
Slovenia	532	2.3
Germany (East)	526	3.5
Denmark	525	2.1
Portugal	523	3.1
Canada (British Columbia)	522	3.0
Germany (West)	522	4.4
Norway	516	2.3
Italy	515	3.4
Netherlands	514	4.9
Ireland	511	5.2
Greece	509	2.9
Cyprus	497	2.2
Spain	490	2.5
Belgium (French)	481	4.9
Trinidad/Tobago	479	1.7
Thailand*	477	6.2
Philippines	430	3.9
Venezuela	417	3.1
Nigeria*	401	—†
Zimbabwe*	372	3.8
Botswana	330	2.0

\*Sampling response rate of schools below 80%  
† Insufficient data to calculate standard error

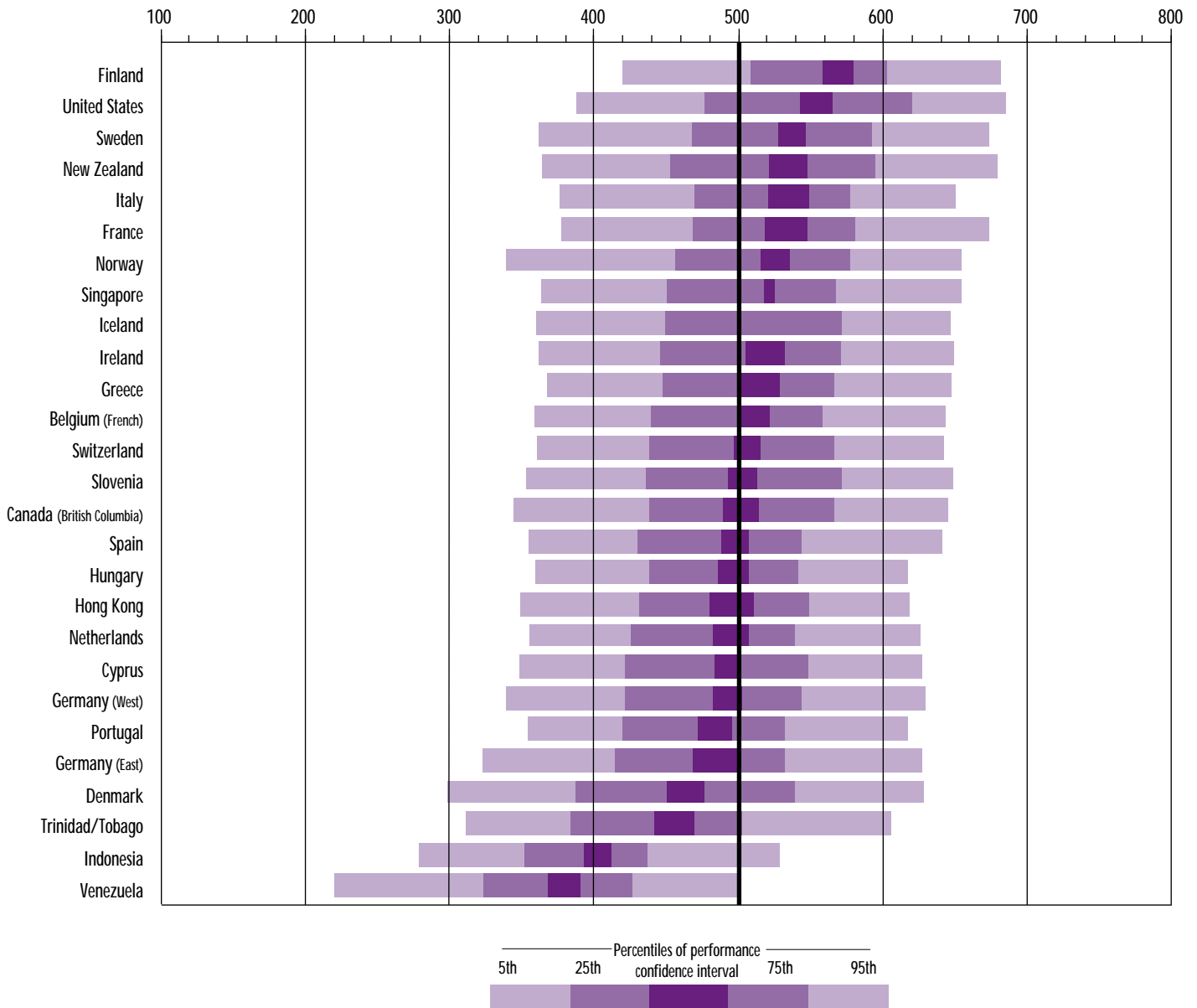
- Mean achievement higher than United States
- Mean achievement equal to United States
- Mean achievement lower than United States

SOURCE: Elley, Warwick B., *How in the World Do Students Read?*, The Hague: International Association for the Evaluation of Educational Achievement, 1992.

To make these differences clear, we reproduce six figures from *How in the World do Students Read?* to show how national rankings differ across the three reading domains. **Figures 1, 2, and 3**

Figure 1

Countries Ranked by 4th Grade Reading Achievement: Narrative Score



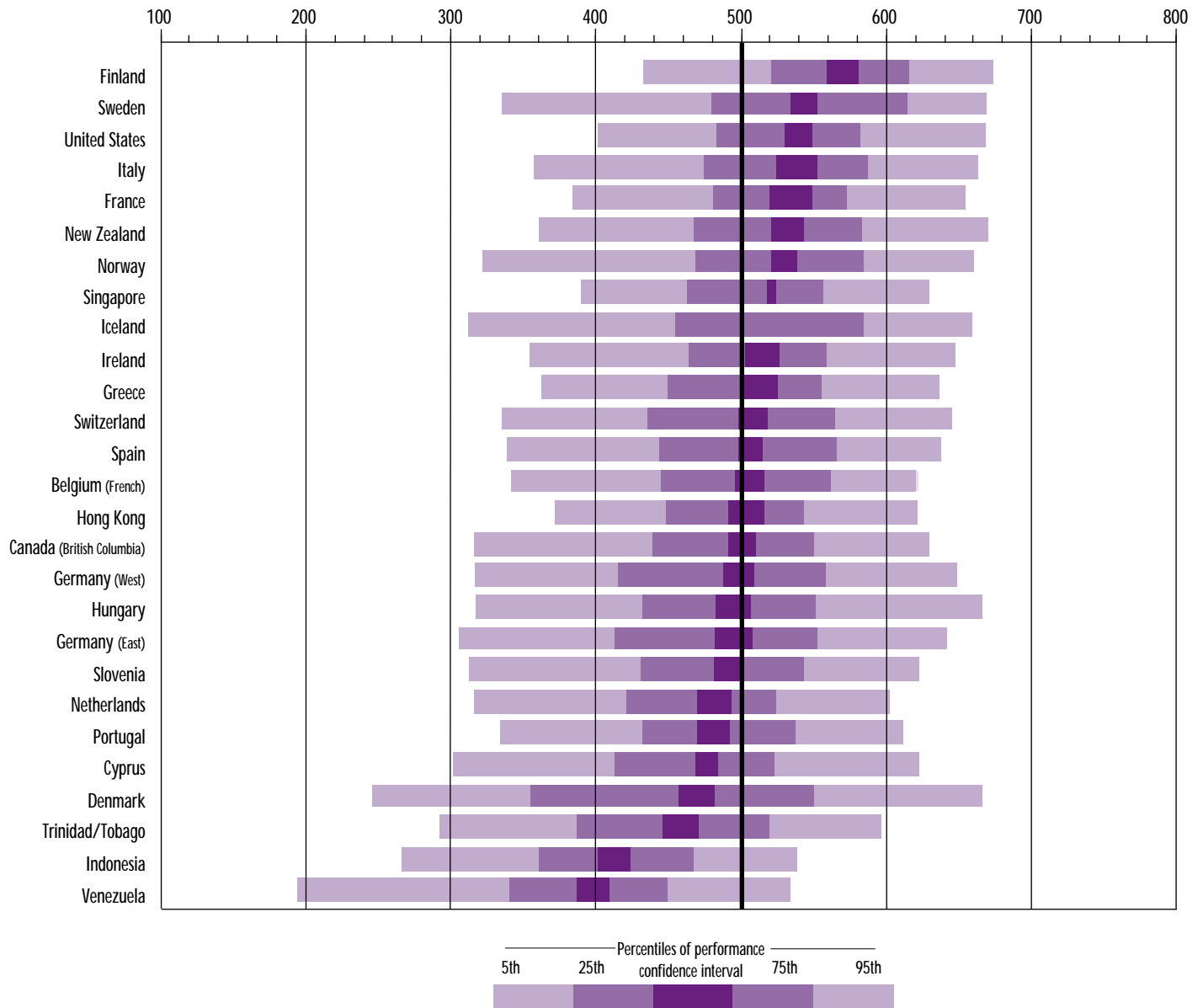
NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Elley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.

rank the reading performance of 9-year-olds for the three domains respectively. **Figures 4, 5, and 6** rank the performance of 14-year-olds for the same three domains.

Figure 2

Countries Ranked by 4th Grade Reading Achievement: Expository Score

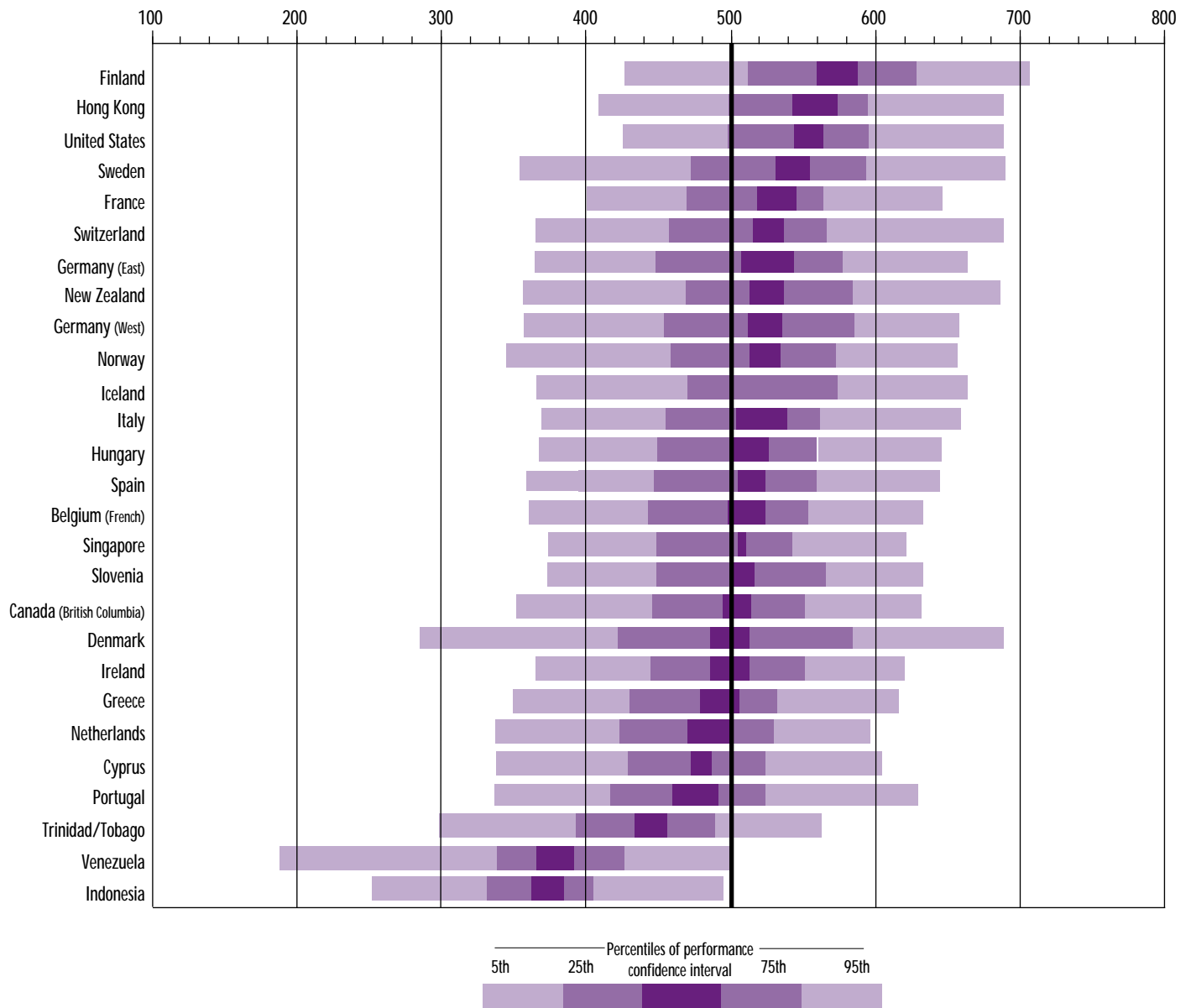


NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Elley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.

Figure 3

Countries Ranked by 4th Grade Reading Achievement: Documents Score



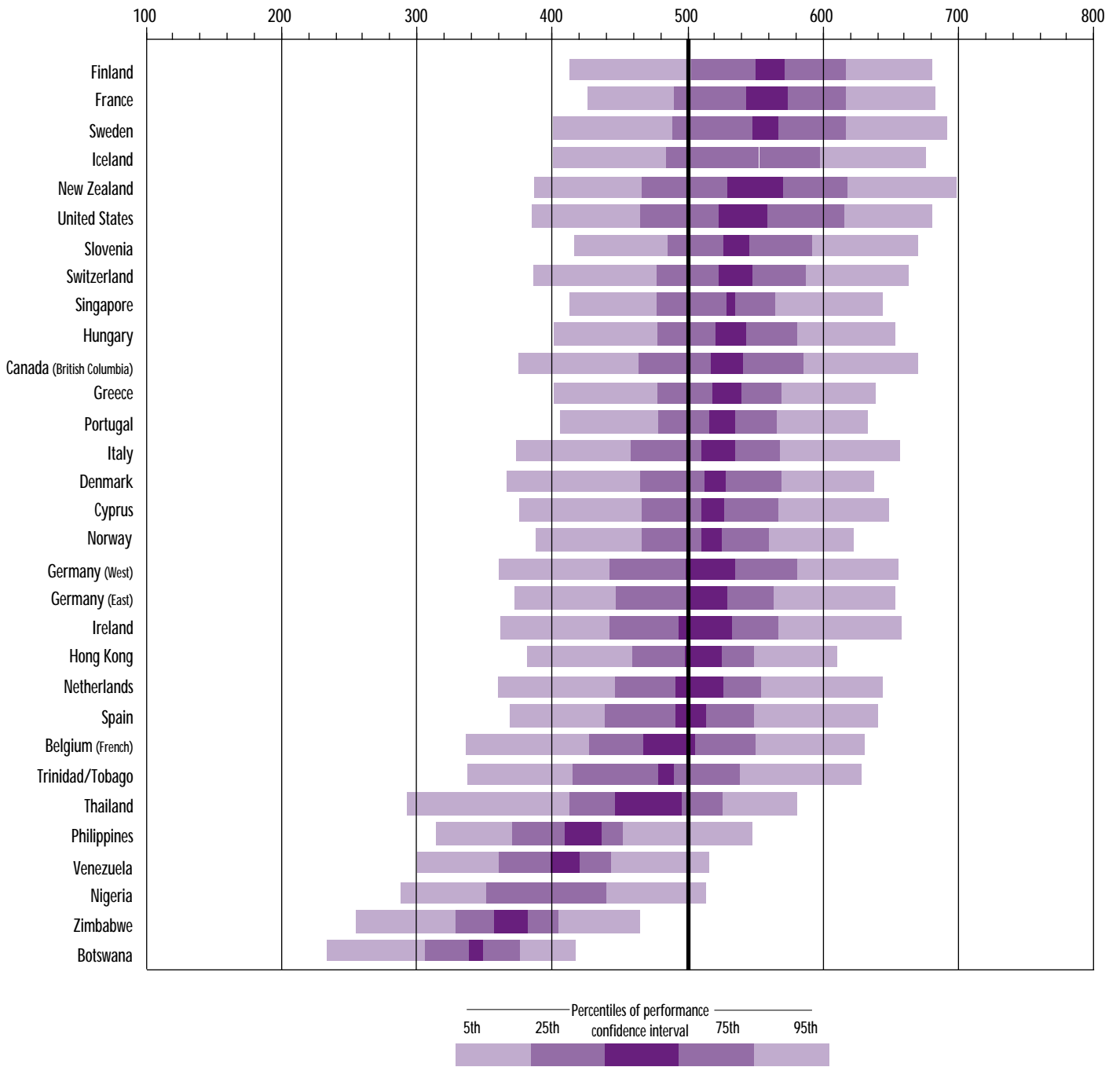
NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Eley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.



Figure 4

Countries Ranked by 9th Grade Reading Achievement: Narrative Score

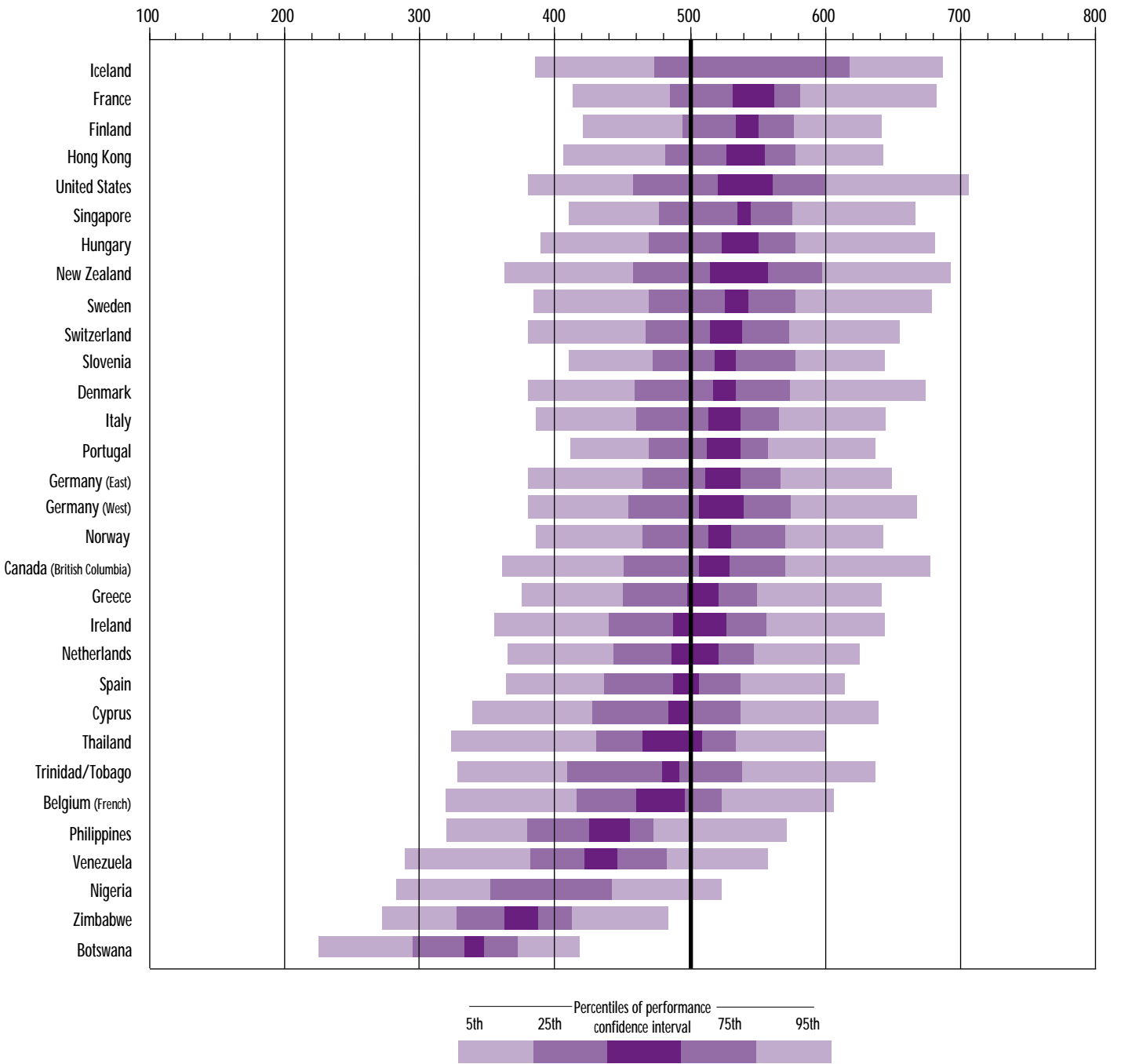


NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Elley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.

Figure 5

Countries Ranked by 9th Grade Reading Achievement: Expository Score

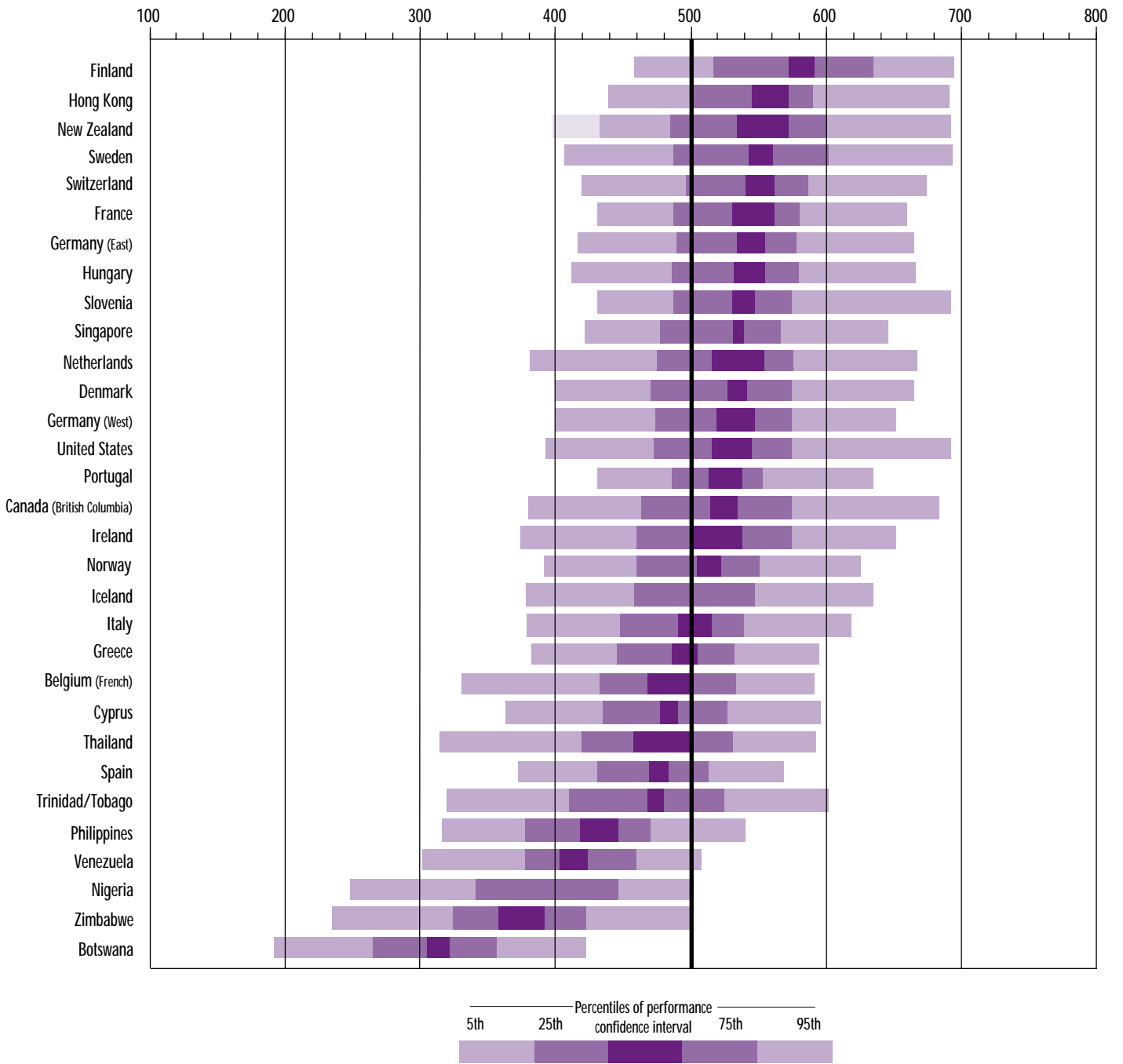


NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Elley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.

Figure 6

Countries Ranked by 9th Grade Reading Achievement: Documents Score



NOTE: The center solid box indicates a confidence interval around the average reading proficiency for a country; 5th, 25th, 75th, and 95th percentiles are indicated by shaded bars.

SOURCE: Eley, Warwick B., *How in the World Do Students Read?* The Hague: International Association for the Evaluation of Educational Achievement, 1992.

Perhaps the most significant points to be gleaned from these six figures are that:

- U.S. 4th graders comprehend narrative text as well or better than students from any other nation except Finland.
- Although U.S. 4th graders appear to place third on expository comprehension, only Finland does better and there is very little difference in our performance and that of Sweden, Italy, France, New Zealand, and Norway.
- While students in Finland do better than the U.S. 4th graders, our students comprehend documents as well as students in Hong Kong and Sweden, and they do better than the students in the 23 other countries included in this ranking.
- U.S. 9th graders do about as well as students from France, Sweden, Iceland, New Zealand, Slovenia, Switzerland, Singapore, Hungary, Canada (British Columbia), Greece, Portugal, and Italy with respect to narrative comprehension, but not as well as those from Finland.
- U.S. 9th graders' expository comprehension ranks equal to that of students in 16 other nations, with 14 countries ranking below the United States in this domain.
- U.S. 9th graders' documents comprehension lags behind that of 9th graders from five other countries (Finland, Hong Kong, New Zealand, Sweden, and Switzerland), but it is not different from that of 11 other countries and exceeds that of the remaining 14 countries.

We cannot explain how these between-nation differences come about, but the overall performance of U.S. students is welcome good news in the face of the bad news about the achievement of American students in other international comparisons. In reading, at least, American students are among the best of the 32 nations involved in the study. With the exception of Finland, no country consistently outperforms the United States.

### **Comparing IEA and NAEP**

In contrast to the good news provided by the IEA study, where American 4th and 9th grade students do well when compared to students from other countries, the picture of American students'

reading proficiency provided by the National Assessment of Educational Progress seems less optimistic. For example, in 1992 NAEP reported that

*. . . For grades 4, 8, and 12, the percentages of students estimated to have met or exceeded the Proficient achievement level were 29, 29, and 40 percent, respectively. Proficient, the central level, represents solid academic performance and competency over challenging subject matter (for the grade level).<sup>8</sup>*

*. . . The Advanced achievement level signifies superior performance beyond Proficient. Very few students at any of the three grades assessed attained the Advanced level—from 3 to 6 percent.<sup>9</sup>*

By 1994, the NAEP picture was slightly worse; the average reading proficiency of 12th grade students declined significantly from 1992 to 1994.<sup>10</sup>

This contrast of good news versus potential “doom and gloom” made us wonder whether IEA and NAEP report and/or measure different things. This question is addressed in the following discussion.

***Differing Points of Comparison.*** One of the first things to consider was whether the data are reported in the same manner across NAEP and IEA. Although both provide descriptions of reading performance of analogous samples of students, the basis for reporting, in fact, differs considerably.

In the case of IEA, reporting is based on comparisons of the performance of groups of students within and across countries. Student performance in one country is compared to that of students in the other participating countries. Or, students in one subgroup within a country are compared to other students in other subgroups within the same country. We look at issues such as mean performance of each country or the distribution of scores within a country as compared to the distribution of scores in other countries. We are always comparing students against students. As such, the point of comparison is a relative rather than an absolute comparison.

Alternatively, much of the NAEP reporting is based on comparisons between actual student performance and desired performance. It is a comparison against an absolute standard or criterion that is defined independently of what students do. As

described in the *NAEP 1992 Reading Report Card for the Nation and the States*, “To carry out its responsibilities, NAGB [the National Assessment Governing Board] developed *achievement levels*, which are collective judgments about how students *should* perform relative to a body of content reflected in the NAEP frameworks. The result is translated onto ranges along the NAEP scale.” As such, the reporting is referenced to a description of the tasks that students are expected to be able to do, or that someone or some group thinks they should do. This is a criterion-referenced comparison.

Success or failure in either context does not necessarily imply success or failure in the other context. Consequently, American students do very well based on the relative comparisons used by IEA, but within the NAEP context they do not do as well as NAGB believes they should be doing.

***Differing Definitions.*** In addition, NAEP and IEA define reading differently. Although their definitions overlap, there are enough differences in emphasis to further explain some of the seeming inconsistencies between NAEP’s and IEA’s findings.

Both IEA and NAEP expect literal comprehension and the development of understanding. Both define parallel domains: narrative prose, expository prose, and documents in the case of IEA; literary experience, to be informed, and to perform a task in the case of NAEP. However, there is a major difference between IEA and NAEP in what students must do to demonstrate their comprehension. While success in IEA depends on reaching and correctly answering more questions directly related to the passage, to reach NAEP’s advanced level, 4th grade students, for example,

*. . . were able to interpret and examine the meaning of text. They summarized information across whole texts, developed their own ideas about textual information, understood some literary devices, and were beginning to formulate more complex questions about text.*<sup>11</sup>

Eighth graders go even further. They

*. . . compared and contrasted information across multiple texts. They could connect inferences with themes, understand underlying meanings, and integrate prior knowledge with text interpretations. They also demonstrated some ability to evaluate the limitations of documents.*<sup>12</sup>

Equally important is the fact that NAEP requires students to generate answers in their own words much more frequently than IEA, which mainly asks students to respond to the test designers' options. Thus the skills required by IEA reading tasks can be seen as a subset of those required by NAEP.

So that the reader might better understand the differences between the test instruments, we have reproduced a passage and its associated questions from both the IEA and NAEP tests. **Exhibit 2**, *Grandpa*, drawn from the IEA 4th grade test, was submitted by the Danes. It is a folk story and describes family relationships. **Exhibit 3**, *Sybil Sounds the Alarm*, a story set during the American Revolution, was drawn from the NAEP 4th grade test. While both sets of items are based on complete stories, the selection from NAEP is a longer, more well-developed story and includes more information that is probably less familiar to the intended student audience.

The questions related to the NAEP passage are also more diverse in nature. As seen in NAEP questions 3 and 7, students must go beyond the information in the passage and compare it to knowledge they have from other sources, even if it is only their own experience, in order to answer the question. Reading experts would point out that because many of these questions have students recall and construct their answers, the students are more likely to be actively engaged in what they have read. In contrast, only the final question associated with *Grandpa* asks that students construct their own response. However, it is important to note that this item was not included in the international scale and was only included in select countries (the United States among them) for separate special analyses.\*

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\*A full discussion of the open-ended IEA items may be found in Chapter 5 of *Methodological Issues in Comparative Educational Studies: The Case of the IEA Reading Literacy Study*.

## A Story on the IEA Test for 4th Graders

## Grandpa

Once upon a time, there was a very old man. His eyes had become weak. His ears were deaf, and his knees would shake. When he sat at the table, he was hardly able to hold the spoon. He spilled his soup on the tablecloth, and he often slobbered.

He lived with his son and daughter-in-law. They also had a small boy who was four years old, so the old man was a grandfather.

His son and his son's wife found it disgusting to see him spilling food at the table. And so they finally ordered him to sit in a corner behind the stove. Here, they served him his food on a small earthenware plate. Grandpa didn't even get enough to satisfy his hunger. He sat there feeling sad. He looked at the table, when the others were eating, and his eyes filled with tears.

Then, one day his shaking hands could not even hold the plate. It fell to the floor and was broken into many pieces. The young wife scolded him. But the grandfather said nothing. He just sighed. Then the young wife bought him a very cheap wooden bowl. Now he had to eat from that.

One day, while they were having dinner, the grandchild sat on the floor and was very busy with some small pieces of wood.

"What are you doing?" asked his father.

"I am making a bowl," the boy answered.

"What is it for?"

"It is for my father and mother to eat from when I grow up."

The man and his wife looked at each other for a long time.

Then they started crying. At once, they asked the old grandpa back to the table, and from then on he always ate with them. After that, even if he sometimes spilled his food, they never said a word about it.

1. What happened when Grandpa sat at the table?
  - A. He always had a good meal.
  - B. His feet would shake.
  - C. He spilled his soup.
  - D. He dropped his plate.
  
2. The son and his wife asked Grandpa to sit behind the stove because
  - A. it was warmer there.
  - B. the table was not big enough for everyone.
  - C. he could not see or hear.
  - D. they did not like to see him eat.



A Story on the IEA Test for 4th Graders (continued)

- 3. Why did the son's wife scold Grandpa?
  - A. He spilled his soup.
  - B. He broke his plate.
  - C. He looked so sad.
  - D. He showed bad manners.
  
- 4. Grandpa was given a new bowl made of wood because
  - A. he wanted such a bowl.
  - B. the family had no more earthenware plates.
  - C. a wooden bowl does not break so easily.
  - D. they boy had made one for him.
  
- 5. How did Grandpa feel when he sat by the stove?
  - A. Bored
  - B. Tired
  - C. Pleased
  - D. Unhappy
  
- 6. The son and his wife cried because
  - A. the boy wanted to make a wooden bowl.
  - B. their father could not eat properly.
  - C. they understood that they too would grow old.
  - D. the wooden bowl was also broken.
  
- 7. Why did the parents decide to ask Grandpa back to the table? Write your answer on the lines below. Make sure you write enough to make your answer clear. You may want to use examples from the story to help explain your answer.

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SOURCE: U.S. Department of Education, National Center for Education Statistics, *Reading Literacy in the United States: Technical Report*. Washington D.C.: 1994.

## A Story on the NAEP Test for 4th Graders

## Sybil Sounds the Alarm

by Drollene P. Brown

A red sky at night does not usually cause wonder. But on the evening of April 26, 1777, the residents of Ludingtons' Mills were concerned. The crimson glow was in the east, not from the west where the sun was setting.

The Ludington family sat at supper, each one glancing now and again toward the eastern window. Sybil, at sixteen the oldest of eight children, could read the question in her mother's worried eyes. Would Henry Ludington have to go away again? As commander of the only colonial army regiment between Danbury, Connecticut, and Peekskill, New York, Sybil's father did not have much time to be with his family. Thudding hooves in the yard abruptly ended their meal. The colonel pushed back his chair and strode to the door. Although Sybil followed him with her eyes, she dutifully began to help her sister Rebecca clear the table.

The girls were washing dishes when their father burst back into the room with a courier at his side.

"Here, Seth," said the colonel, "sit you down and have some supper. Rebecca, see to our weary friend."

Sybil, glancing over her shoulder, saw that the stranger was no older than she. A familiar flame of indignation burned her cheeks. Being a girl kept her from being a soldier!

Across the room, her parents were talking together in low tones. Her father's voice rose.

"Sybil, leave the dishes and come here," he said.

Obediently, she overheard her father as he again spoke to her mother.

"Abigail, she is a skilled rider. It is Sybil who has trained Star, and the horse will obey her like no other."

"That red glow in the sky," Colonel Ludington said, turning now to his daughter, "is from Danbury. It's been burned by the British raiders. There are about two thousand Redcoats, and they're heading for Ridgefield. Someone must tell our men that the lull in the fighting is over; they will have to leave their families and crops again."

"I'll go! Star and I can do it!" Sybil exclaimed. She faced her mother. "Star is sure of foot, and will carry me safely."

"There are dangers other than slippery paths," her mother said, softly. "Outlaws or deserters or even British soldiers may be met. You must be wary in a way that Star cannot."

A lump rose in Sybil's throat. "I can do it," she declared.

Without another word, Abigail Ludington turned to fetch a woolen cape to protect her daughter from the wind and rain. One of the boys was sent to saddle Star, and Sybil was soon ready. When she had swung up on her sturdy horse, the colonel placed a stick in her hand.

As though reciting an oath, she repeated her father's directions: "Go south by the river, then along Horse Pound Road to Mahopac Pond. From there, turn right to Red Mills, then go North to Stormville." The colonel stood back and saluted. She was off!

At the first isolated houses, windows or doors flew open as she approached. She shouted her message and rode on. By the time she reached the first hamlet, all was dark. There were many small houses there at the edge of Shaw's Road, but everyone was in bed. Lights had not flared up at the sound of Star's hoofbeats. Sybil had not anticipated this. Biting her lower lip, she pulled Star to a halt. After considering for a moment, she nudged the horse forward, and riding up to one cottage after another, beat on each door with her stick.

"Look at the sky!" she shouted. "Danbury's burning! All men muster at Ludington's!"

At each village or cluster of houses, she repeated the cry. When lights began to shine and people were yelling and moving about, she would spur her horse onward. Before she and Star melted into the night, the village bells would be pealing out the alarm.

Paths were slippery with mud and wet stones, and the terrain was often hilly and wooded. Sybil's ears strained for sounds of other riders who might try to steal her horse or stop her mission. Twice she pulled Star off the path while unknown riders passed within a few feet. Both times, her fright dried her mouth and made her hands tremble.

By the time she reached Stormville, Star had stumbled several times, and Sybil's voice was almost gone. The town's call to arms was sounding as they turned homeward. Covered with mud, tired beyond belief, Sybil could barely stay on Star's back when they rode into their yard. She had ridden more than thirty miles that night.

In a daze, she saw the red sky in the east. It was dawn. Several hundred men were milling about. She had roused them in time, and Ludington's regiment marched out to join the Connecticut militia in routing the British at Ridgefield, driving them back to their ships on Long Island Sound.

Afterward, General George Washington made a personal visit to Ludingtons' Mills to thank Sybil for her courageous deed. Statesman Alexander Hamilton wrote her a letter of praise.

Two centuries later visitors to the area of Patterson, New York, can still follow Sybil's route. A statue of Sybil on horseback stands at Lake Gleneida in Carmel, New York, and people in that area know well the heroism of Sybil Ludington. In 1978, a commemorative postage stamp was issued in her honor, bringing national attention to the heroic young girl who rode for independence.

From Cobblestone's September, 1983 issue: "Patriotic Tales of the American Revolution." Copyright 1983, Cobblestone Publishing Inc., Peterborough, NH 03548. Reprinted by permission of the publisher.

## A Story on the NAEP Test for 4th Graders (continued)

1. What are the major events in the story?

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2. Sybil's father thought that she

- |                                    |  |
|------------------------------------|--|
| a. was obedient but forgetful      | c. could lead the troops against the British |
| b. was courageous and a good rider | d. could easily become angry                 |

3. Could a similar story take place today? Tell why or why not.

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4. Sybil's ride was important mainly because

- |                                       |   |
|---------------------------------------|---|
| a. she rode about 30 miles            | c. the British lost at Ridgefield           |
| b. she was exhausted when it was over | d. her mother allowed her to ride after all |

5. The red glow that the Ludingtons watched during supper was caused by

- |                   |                      |
|-------------------|----------------------|
| a. the sunset     | c. a warning bonfire |
| b. a severe storm | d. a burning town    |

6. How does the author show the excitement and danger of Sybil's ride?

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7. If you had just finished a ride like Sybil's how would you feel and why?

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8. The information about the statue and the stamp helps to show that

- |   |  |
|---|--|
| a. people today continue to recognize and respect Sybil's bravery | c. the author included minor details               |
| b. people were surprised that George Washington honored her       | d. heroes are honored more now than they were then |

9. Why do you think the author called this story "Sybil Sounds the Alarm"?

Use what you learned in the passage to support your answer.

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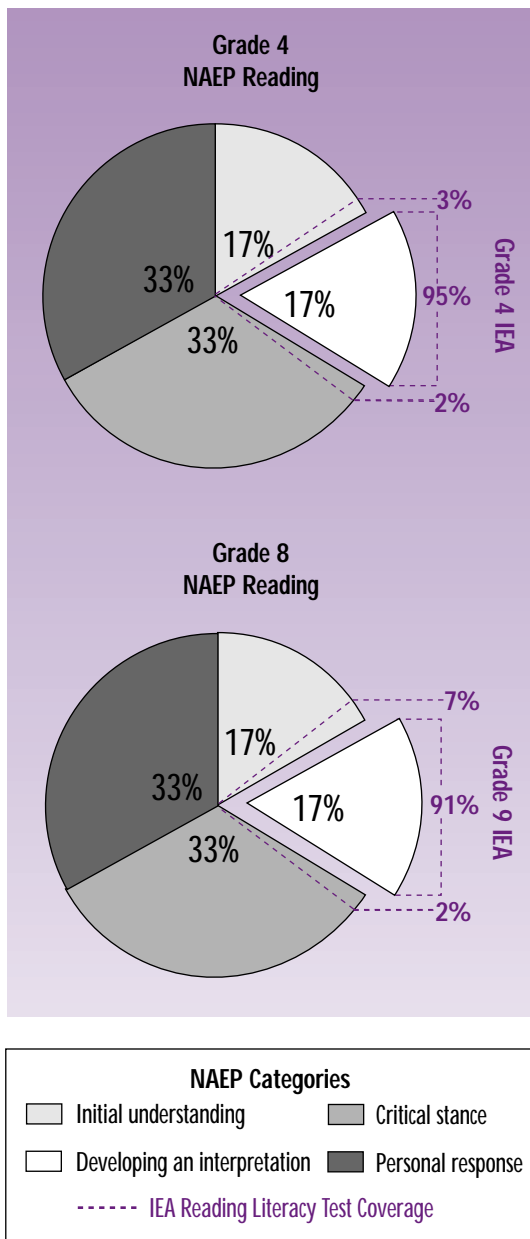
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Figure 7

IEA and NAEP Item Overlap



SOURCE: U.S. Department of Education, National Center for Education Statistics, *Reading Literacy in the United States: Technical Report*. Washington D.C.: 1994.

**Differing Emphases.** To explore the differences between the IEA and NAEP tests systematically, a committee of experts categorized IEA items according to NAEP specifications. Their findings are represented in **Figure 7**, which shows clearly that IEA test items tend to be located in only one of the NAEP categories—developing an interpretation. More than 90 percent of the IEA items assess tasks seen in only 17 percent of NAEP items. Further, virtually all the IEA items are aimed solely at literal comprehension and interpretation. Items of that kind make up only one-third of NAEP reading assessments.

As compared to the NAEP test, the IEA test measures only basic reading processes. NAEP requires students to demonstrate these basic skills as well, but also asks for evidence of more complex levels of understanding. This difference in emphasis between the two tests is further illustrated by consideration of the distribution of items on a difficulty scale. Ideally a test would include items at all points where students can be expected to perform. In this way, we could clearly order the performance of students. In the IEA test items did not cover the entire expected ability range. Many American students got every item correct. Consequently their score on the IEA Reading Literacy Test was extrapolated. In contrast, the range of item difficulty on the NAEP reading assessment exceeds the ability of most American students. Few, if any, students would correctly answer all items.

One might wonder whether students in the other participating countries would do better than American students on the standards set by NAGB. There is a high probability that the rank ordering or relative performance of countries would remain pretty much the same.\* Therefore, it seems reasonable to conclude that American students would do well as compared to students in other countries even if the NAEP test had been administered.

\* This statement is derived from the theoretic underpinnings of Item Response Theory and its application to the scaling used for both the IEA Reading Literacy Test and the NAEP Reading Assessment.