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ABSTRACT

A study examined the writing performance of American schoolchildren based on a survey conducted in 1992 by the National Assessment of Educational Progress (NAEP). Nationally representative samples of fourth-, eighth-, and twelfth-grade students attending public and private schools--approximately 30,000 in all--responded to a variety of writing tasks. Nine different writing tasks were used at grade 4, 11 at grade 8, and 12 at grade 12. The tasks at each grade included a mix of grade-appropriate informative, persuasive, and narrative writing, with some tasks being given to students at more than one grade. Not all students at a grade were given all tasks. At each grade, approximately 1,500 students responded to each task. Taken as a whole, results indicated that given time and familiarity with the topic, the best students can write relatively effective informative and narrative pieces. Even the best students continue, however, to have difficulty with writing tasks that require them to muster arguments and evidence in persuasive writing. According to teachers and students, persuasive writing--advancing evidence and arguments to influence readers to change their thinking--received less emphasis in their classes than did informative or narrative writing. The performance of the best students remained far ahead of the performance of most of their classmates. Whatever successes schools may claim in writing instruction, many students at each grade level continue to have serious difficulty in producing effective informative, persuasive, or narrative writing. (Contains 50 tables and 8 figures of data as well as samples of students' essays. A procedural appendix is attached). (RS)

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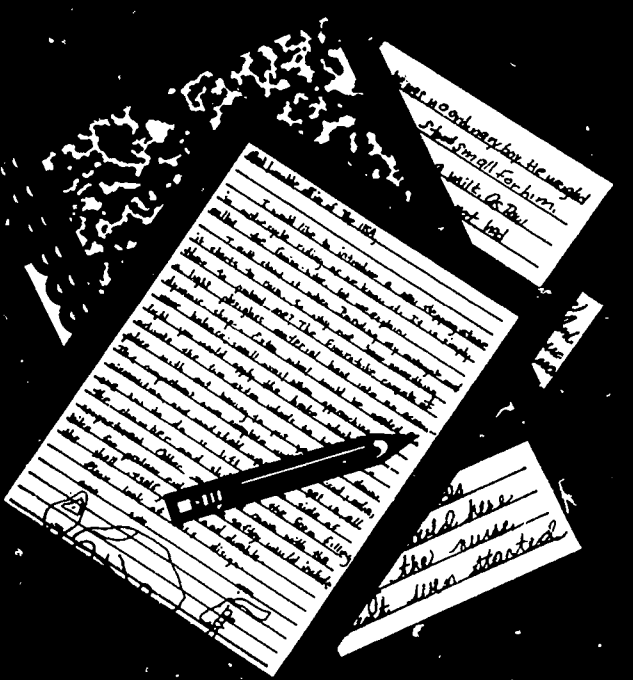
NAEP 1992 Writing Report Card



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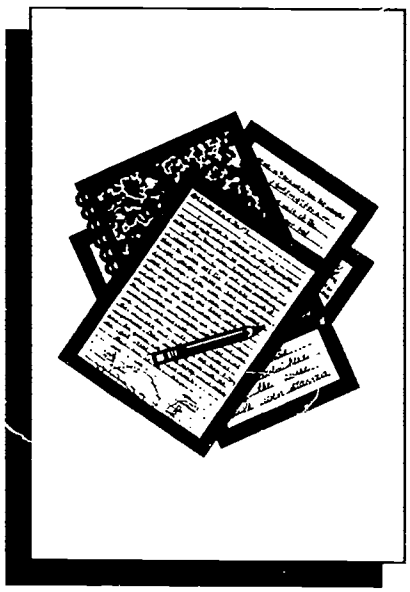

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June 1994

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CONTENTS

Executive Summary

This report describes the writing performance of American schoolchildren based on a survey conducted in 1992 by the National Assessment of Educational Progress (NAEP). It considers such questions as, How well do American students write? How well do the least and most proficient students perform? How much emphasis do schools place on writing instruction? Are sufficient resources available? What approaches are being used to teach writing?

To evaluate the writing abilities of American students, NAEP asked nationally representative samples of fourth-, eighth-, and twelfth-grade students attending public and private schools — approximately 30,000 in all — to respond to a variety of writing tasks. Nine different writing tasks were used at grade 4, 11 at grade 8, and 12 at grade 12.

GRADES 4, 8, AND 12

Number of Writing Tasks – NAEP 1992 Assessment

	GRADE 4	GRADE 8	GRADE 12
Informative	3	4	4
Persuasive	3	3	4
Narrative	3	4	4
TOTAL	**9**	**11**	**12**

The tasks at each grade included a mix of grade-appropriate informative, persuasive, and narrative writing, with some tasks being given to students at more than one grade. Not all students at a grade, however, were given all tasks. According to a carefully specified sampling design, each student in the assessment completed either two 25-minute writing tasks or one requiring 50 minutes. For example, some students were asked to identify a problem that existed in their school and to discuss the causes and effects of the problem; others wrote a persuasive letter to a director of a space project about whether to allow creatures from another planet to return home; and still others wrote imaginative stories about a package that could change their lives. At each grade, approximately 1,500 students responded to each task. Trained readers evaluated the papers according to scoring guidelines tailored for each task and encompassing six categories: extensively elaborated, elaborated, developed, minimally developed, undeveloped response, and response to topic. The exact agreement for ratings, averaged across the tasks at all three grades, was 81 percent.

Taken as a whole, the results show that given time and familiarity with the topic, the best students can write relatively effective informative and narrative pieces. Even the best students continue, however, to have difficulty with writing tasks that require them to muster arguments and evidence in persuasive writing. According to teachers and students, persuasive writing — advancing evidence and arguments in an attempt to influence readers to change their thinking — received less emphasis in their classes than did informative or narrative writing.

More importantly, the performance of the best students remains far ahead of the performance of most of their classmates. Whatever successes schools may claim in writing instruction, many students at each grade level continue to have serious difficulty in producing effective informative, persuasive, or narrative writing.

Major Findings

How Well Do Students Write?

Results from the writing assessment indicate that by grade 12, the majority of students have some understanding of informative and narrative writing, but continue to have considerable difficulty with persuasive writing.

For informative writing . . .

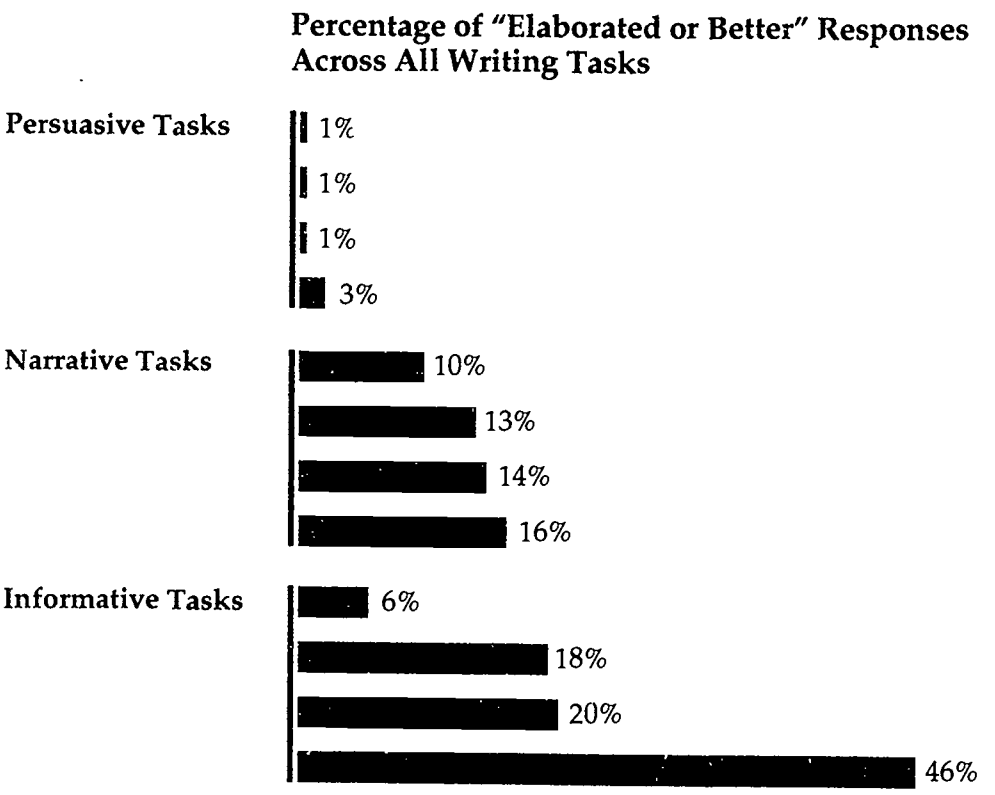
- About three-fourths (or more) of the students at all three grades provided at least minimally developed responses to the informative tasks. However, minimally developed responses were brief, vague, or somewhat confusing.
- About one-third of the fourth graders (32 to 39 percent) provided developed or better responses to the informative tasks, while very few (6 to 11 percent) provided elaborated or better responses. Responses rated as developed were typically uneven but contained the elements necessary for successful completion of the task. In contrast, elaborated responses were well developed and detailed.
- At grades 8 and 12, the results were more varied across tasks. Students had the least difficulty discussing a school problem — 27 percent at grade 8 and 46 percent at grade 12 wrote elaborated or better responses. They had the most difficulty with the challenging task of describing an invention — 4 to 6 percent provided elaborated or better responses for both grades.

For persuasive writing . . .

- Fewer than half the fourth graders (36 to 47 percent) and from 59 to 76 percent of the eighth and twelfth graders wrote at least minimally developed papers.
- All students, even at grade 12, had considerable difficulty moving beyond the minimally developed level. Across all three grades, from 7 to 25 percent of the students wrote developed or better responses to the persuasive tasks and very few (0 to 3 percent) wrote elaborated or better responses.

For narrative writing . . .

- Approximately one-fourth of the students at grade 4 (20 to 29 percent) wrote narratives rated as developed or better, but only small percentages (2 to 4 percent) wrote narratives rated as elaborated or better.
- At grades 8 and 12, there was considerable variation in narrative writing. Across both grades, from 33 to 59 percent of the students provided developed or better responses to the narrative tasks and from 4 to 16 percent provided elaborated or better responses.
- Most students showed some grasp of the narrative form. At least 55 percent and often 80 percent or so across the grades provided at least minimally developed or better narrative responses.



How Well Do the Least and Most Proficient Writers Perform?

Sophisticated analysis techniques were used to aggregate performance across tasks and develop a NAEP writing proficiency scale for students at grades 4, 8, and 12. The results at various percentiles on the scale also highlighted the great variability in student performance within and between grades.

The responses of the poorest-performing 10 percent of writers at grade 4 to the informative, persuasive, and narrative tasks were typically abbreviated or disjointed, indicating little ability to meet the demands of those kinds of tasks. The best 10 percent of writers at grade 4, on the other hand, typically demonstrated a clear understanding of the rhetorical demands of informative and narrative writing, as well as a command of the

structures necessary to development within these types of writing. Their persuasive writing, however, revealed an understanding of the basic rhetorical features of persuasion, but did not provide effective support for their arguments.

- Students in the bottom 10 percent at grade 4 typically responded at the minimally developed level to two of the four informative tasks, at the undeveloped level on the remaining informative and narrative tasks, and at the undeveloped or lower level to the persuasive tasks given at that grade level.
- Students in the top 10 percent at grade 4 typically gave developed or better responses to one of the informative and one of the narrative tasks, and minimally developed responses to the remaining informative, narrative, and persuasive writing tasks given at grade 4.

By grade 12, the poorest 10 percent of writers still had difficulty on narrative and persuasive writing tasks, though their informative writing was likely to reflect knowledge of the basic elements of this type of writing. The better 10 percent of writers at grade 12, on the other hand, demonstrated a knowledge of rhetorical structures and supporting detail appropriate to informative and narrative writing. Their persuasive writing similarly revealed a clear understanding of the basic rhetorical features of persuasion, but continuing difficulty in the use of evidence in support of effective arguments.

- Students in the bottom 10 percent at grade 12 typically gave minimally developed responses to two of the four informative tasks, undeveloped responses to the remaining informative tasks, and undeveloped responses to the four narrative and four persuasive writing tasks at grade 12.
- Students in the top 10 percent at grade 12 typically gave elaborated responses to one of the four informative tasks, developed responses to two of the informative and all four of the narrative tasks, and minimally developed responses to the remaining informative task and the four persuasive tasks given at grade 12.

How Does Performance Differ for Demographic Subgroups?

As in previous assessments of writing and other subjects, average proficiency was related to demographic and background characteristics, with students in advantaged urban communities writing better than those in disadvantaged urban communities. On average, White and Asian-Pacific Islander students wrote better than Black and Hispanic students, females wrote better than males, and private school students wrote better than those in public schools.

- Average writing proficiency of students in the bottom-performing third of the schools was four years or more behind that of students in the top-performing third of the schools at grades 8 and 12. For example, twelfth graders in the bottom-third schools had lower average writing proficiency than eighth graders in top-third schools. Similar gaps occurred between the average writing proficiency of students in disadvantaged urban schools and those in advantaged urban schools.
- The percentile results highlight the vast discrepancies in student writing achievement. For example, that the lowest performing 10 percent of the Black and Hispanic twelfth-grade students achieved similarly to the typical fourth grader (50th percentile) underscores the challenges facing our educational system.

What Is the Impact of Parental Involvement?

Home environment also continued, as in previous assessments, to be closely related to writing proficiency. In general, the higher the educational attainment of the parents the greater students' writing proficiency was likely to be. Similarly, average writing proficiency was higher for students who reported more types of reading material available in the home and more discussion of schoolwork with someone at home. Other important factors related to writing achievement, over which people in the home have some influence, included television viewing, pages read each day for school, and time spent on homework.

- At each grade level, approximately one-fifth of the students reported never or hardly ever discussing schoolwork with someone

at home. These students had lower average writing proficiency than did those who reported more frequent discussion of their work.

- At grade 4, the highest average writing proficiency occurred for students who reported doing homework for an average of an hour a day. At grades 8 and 12, the highest average proficiency occurred for students who reported, on average, doing more than an hour a day of homework.
- At all three grades, students who watched 6 or more hours of television a day had significantly lower average writing proficiency than those who watched less.
- At grade 4, 21 percent of the students reported watching more than 6 hours of television a day; this dropped to 14 percent at grade 8 and 6 percent by grade 12.

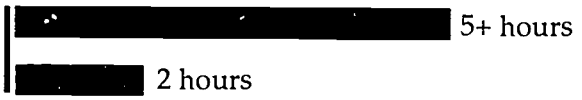
How Much Curricular Emphasis Is Placed on Writing Instruction?

As with every curriculum area, research has shown that effective writing instruction is facilitated by a school environment that values writing and reinforces high standards of achievement. According to questionnaires completed by the school principals or their designees, three-fourths of the students at grade 4 and two-thirds at grade 8 attended schools that placed a special priority on writing instruction. Teachers' reports, however, indicated that this relatively high priority may not be reflected in the amount of time actually devoted to writing instruction.

Eighth graders' language arts or English teachers also responded to a questionnaire about instructional methods and the school environment, and these data indicated a relatively low instructional emphasis on writing. Teachers reported that the majority of eighth graders typically spent only about 2 hours a week on writing in class and for homework — compared to 5 or more hours a week on mathematics instruction.

GRADE 8

Teachers' Reports on the Hours of Weekly Instruction and Homework for the Majority of Students



(By contrast, 87% of the eighth graders reported spending two hours or more watching television *each day*.)

Part of emphasizing writing is providing students with challenging writing assignments. For example, research indicates that success in learning to write is associated with assignments that encourage sustained involvement over a period of time, allowing multiple drafts and time for reflection and revision. However, 52 percent of the eighth graders and 37 percent of twelfth graders reported never or hardly ever being given writing assignments of three or more pages.

Compared to poorer-performing schools, teachers in the top-performing third of schools reported a greater emphasis on more challenging and extensive writing content. They reported more frequently assigning papers of three or more pages, more frequent use of long essays to assess students' writing achievement, and more frequent assignments requiring analysis and interpretation rather than report or summary writing.

Despite the low emphasis given to writing instruction, the picture may be improving. Based on questionnaire data available from NAEP's 1988 writing assessment, students and teachers did report some increase in the amount of attention to writing instruction in the four years between 1988 and 1992. At grade 8, teachers' reports showed an increase in the proportion of students receiving at least an hour of writing instruction each week, from 70 percent in 1988 to 85 percent in 1992. Students' reports at grades 8 and 12 indicated a complementary increase between 1988 and 1992 in the proportion of students being asked to write one or two pages every week, as well as in the proportion being assigned papers of three or more pages every month.

Research also has shown that it is important for students to have opportunities to write about a wide variety of topics and for diverse purposes. Students reported some variety in their writing assignments, although the types of writing that were emphasized showed some shifts across the three grades. Students at grade 4 were typically asked to do some story or report writing every month (82 percent) and also to write in a log or journal (62 percent). By grade 8, the most typical assignments required report or summary writing (78 percent at least monthly), narratives (75 percent), essays or themes requiring analysis or interpretation (66 percent), and persuasive writing (57 percent). By grade 12, essays requiring analysis or interpretation were most frequent (84 percent at least monthly), followed by report or summary writing (82 percent). Narrative writing (62 percent at least monthly) and persuasive writing (54 percent) were assigned less often.

Are Sufficient Resources Devoted to Writing Instruction?

For the majority of students in the assessment, the conditions for writing instruction were at least adequate, as reflected in reports on the availability of resources, class size, and education and experience of the teachers. At grade 8, for example, 60 percent of the students were in classes whose teachers reported that they had access to most of the instructional resources they needed, and more than half were in classes of 25 or fewer students.

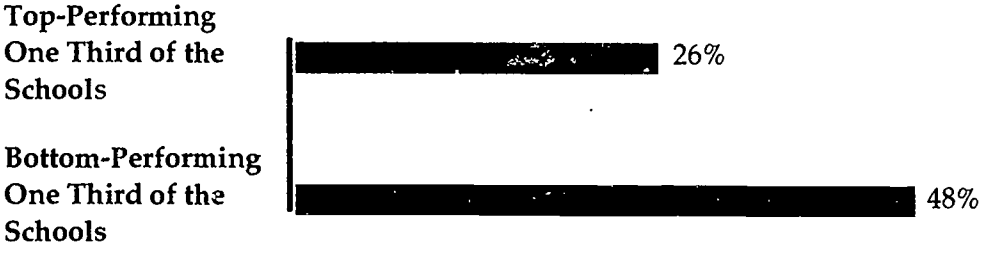
Teachers of writing were also for the most part well qualified by education and experience. Some 68 percent of the eighth-grade students had teachers with 11 or more years of experience, and 52 percent had teachers with a masters degree or higher. All but 16 percent had teachers with some special training in the teaching of writing.

On the other hand, 15 percent of students nationally, and 30 percent in disadvantaged urban communities, were in classes of 30 or more students, and 40 percent had teachers who reported that none or only some of the necessary resources were available to them. Fully 37 percent of the eighth-grade students were in classrooms without a computer available for writing instruction, and another 53 percent were in classrooms where computers were available but difficult to access.

The availability of computers is particularly important in writing instruction, because word-processing capabilities greatly facilitate the process of drafting and revision. Differences between the experiences of students in top- and bottom-performing schools were evident. Computers were less likely to be available at all for writing instruction in the bottom-performing schools. Teachers reported that computers were not available for 48 percent of the eighth graders in the bottom-performing one-third of the schools, compared to 26 percent in the top-performing one-third of the schools.

GRADE 8

Percentages of Students Who Do Not Have Computers Available for Writing



The relationship between proficiency and computer use changed across the grades. At grade 4, computers appeared to be used primarily with the poorer students — perhaps for remediation. By grade 12, however, the balance had shifted. The higher-achieving students were using the computer for writing stories or reports.

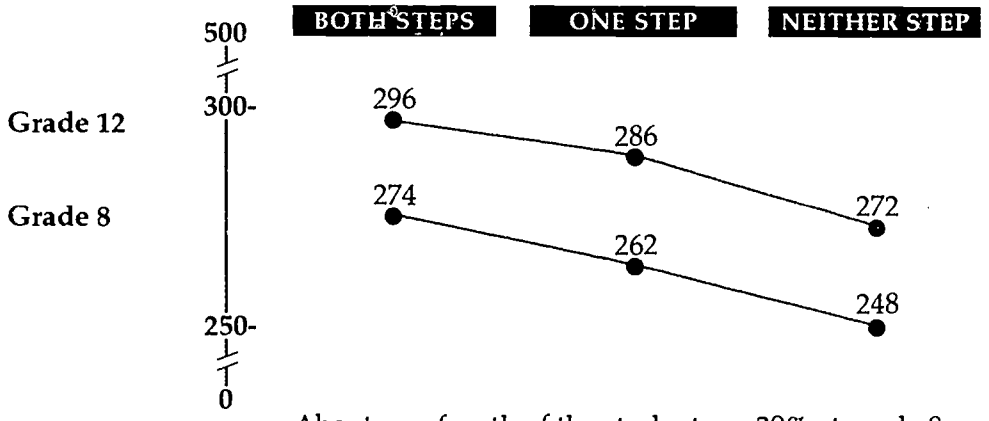
Are Students Receiving Appropriate Instruction in Writing?

Reforms in writing instruction during the past two decades have emphasized process-oriented activities (e.g., planning, prewriting, writing multiple drafts, engaging in sharing and reflection); integration of reading, writing and language tasks; and evaluation of student work in terms of the quality and coherence of ideas. Results from the 1992 assessment suggest that these reforms are taking root in the schools, although most teachers rely upon an eclectic approach that draws from more than one instructional tradition.

The eclecticism was evident in teachers' reports on overall approaches to writing instruction at grade 8. Process-oriented approaches were central for the teachers of 71 percent of the students, integrated reading and writing for 54 percent, skill-based approaches for 49 percent, and writing about literature for 40 percent. Their reports reflected an increase in the use of process-oriented instruction between 1988 and 1992.

Particular activities favored by the teachers in conjunction with individual writing assignments included an emphasis on planning, on writing multiple drafts, and on defining audience and purpose. In general, greater emphasis on these process-oriented activities was associated with higher levels of writing proficiency. Similarly, teachers in the better-performing third of schools were more likely to emphasize such process-oriented activities, and less likely than teachers in the poorer-performing schools to emphasize formal outlining. Also, students who used the planning page when responding to the NAEP assessment tasks performed significantly higher than those who left the page blank.

Average Writing Proficiency by Students' Reports that Their Teachers *Always* Encourage Planning and Multiple Drafts



About one-fourth of the students — 29% at grade 8 and 24% at grade 12 — report *neither* step is always encouraged.

Because the opportunity to obtain ongoing reviews of work-in-progress is considered integral to the writing process, it is noteworthy that most students were being provided with an array of opportunities to reflect on and gain feedback about their writing. Teachers reported that over 90 percent of the eighth graders were at least sometimes asked to discuss what they wrote with other students as well as to comment on what other students wrote. Both of these practices were associated with higher average writing proficiency. In addition, approximately two-thirds of the eighth and twelfth graders were collecting their writing in folders or portfolios that could be used for a variety of purposes that support reflection and learning.

Teachers' and students' reports on the evaluation of student work indicated that emphasis was placed on coherence and on the quality of the ideas expressed. The emphasis is consistent with research showing that it is important to focus on the quality of students' thinking and their ability to sustain and elaborate on an argument or point of view. Students, however, believed that the accuracy of their spelling, punctuation, and grammar was equally important in grading, though their teachers ranked this criterion considerably lower.

In general, a concern with coherence and quality of ideas was associated with higher writing proficiency, though a moderate emphasis on mechanics was also associated with higher proficiency. At all three grades, students in top-performing schools were more likely than those in bottom-performing schools to report that their teachers stressed quality and creativity of ideas, and less likely to report an emphasis on mechanics.

The results of the assessment do suggest that writing instruction has been changing. Compared to the previous NAEP writing assessment, in 1988, results in 1992 indicate that students are being asked to write somewhat more frequently, at greater length, and in assignments requiring more analysis and interpretation. Teachers' reports on their instructional approaches suggest an increasing emphasis on process-oriented instruction, including planning or prewriting activities, multiple drafts, and the provision of feedback from a variety of people throughout the writing process.

Changes in instruction have been gradual rather than dramatic, however, and the total amount of time devoted to writing and learning to write remains relatively small, particularly when compared to the time devoted to other basic subjects, such as mathematics. If American schools are going to ensure that the majority of students become effective writers, then a threshold question lies before them: Practically speaking, is it possible to take the steps necessary to increase emphasis on writing instruction?

A Note on Interpretations

The NAEP background questionnaires make it possible to examine the relationships between student proficiency and a wide variety of background factors, usually by relating performance to one or several variables at a time. The selection of background questions included in the NAEP writing assessment was guided by the *NAEP 1992 Background Questionnaire Framework* derived by considering the wide body of available research about factors influencing student learning and the particular purposes of NAEP data collection. Fourth-, eighth-, and twelfth-grade students responded to questions about their writing instruction, writing experiences, and home factors that might be related to writing proficiency. Eighth graders' language arts or English teachers responded to a questionnaire about instructional methods and the school environment. School principals completed questionnaires about school policies, writing instruction, students' writing experiences, and home and community factors that might be related to writing proficiency.

Because of their basis in research, the NAEP survey results often help to confirm our understanding of how school and home factors relate to achievement. Although the effects of schooling and instruction are of prime concern, these analyses do not reveal the underlying causes of the relationships between background factors and performance. The NAEP assessment results are most useful when they are considered in light of other knowledge about the education system, such as trends in instructional reform, changes in the school age population, and societal demands and expectations. Throughout this report, references are provided to assist the reader in finding additional related information about the topics covered.

Additional NAEP Reports About Writing Achievement

NAEP's 1992 writing assessment also involved "The Nation's Writing Portfolio," a study of students' classroom-based writing. Piloted in 1990,[1] this portion of the assessment asked a subsample of the fourth and eighth graders who had participated in the timed portion of the assessment to work with their teachers and submit three pieces of the students' best writing to NAEP for subsequent analysis. The portfolios for students' best writing were accompanied by questionnaires about the classroom assignments underpinning the writing. The analysis of this classroom-based writing and the relationship between students' performance on the two portions of the 1992 writing assessment will be the topic of a future NAEP report.

Because NAEP's 1992 writing assessment is based on a wholly new effort, including newly developed writing tasks, lengthened response times, an enhanced 6-point rating scale for student responses, and the newly developed partial-credit model scaling, comparisons with achievement results from any previous writing assessments are precluded. However, NAEP will continue to report trends in writing achievement as compared to the past through the long-term trend assessment, which consists of writing assessment materials readministered in ways that replicate previous procedures. Educational achievement trends in writing, reading, mathematics, and science will be available in *NAEP 1992 Trends in Academic Progress*.

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[1]Gentile, C., *Exploring New Methods for Collecting Students' School-based Writing: NAEP's 1990 Portfolio Study* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1992).

Part I

How Well Do Students Write?

Part I of this report describes students' performance on the writing tasks that comprised NAEP's 1992 assessment of students at grades 4, 8, and 12. Chapters 1 through 3 contain the response data for each of the writing tasks, presenting the results in turn for informative, persuasive, and narrative writing performance across the grades. Samples of students' papers are included. In Chapter 4, the results are summarized across tasks for each grade via the NAEP writing proficiency scale, and accomplishment is described for students at various percentiles of performance. Chapter 5 describes average achievement for various population subgroups as defined by demographic characteristics such as gender, race/ethnicity, and type of school. Part II illuminates the context for writing instruction, based on information collected from questionnaires given to students, teachers, and school principals.

The 1992 Writing Framework and Assignments

NAEP's 1992 writing assessment encompassed a number of innovations, compared to previous assessments, including an updated framework and newly developed writing tasks for the students. To ensure a forward-looking conceptualization of writing that was responsive to the needs of policymakers and educators and attuned to contemporary research on writing, a national consensus process was used to revise NAEP's writing assessment framework, under the guidance of the National Assessment Governing Board (NAGB). The Board convened a 14-member panel of writers, writing teachers, other educators, and representatives of business and professional organizations, and then solicited written input from a broadly representative group of nearly 100 other experts to achieve, as nearly as possible, a national consensus.[2]

The *1992 NAEP Writing Framework* identifies three primary purposes for writing — informative, persuasive, and narrative.

- Informative writing "focuses primarily on the subject matter element in communication" and is used to share knowledge and to convey ideas.
- Persuasive writing focuses on the reader, with the primary aim of influencing others to take some action or bring about change.
- Narrative writing encourages students to incorporate their imagination and creativity into the production of stories or personal essays.

These broad purposes for writing are not mutually exclusive, however, and may blend in various ways depending on each specific writing situation. Accomplishing any given writing task can involve a variety of approaches.

In addition to assessing these broad purposes for writing, the framework called for students to write on a variety of topics for different audiences and emphasized that the tasks be based on diverse stimulus materials. However, there also was recognition that, in the context of the assessment, students would justifiably perceive that their actual audience

[2] *Writing Framework for the 1992 National Assessment of Educational Progress* (Washington, DC: National Assessment Governing Board, U.S. Department of Education).

would be the writing teachers who eventually would score the responses. Thus, although an audience beyond NAEP was necessarily specified for the persuasive writing tasks, the scorer, and not a specified artificial audience, was implicitly the only audience for some informative and narrative tasks.

In developing the writing assignments for field testing, every effort was made to create writing tasks that were responsive to the framework, applicable to the diversity of student backgrounds across the nation, and as interesting to students as possible. In their responses, students were encouraged to use the writing process and to make effective choices in organizing and elaborating their ideas. As another innovation in the 1992 assessment, a special page preceded each task for students to plan and organize their writing.

The three writing purposes were addressed at all three grades assessed, with each student at grades 4, 8, and 12 responding to two 25-minute tasks or, at grades 8 and 12, one 50-minute writing task. This represented expanded response time compared to previous NAEP writing assessments. The response times for the tasks were determined from field testing. The writing tasks were developed by a committee of distinguished writing educators working with staff at Educational Testing Service (ETS) in Princeton, NJ. Approximately half of the 10 committee members had also served on the panel that worked to develop the *1992 NAEP Writing Framework*. Field testing of a variety of writing tasks was conducted at grades 4, 8, and 12 in diverse types of schools across the nation. The students' field-test responses were scrutinized by the development committee to refine the evaluation criteria and the scoring was conducted by trained readers. The development committee selected the writing tasks for the 1992 assessment based on the field-test experience, and these were reviewed by the National Center for Education Statistics (NCES), the Office of Management and Budget (OMB), and NAGB.

All students did not write about all topics. Through the carefully designed matrix sampling procedures, each student wrote about either one 50-minute or two 25-minute topics so that nationally representative samples of approximately 1,500 students responded to each writing task. Some tasks were given at more than one grade, with fourth graders as a whole responding to a total of nine tasks, eighth graders to 11 tasks, and twelfth graders to 12 tasks (see Procedural Appendix). The topics incorporated a variety of stimulus materials, audiences, and forms of writing.

The directions before each writing task asked students to:

"Read the assignment carefully and think about it before you begin.

Be sure to respond to every part of the assignment. Your writing will be judged according to how well you develop your ideas. Remember that you can use the planning page to make notes and organize your ideas.

Make your response as thoughtful and complete as possible. If you finish before time is called, you should go over your work again and change anything that you think will make your writing better."

Administering the Assessment

As with all NAEP assessments, the schools and students participating in the 1992 writing assessment were selected through scientifically designed stratified random sampling procedures. Approximately 7,000 students at grade 4, 11,000 at grade 8, and 11,500 at grade 12 participated in NAEP's 1992 writing assessment. These nationally representative samples of students were drawn from approximately 1,500 public and private schools across the country.

The assessment was administered by a trained field staff from January through April of 1992. Sampling and data collection activities were managed by Westat, Inc., located in Rockville, MD.

Evaluating the Students' Writing

In recent years, American education has seen a greater emphasis on the writing process. To evaluate how students plan what they will write, NAEP provided a space for students to engage in prewriting activities. Their prewriting methods were classified into five categories, ranging from diagrams, to outlines, to complete first drafts. Since the assessment context provides little opportunity to review and revise one's work, however, students' responses to assessment tasks were viewed as first-draft writing and evaluated accordingly.

Students' responses to each writing task were evaluated by trained raters who used a modified primary-trait analysis. The previously used 4-point rubric was enhanced in 1992 to accommodate the new writing framework, tasks, and response times. The scoring guidelines defined six successive levels of task accomplishment: response to topic, undeveloped response to task, minimally developed response, developed response, elaborated response, and extensively elaborated response. A small

percentage of the responses were not rated because they were blank, illegible, totally off task, indecipherable, or contained a statement to the effect that the student did not know how to do the task.

To provide for consistency in approach across tasks and grades, the scoring guides generally were based on the expanded primary-trait framework presented in Figure 1. Each task, however, had a uniquely tailored scoring guide created from its specific rationale and writing situation. If a task was given at both grades 4 and 8 or both grades 8 and 12, the same identical scoring guide was used to evaluate responses at both grades. To enable comparisons, the same criteria were applied to all papers written in response to a given assignment. As will be seen, the older students usually, but not always, wrote more developed and elaborated responses.

It should be noted that for the 50-minute tasks and for tasks given at grade 12, the scoring guidelines required somewhat better writing to meet the criteria, especially at the lower levels of the scale. For example, brevity is relative, being different for fourth graders given 25 minutes than for twelfth graders given 50 minutes. For a task given only to fourth graders, several sentences on a topic may have been considered "brief" and rated as minimally developed (score of 3). For 50-minute assignments or twelfth graders, depending on the content conveyed, several sentences may have been considered "very abbreviated" and rated as undeveloped (score of 2).

Figure 1
NAEP Expanded Primary-Trait Scoring Guidelines

Primary trait: [In each scoring guide, a specific trait is defined corresponding to the requirements of the given task. For example, the primary trait for a narrative task would be *quality of narrative (clarity of description and sequence of events)*; for an informative task, *quality of description (clarity and use of detail)*; and for a persuasive task, *quality of argument (clarity of perspective and level of support)*].

Scoring rationale: [In each scoring guide, a rationale is provided at this point, summarizing the task and explaining the specific scoring criteria.]

6 **Extensively elaborated.** In these papers, students create a well developed, detailed, and well written response to the task. They show a high degree of control over the various elements of writing. These responses may be similar to "5" responses, but they are better organized, more clearly written, and less flawed.

5 **Elaborated.** In these papers, students write a well developed and detailed response to the task. They may go beyond the requirements of the task.

4 **Developed.** In these papers, students provide a response to the task that contains necessary elements. However, these papers may be unevenly developed.

3 **Minimally developed.** In these papers, students provide a response to the task that is brief, vague, or somewhat confusing.

2 **Undeveloped response to task.** In these papers, students begin to respond to the task, but they do so in a very abbreviated, confusing, or disjointed manner.

1 **Response to topic.** In these papers, students respond to some aspect of the topic but do not appear to have fully understood the task. Or, they recopy text from the prompt.

0 **Not rated.** Blank, totally off task, indecipherable, illegible, and "I don't know."

The 6-point scoring rubric represents a departure from the 1988 assessment, where a 4-point scale was used. Moving to a 6-point scale enabled NAEP to provide expanded information about how American students write, but it also posed a challenge to evaluate more than 50,000 student responses accurately and reliably.

To this end, NAEP employed rigorous quality-control standards at the scoring subcontractor's site, National Computer Systems (NCS) in Iowa City, Iowa. After training, all scorers had to successfully complete qualifying sets before they could participate in the scoring. Throughout the process, the inter-rater reliability of the scoring was monitored by having raters independently score 25 percent of the responses a second time. The exact agreement for ratings, averaged across the tasks, was 84 percent at grade 4, 80 percent at grade 8, and 79 percent at grade 12.

Analyzing the Writing Performance Results

As presented in Chapters 1 through 3, ETS first analyzed the assessment results to determine the percentage of students responding to each writing assignment according to each of the six categories established by the scoring guides. The task-by-task data also include the percentages of students writing at or above the minimally developed, developed, and elaborated levels as defined by the scoring guides.

For the remaining chapters, which present overall writing performance in relation to various factors, the results were summarized across the writing tasks at each grade using item response theory (IRT). For the first time, in summarizing data for the writing scale, which ranges from 0 to 500, the NAEP 1992 assessment used a partial-credit scaling procedure employing a specialized IRT method to account for students' responses scored according to the 6-point scoring guides.

Average proficiency on the 1992 writing scale is the statistic primarily used in this report to compare overall writing performance among subgroups of students defined by demographic characteristics, as well as by a variety of home and school factors (see Chapters 5 through 8). In Chapter 4, also for the first time, a special mapping procedure has been used to profile students' task-by-task performance in relation to percentiles on the summary scale. For each grade, students' levels of performance on each individual writing task are mapped in relation to their overall writing achievement as summarized by the NAEP writing proficiency scale.

Unless otherwise noted, all changes or differences discussed in this report are statistically significant at the .05 level of significance. This means that the observed differences are unlikely to be due to chance or to sampling variability. Further details about the methods and procedures used in NAEP's 1992 writing assessment are provided in the Procedural Appendix. Full documentation can be found in *The NAEP 1992 Technical Report*.

1

Informative Writing

To be effective, informative writing must convey knowledge and ideas with clarity and detail. The subject matter being conveyed may be based on the writer's personal knowledge or experience, or it may involve the synthesis of new information presented to the writer.[3] Whether the writing involves the familiar, the new, or a mixture of both, informative thought can require a wide range of analytic and evaluative skills, from writing a letter or filling out a job application to more complex professional or academic tasks requiring description, analysis, and explanation.[4]

Because informative writing plays such an integral role in academic and professional success, the NAEP w. iting framework emphasized students' ability to accomplish a wide range of informative writing. Across

[3]Kinneavy, J. L., *A Theory of Discourse* (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1971).

[4]Britton, J., *Prospect and Retrospect: Selected Essays of James Britton*, Gordon M. Pradl, editor (Montclair, NJ: Boynton/Cook Publishers, Inc., 1982).

the three grades assessed —fourth, eighth and twelfth — NAEP devised seven different informative tasks for the 1992 assessment. These tasks elicited a broad spectrum of informative responses, from describing a typical school lunch to tracing the causes and effects of problems within the school.

The seven prompts are listed below with brief descriptions.

School Lunchtime

Describe a typical lunchtime at your school in such a way that someone who has never had lunch there can understand what it is like. (Grade 4)

Favorite Story

Tell about a favorite story you have read, heard, or seen on television or at the movies. Include interesting details about characters, places, events or ideas. (Grade 4)

Favorite Object

Describe a favorite object and explain why it is valued. (Grades 4 and 8)

Invention

Think of something to invent. Write a letter to the United States Patent Office describing both the object and the need it is designed to fulfill. (Grades 8 and 12)

Performance Review

Write an article for the school newspaper that reviews a program or performance. Be sure to describe what you liked or disliked, why other people might or might not enjoy it, and what people should know before they go to see it. (Grades 8 and 12)

Time Capsule

Choose an object to place in a time capsule which will be opened in 50 years. Describe how the object tells something especially interesting or important about people living today. (Grade 12)

School Problem

Write to the director of a news program and identify a problem that exists in school. Consider both the causes and effects of the problem. (Grades 8 and 12; 50 minutes)

In four cases, the questions were administered at two grade levels to allow direct examination of grade-level improvement in writing ability. Students were given 25 minutes to complete each of the first six tasks. The seventh, School Problem, was administered in a 50-minute time period to eighth and twelfth graders. In all, fourth graders wrote about three different informative topics, and eighth and twelfth graders wrote about four.

Achievement in Informative Writing

Table 1.1 presents the percentages of student responses at each level for these informative tasks, and Figure 1.1 graphically illustrates the percentages of students who wrote at or above the elaborated, developed, and minimally developed levels on each of the tasks. Responses reaching the developed level, while not detailed and sometimes uneven in their presentation, contained the elements necessary for effective informative writing. In comparison, minimally developed responses contained some elements necessary to complete the task, but were brief, vague, or somewhat confusing. Elaborated or better responses were detailed and well developed.

Across the three grade levels, a large majority of students (72 to 90 percent) wrote minimally developed or better responses to the 25-minute informative tasks, demonstrating some grasp of the elements necessary to convey knowledge and ideas to others. Far fewer students, however, provided developed responses. For example, only about one-third of the fourth graders (32 to 39 percent) wrote developed or better responses to the three informative tasks given at that grade. From 42 to 45 percent of the fourth graders provided responses judged as only minimally developed. At grades 8 and 12, there was a wider range in performance on the 25-minute informative tasks. Roughly one-quarter to half of the students (26 to 55 percent) wrote developed or better responses. Still, the preponderance of the older students — 39 to 46 percent at grade 8 as well as 31 to 54 percent at grade 12 — wrote minimally developed informative papers. Only 4 to 20 percent of the students at any of the three grades were able to craft elaborated or extensively elaborated responses.

On the 50-minute School Problem task, which asked students to draw on their own experiences at school to explain a problem and its causes and effects, student performance was substantially better. A large majority of the students (68 and 86 percent, respectively, at grades 8 and 12) constructed developed or better responses, and 27 and 46 percent, respectively, produced elaborated or better pieces of writing. Because length of response

Table 1.1

Student Performance on Informative Writing Tasks, Grades 4, 8, and 12

Writing Task	PERCENTAGES OF STUDENTS						
	No Response	Response to Topic	Undeveloped Response to Topic	Minimally Developed	Developed	Elaborated	Extensively Elaborated
School Lunchtime							
Grade 4	8(0.8)	3(0.5)	8(0.9)	42(1.5)	31(1.3)	6(0.8)	1(0.4)
Favorite Story							
Grade 4	9(0.7)	4(0.6)	9(0.8)	45(1.4)	22(1.3)	9(0.9)	2(0.3)
Favorite Object							
Grade 4	11(0.9)	6(0.7)	8(0.9)	44(1.7)	26(1.4)	5(0.8)	1(0.2)
Grade 8	3(0.5)	3(0.4)	3(0.4)	39(1.4)	37(1.2)	12(0.9)	2(0.4)
Invention							
Grade 8	5(0.6)	6(0.6)	17(1.0)	46(1.4)	22(1.0)	4(0.4)	0(0.1)
Grade 12	4(0.8)	7(0.9)	9(0.9)	54(1.4)	21(1.2)	5(0.5)	0(0.2)
Performance Review							
Grade 8	9(1.0)	10(0.7)	3(0.4)	45(1.6)	26(1.3)	8(0.8)	0(0.1)
Grade 12	4(0.5)	6(0.7)	1(0.4)	47(1.5)	24(1.1)	17(1.0)	1(0.3)
Time Capsule							
Grade 12	2(0.4)	5(0.6)	8(0.8)	31(1.3)	35(1.3)	17(1.1)	2(0.5)
School Problem*							
Grade 8	3(0.6)	2(0.4)	4(0.5)	23(1.2)	41(1.4)	24(1.2)	4(0.5)
Grade 12	1(0.3)	1(0.3)	2(0.4)	10(0.8)	41(1.5)	40(1.4)	6(1.1)

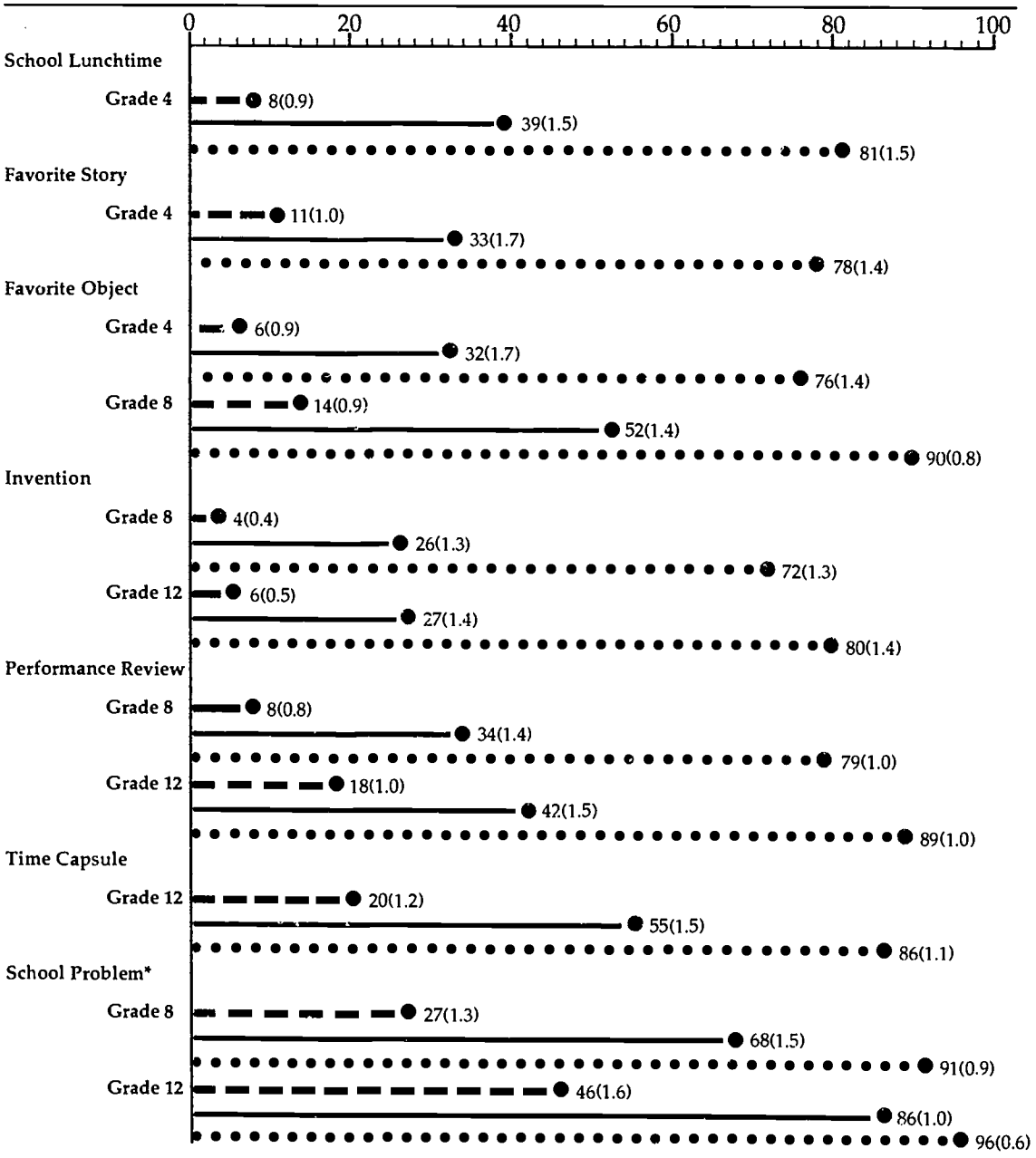
The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). When the proportion of students is either 0 percent or 100 percent, the standard error is inestimable. However, percentages 99.5 percent and greater were rounded to 100 percent and percentages 0.5 percent or less were rounded to 0 percent. Percentages may not total 100 percent due to rounding error.

*Students were given 50 minutes to respond to School Problem, 25 minutes for all other informative tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Figure 1.1 – Informative Writing

Percentages of Student Responses At or Above Elaborated, Developed, or Minimally Developed, Grades 4, 8, and 12



Elaborated or Better Responses
Developed or Better Responses
Minimally Developed or Better Responses

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Combined percentages may differ slightly from the sum of separate percentages shown in TABLE 1.1. The combining was based on unrounded percentages, whereas the percentages shown in the table have been rounded.

*Students were given 50 minutes to respond to School Problem, 25 minutes for all other informative tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

time did not have this impact for other writing tasks (see Chapters 2 and 3), this increase in performance may be largely attributable to the popularity of the subject — very few students were at a loss to identify and expound upon the problems in their schools.

Not surprisingly, older students tended to produce more effective informative writing than their younger counterparts when asked to respond to identical prompts. On the Favorite Object task, given at grades 4 and 8, more of the older students (52 versus 32 percent) were able to construct developed or better responses. On the Performance Review and School Problem tasks (grades 8 and 12), performance at the developed or better level rose across grades from 34 to 42 percent and 68 to 86 percent, respectively. The Invention prompt, which proved the most difficult for students, yielded virtually no difference between grades 8 and 12 for the percentages of developed or better responses (26 and 27 percent, respectively).

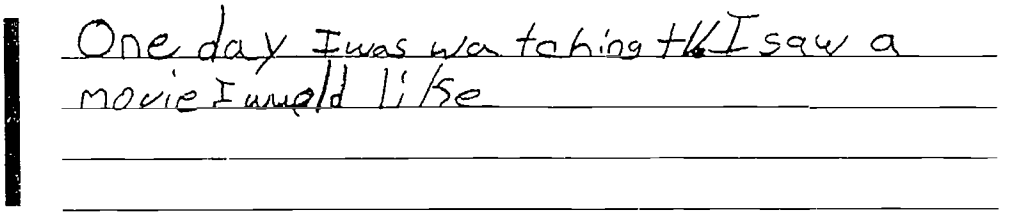
Sample Student Responses

The following examples illustrate the kinds of informative writing elicited on this assessment. They are drawn from the Favorite Story and In· er tion tasks. The other prompts are being held secure for possible use in future assessments.

THE FAVORITE STORY TASK — GRADE 4

The Favorite Story prompt asked fourth-grade students to tell about a favorite story that they had read, heard, or seen at the movies. Students were encouraged to provide interesting details that would help to explain the story and why it was so interesting.

For the Favorite Story task, only 4 percent of the fourth-grade students wrote responses in the lowest category, *response to topic*. These fourth graders seemed to address the overall topic, but they did not carry out the task. For example, in the response below the student discusses the general topic of an enjoyable movie without identifying or describing any specific favorite story, as requested in the prompt.



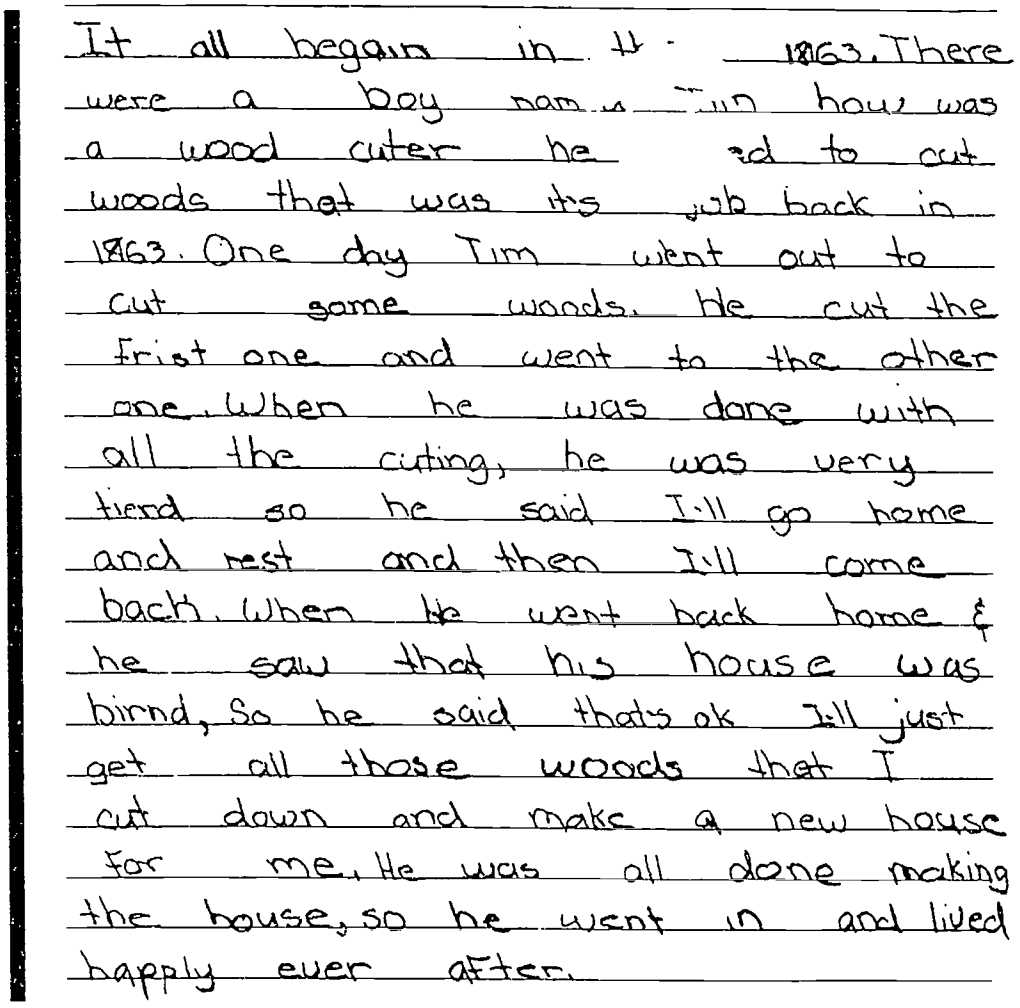
Undeveloped responses to the task, provided by 9 percent of the fourth-grade students, did little more than identify a specific favorite story. The descriptions of the story were either so brief or so convoluted that it was impossible for the reader to recognize a sequence of events. In these responses, students demonstrated little of the organizational ability (in this case, to present a clear description) that is so crucial in communicating relevant information. For example, in the next response, the student identified a favorite story and characterized it as exciting, but did not explain what happened in the story that made it so much "fun to read."

A favorite story that I never heard is the little mermaid. The event that happen were exiting and fun to read. the characters were used expeser the

Minimally developed responses began to provide a summary of the story, but left major gaps. Often these gaps resulted from the student failing to provide an adequate overview of the story's theme or plot line, or omitting a crucial story element, such as the ending. Nearly half of the fourth graders' responses (45 percent) fell into this category. In the example below, the response is so vague that it is difficult for a reader to understand the plot.

Danny Campion of the World
once there was a boy named Danny
whene he was born his mother
died. And it was only him and his Dad.
Once his dad told him his deep dark
secret and it was: Me and your mom
Yous ed to go out hunting. So wonce
his dad went out hunting and Danny
woke up and went out to there's buk
and got a Baby ostin and he drove
to the wood and got his da dout of
the hole

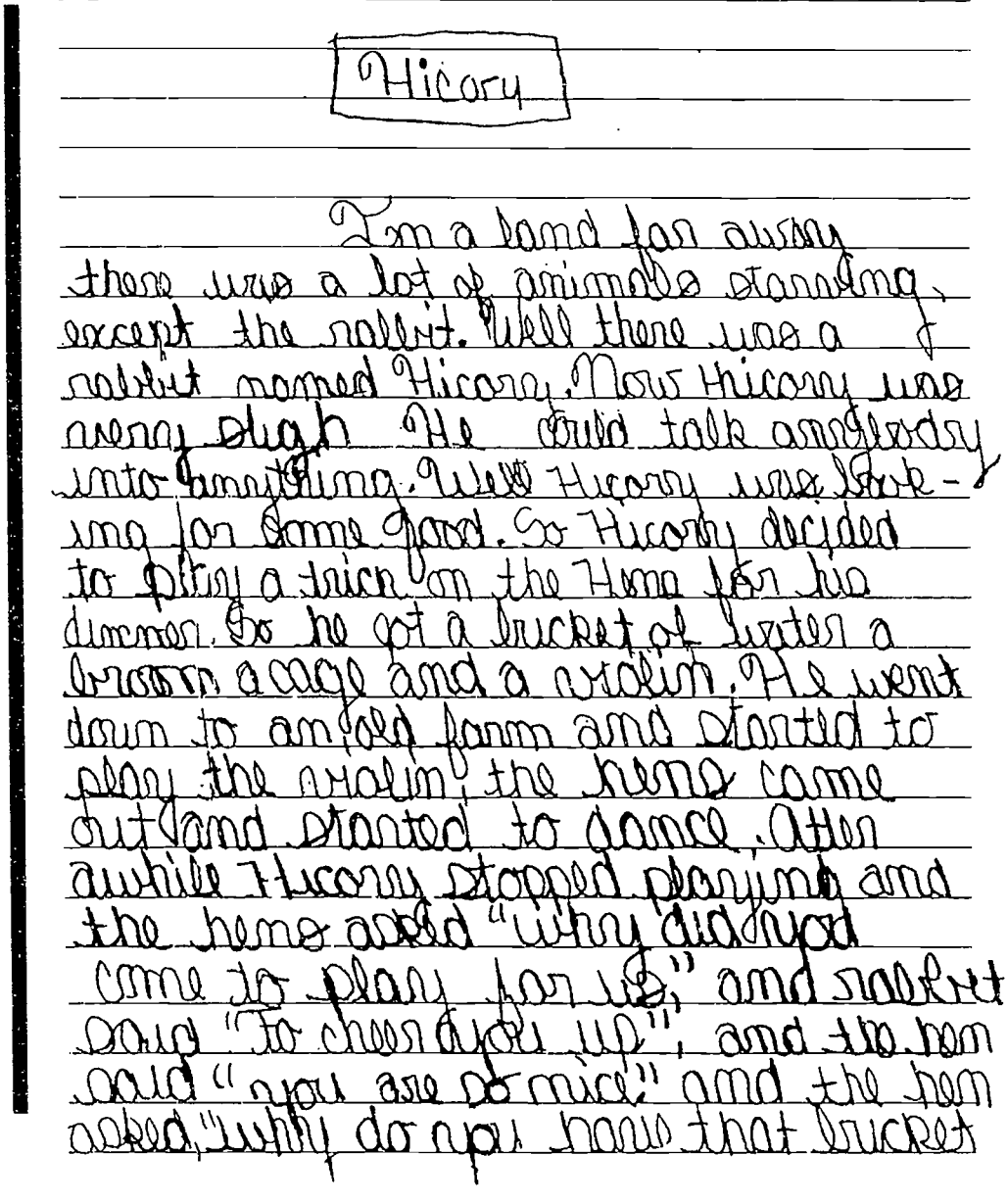
Developed responses provided a clear and comprehensive summary of a story. Nearly one-quarter of the fourth graders (22 percent) wrote responses rated as developed. Although the summaries contained enough information to be considered developed, they lacked the additional detail that characterized the next category, elaborated informative writing. In the example below, the student provides a complete, albeit brief, summary of how Tim the woodcutter rebuilds his home.


It all begain in th 1863. There were a boy nam Tim hous was a wood cuter he ed to cut woods that was its job back in 1863. One day Tim went out to cut some woods. He cut the frist one and went to the other one. When he was done with all the cuting, he was very tierd so he said I'll go home and rest and then I'll come back. When he went back home & he saw that his house was birnd, So he said thats ok I'll just get all those woods that I cut down and make a new house for me. He was all done making the house, so he went in and lived happly ever after.

Nine percent of the fourth graders wrote *elaborated* responses that effectively summarized a favorite story and provided relevant enriching details. They demonstrated the ability to describe specific scenes in depth, within the context of a comprehensive overview of the story. The following example clearly summarizes the story and describes the first worm-eating scene at length, including the condiments used to make the worm scrumptious.

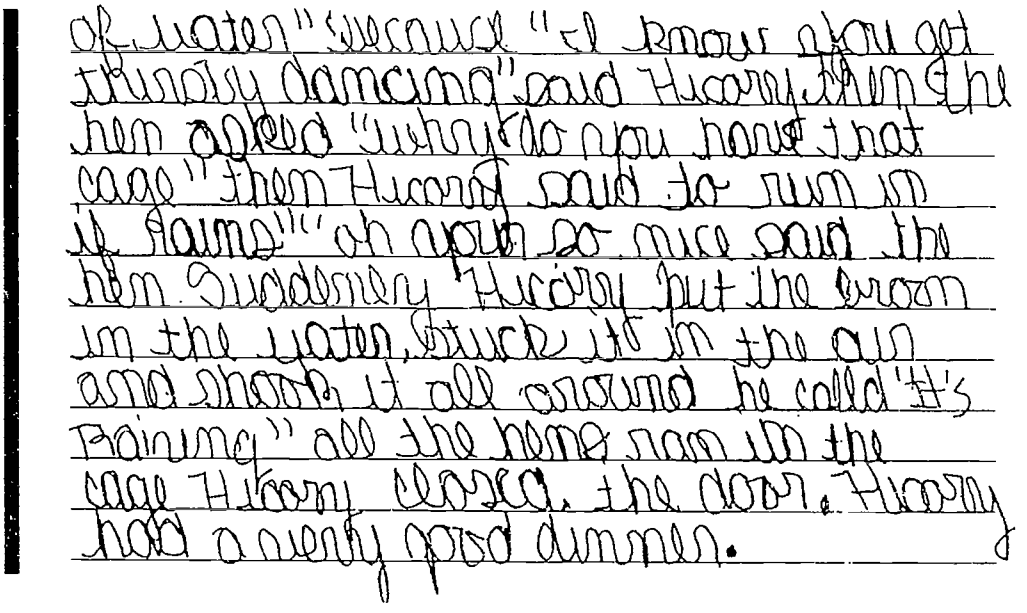
I just recently read a story called How to eat fried worms. It's about a boy named Billy who made a bet with another boy that if he could eat 15 worms the boy would give Billy $50. Well Billy really wants the fifty dollars so he can buy a mini bike that his friend's brother is selling for exactly fifty dollars. Billy finally decides to do it so the next day Billy and some other boys go in Billy's back yard and place a tin plate in front of him and tell Billy to open the plate so thinking about the mini-bike he opens it. To his surprise the worm is fried. So he put ketchup, mustard, and mayonnaise on the worm and Billy pops it in his mouth. After 14 more Billy gets the $50 and you know what he done with it. Of course, he bought the mini-bike.

Very few fourth graders (2 percent) wrote *extensively elaborated* summaries, providing complete and relevant details about the setting, characters, episodes, and ending. These extensively elaborated responses, as shown in the example below, generally were well organized, coherent, and unified.



Hicory

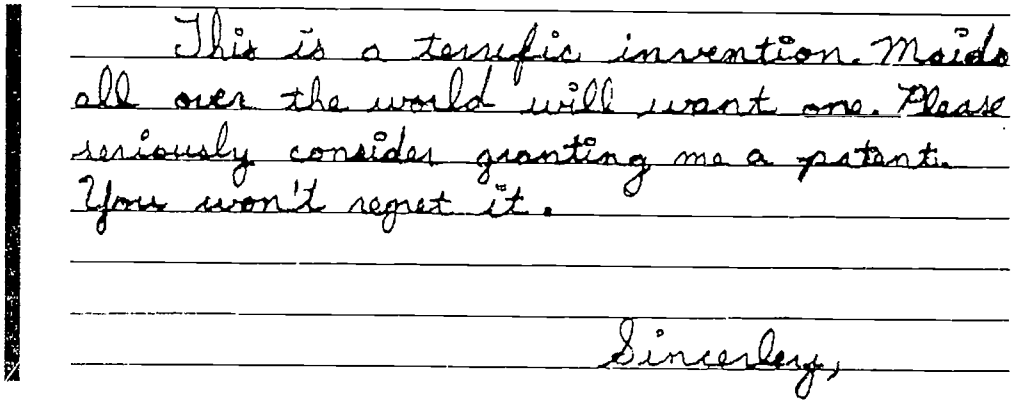
I'm a land far away there was a lot of animals standing, except the rabbit. Well there was a rabbit named Hicory. Now Hicory was very shy He could talk and sing into something. Well Hicory was looking for some food. So Hicory decided to play a trick on the Hens for his dinner. So he got a bucket of water a broom a cage and a violin. He went down to an old farm and started to play the violin, the hens came out and started to dance. After awhile Hicory stopped playing and the hens said "Why did you come to play for us," and rabbit said "To cheer you up", and the hen said "you are so nice" and the hen asked "why do you have that bucket



THE INVENTION TASK — GRADES 8 AND 12

Eighth and twelfth graders were given the opportunity to describe an imaginary new object they had invented or an existing object that they had substantially improved, or "reinvented." They were instructed to write a letter to the United States Patent Office that requested a patent and clearly described the invention and the need it was designed to fulfill. This task proved particularly challenging for students at both grades. It required creativity to devise an invention and persuasion to convince the patent office to grant a patent, all under the aegis of informative writing. Although the task tapped students' creativity and persuasive skills, responses were rated primarily according to how well they provided information about an invention.

For the Invention task, 6 and 7 percent, respectively, of the eighth and twelfth graders' writing was classified as *response to topic*. In most cases, these students discussed inventions in general without identifying a specific invention, or they appeared to have misinterpreted the task. The following example mentions an invention that will help maids, but does not describe it in any other way.



Undeveloped responses were provided by 17 and 9 percent of the eighth and twelfth graders, respectively. These students responded to the task by identifying an object, but they were unable to describe it or the need it was designed to fulfill. Often, as is the case with the next example, these students allowed themselves to become sidetracked by describing the great profit potential of their product, rather than providing information appropriate to the task.

I would like to invent something that would make travel easy something like a plane but doesn't cost so expensive like you can build your own little plane and fly anywhere you want for free all you have to pay for is the gas.

About half of the responses from both grades (46 and 54 percent, respectively) were categorized as *minimally developed*. These responses tried to describe an invention, but the descriptions lacked focus. The example below identifies an invention that "can simulate players from any sport" and has a level of difficulty switch, but the piece provides little else in the way of description.

Dear Sir or Madame,

I am writing to tell you about my invention, I call it the ALL-SPORT BUDDY.

It can simulate players from any sport. This way, you don't need your friends to play a game of football or baseball. It's even good for two people to use. but it's best feature is the level of difficulty switch. This way your opponent won't be to good for you. I would like to put a patent on my invention. Thank you for your time.

Sincerely,
John Doe

Developed responses were written by almost one-quarter of the students at grades 8 and 12 (22 and 21 percent). These responses conveyed some details about the invention to the reader, and also discussed its usefulness or purpose. In the example, the student briefly describes a car that can run on water vapor, then highlights some of its advantages.

Dear United States Patent Office,

I have a perfect invention. It is a car than runs on water. All it takes is one tank. It can keep on reusing water then once it has turned into vapor the car can create more water. But you have to fill it up once. This would decrease pollution. It will help our environment. It would even help people save money on gas. This car will be able to go pretty fast too. The car would look like any other car. Then you could help get food to

other places and it won't take any money. All you have to pay for is the food. This is an idea I had in my dream.

Your Friend

Students writing *elaborated* responses described the features and uses of their inventions in well-organized papers with appropriate elaborating detail. Only 4 and 5 percent of the eighth- and twelfth-grade responses, however, reached this level. Note that in the example below the student provided sketches to help describe the invention. Since students were being assessed on their informative writing ability, raters were instructed to concentrate on the actual writing from responses rather than any sketches or diagrams.

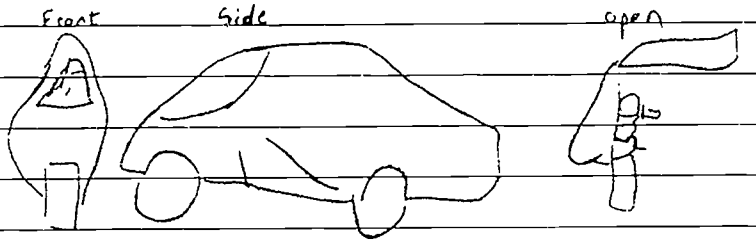
Most honorable office of The USA,

I would like to introduce a new stepping-stone in motorcycle riding as we know it. It is simply called the Enviro-bike. let me explain.

I can't stand it when I'm riding my motorcycle and it starts to rain. So why not have something these to protect me? The Enviro-bike consists of a light plexiglass material bent into an arrow-dynamic shape. Extra wheel would be needed for more balance; small ones. When approaching a red light you would apply the brake which would activate the two extra wheels to hold you in place with out having to put your feet down. This compartment comes complete with a sun-roof, radio, airconditioner, and windshield wipers. To get in, all

one has to do is lift up on side of the chamber and slide into the form fitting compartment. Other compartment come with the bike for partner riding. The safety would include the shell itself, hard and durable.

Please look at this disign.



Thank you,

Very few students at either grade wrote *extensively elaborated* responses. As shown in the example below, these students organized their descriptions into cohesive presentations enriched with appropriate details or explanations. They not only described their invention and its purpose, but they also clearly explained how to use it.

To whom it may concern,

I am writing on behalf of an invention that may interest you.

I have found that in my experiences of waking up in the mornings, I have encountered some difficult situations. The way I see it,

you have two options:
1) an alarm-clock-w/manual
or buttons
2) someone can wake you up.
There are problems with both. When you're
tired, you can push the wrong buttons
on the alarm clock so that it won't
work correctly, and when people wake
you up, you're usually end up in a
bad mood!

But my new invention puts a
stop to all these problems. It is a
completely voice-responsive alarm clock.

This new state-of-the-art alarm
clock is revolutionary, and I am quite
sure, that if given a patent will soon
become standard in every American
household.

My invention, the "Ticker Voice"
is fully operated by voice command.
You set the time, alarm, favorate radio
stations, and the brightness of the
face simply by telling it what to do.

After the purchase, the owner
thinks of his own password (anything
from gum to Zoopsilogustic,) which,
when said, gives access to programing
After the password, state what your
mission is: Time, Alarm, Radio, Or Face.

The clock will then beep, indicating it is ready for programing. Then state either the time, when you want to wake-up, the call-number of the radio station you desire, or bright, medium, dark, for the brightness of the face. Then state the password again to complete and lock-in the program.

This invention solves many problems and is very convienient for the busy lifestyle of today. For you can just talk out in the air, when half asleep in bed, or shout it out as you're racing through the door, etc.

Another feature that the "Ticker Voice" offers is a voice controlled alarm snooze. When the alarm goes off in the morning you simply say the password, how many minutes you want to "snooze" (1-15) and say the password again. It's that simple.

As you can plainly see the "Ticker-Voice" is a revolutionary invention, and if you grant its patent, will soon become standard in every household across America.

Thank-you for your time.

Summary

It is encouraging to note that more than one-quarter of the students at each grade level wrote developed or better responses to each prompt, demonstrating at least a seminal ability to provide information through writing. In general, however, approximately one-third of the students wrote minimally developed responses that contained some of the elements necessary to informative writing but were brief, vague, or somewhat confusing. About 10 to 20 percent had great difficulty with the informative tasks. Also, no more than 20 percent of the students were able to advance beyond the rather basic confines of developed responses and provide elaborated or better responses for the 25-minute tasks.

Many students successfully presented relevant information, but they had difficulty distinguishing between important and trivial details. This in turn contributed to student writing that often resembled lists of ideas rather than coherent, organized pieces developed to fulfill their intended purposes. The exception was a task describing a school problem given at grades 8 and 12, where these older students had a great deal to say and were given 50 minutes to write. Twenty-seven percent at grade 8 and 46 percent at grade 12 wrote elaborated or better responses.

The prompts administered at two grade levels were scored using the exact same criteria for each grade level. As would be expected, twelfth-grade students generally outperformed eighth-grade students. However, in the case of the particularly challenging Invention prompt, performance at grades 8 and 12 was virtually indistinguishable beyond the minimally developed level; even at grade 12, only 5 percent of the students wrote elaborated responses.

The seeds of strong informative writing were found in students' responses at all three grades. The responses were limited, however, in that they did not adhere to the overall purpose of the task nor selectively provide the appropriate information required.

2

Persuasive Writing

Persuasive writing attempts to influence readers to change their thinking or behavior. It may contain great amounts of information, such as facts, details, examples, comparisons, statistics, or anecdotes, but its main purpose is to go beyond the presentation of knowledge in order to persuade others to take some action or bring about some change.[5] It involves having a clear awareness of what arguments might be most effective in persuading the audience being addressed.

In persuasive writing, authors must choose the approach they will use. They can, for instance, use emotional or logical appeals, or an accommodating or demanding tone. Part of the difficulty in persuasive writing is developing the ability to recognize the perspective of the intended audience in order to maximize the chance that the writing will have the desired effect.[6]

[5]D'Angelo, F. J., "Modes of Discourse" in *Teaching Composition*, G. Tate, editor (Fort Worth, Texas: Texas Christian University Press, 1976).

[6]Brewer, W. F., "Literary Theory, Rhetoric, and Stylistics: Implications for Psychology." in *Theoretical Issues in Reading Comprehension*, R. J. Spiro, B. C. Bruce, and W. F. Brewer, editors (Hillsdale, NJ: Lawrence Erlbaum Associates, 1980).

The 1992 NAEP writing assessment included seven different persuasive writing tasks, that presented students with a problematic situation and asked them to state their opinion and explain or support it with reasons or an argument. Brief summaries follow:

Watch TV

Write a letter to your teacher expressing an opinion on a proposed law that would prevent children from watching television, and give reasons for your opinion. (Grade 4)

Space Travelers

Decide whether creatures from another planet should be allowed to return home or be detained for scientific study, and convince the director of the space center of this point of view. (Grade 4)

Lengthen School Year

Take a stand on whether school vacations should be shortened and write a letter to your principal arguing for your opinion. (Grades 4 and 8)

Drug Search

Write an essay for the school board expressing your views about their proposed policy of random drug searches in school. Consider how the proposal affects individual rights and whether it would help control the potential drug problems in schools. (Grades 8 and 12)

Rating Labels

Take a stand on whether negative rating labels should be used to restrict teenagers from buying certain music, and write a letter to the local committee supporting your opinion with reasons. (Grades 8 and 12)

Community Service

Write an essay on whether high school students should be required to perform community service before graduation. (Grade 12)

No Pass/No Drive

Should the state legislature pass a law that students who receive failing grades will lose their drivers' licenses? Write a letter convincing your congressperson of your point of view. (Grade 12; 50 minutes)

Students were required to use their own personal experience and knowledge in constructing a response. Fourth, eighth, and twelfth graders each responded to three 25-minute persuasive writing tasks, several of which

were given to both fourth and eighth graders or eighth and twelfth graders to provide some comparative data. In addition, twelfth graders were asked to respond to one 50-minute persuasive task. Each of the persuasive tasks provided students with detailed instructions about the task and audience.

Achievement in Persuasive Writing

Table 2.1 presents the percentages of student responses at each level for these persuasive writing tasks. Figure 2.1 illustrates the percentages of students writing at or above the elaborated, developed, and minimally developed levels.

The persuasive writing tasks in general posed more difficulty for students at all three grades than did the informative writing tasks discussed in the previous chapter. Fourth graders had particular difficulty with persuasive writing — fewer than one-half of fourth graders (36 to 47 percent) provided responses that were minimally developed or better. At grades 8 and 12, 59 to 76 percent of the students wrote at least minimally developed persuasive responses. Across all three grades, one-fourth or fewer of the students (7 to 25 percent) provided discussions that were at least developed, and no more than 3 percent of the students wrote persuasive letters or essays that were elaborated or extensively elaborated in response to any of the tasks.

Two-fifths or more of the students wrote undeveloped responses — 28 to 41 percent at grade 4, 22 to 29 percent at grade 8, and 20 to 30 percent at grade 12. A considerable proportion of the fourth graders (19 to 26 percent) and some of the older students (3 to 8 percent) seemed at a loss on the persuasive tasks, barely responding to the topics if they responded at all. On the 50-minute task (No Pass/No Drive) given at grade 12, only 25 percent of the students managed a developed or better response, and only 3 percent managed an elaborated one. It is interesting to note that, in response to questions about classroom assignments (see Tables 6.7 through 6.9), eighth-grade teachers and students in grades 8 and 12 reported spending less time on persuasive writing than on informative or narrative writing.

The three tasks administered at more than one grade level showed growth in persuasive writing skills between grades 4 and 8, and between grades 8 and 12. On all three tasks, students at the higher grade levels were more likely than those at the lower grades to provide at least minimally developed responses, and were correspondingly less likely to provide undeveloped responses to the topic.

Table 2.1

Student Performance on Persuasive Writing Tasks, Grades 4, 8, and 12

Writing Task	PERCENTAGES OF STUDENTS						
	No Response	Response to Topic	Undeveloped Response to Task	Minimally Developed	Developed	Elaborated	Extensively Elaborated
Watch TV							
Grade 4	14(1.1)	9(0.9)	41(1.4)	29(1.1)	6(0.6)	1(0.3)	0(0.0)
Space Travelers							
Grade 4	11(0.8)	15(1.0)	28(1.4)	32(1.5)	13(1.2)	2(0.5)	0(0.0)
Lengthen School Year							
Grade 4	11(0.9)	8(0.7)	39(1.3)	34(1.3)	8(1.1)	0(0.2)	0(0.0)
Grade 8	2(0.4)	2(0.3)	22(1.2)	52(1.3)	20(1.1)	2(0.4)	0(0.0)
Drug Search							
Grade 8	4(0.5)	4(0.6)	33(1.3)	51(1.3)	8(0.6)	0(0.1)	0(0.0)
Grade 12	1(0.3)	3(0.6)	26(1.8)	58(1.7)	11(1.0)	1(0.3)	0(0.0)
Rating Labels							
Grade 8	3(0.5)	3(0.3)	29(1.1)	58(1.1)	7(0.6)	0(0.1)	0(0.0)
Grade 12	1(0.3)	2(0.4)	20(1.0)	63(1.3)	13(1.0)	1(0.3)	0(0.0)
Community Service							
Grade 12	2(0.4)	3(0.5)	30(1.5)	52(1.6)	11(1.1)	1(0.3)	0(0.1)
No Pass/No Drive*							
Grade 12	1(0.2)	3(0.5)	23(1.5)	48(1.3)	22(1.3)	3(0.4)	0(0.1)

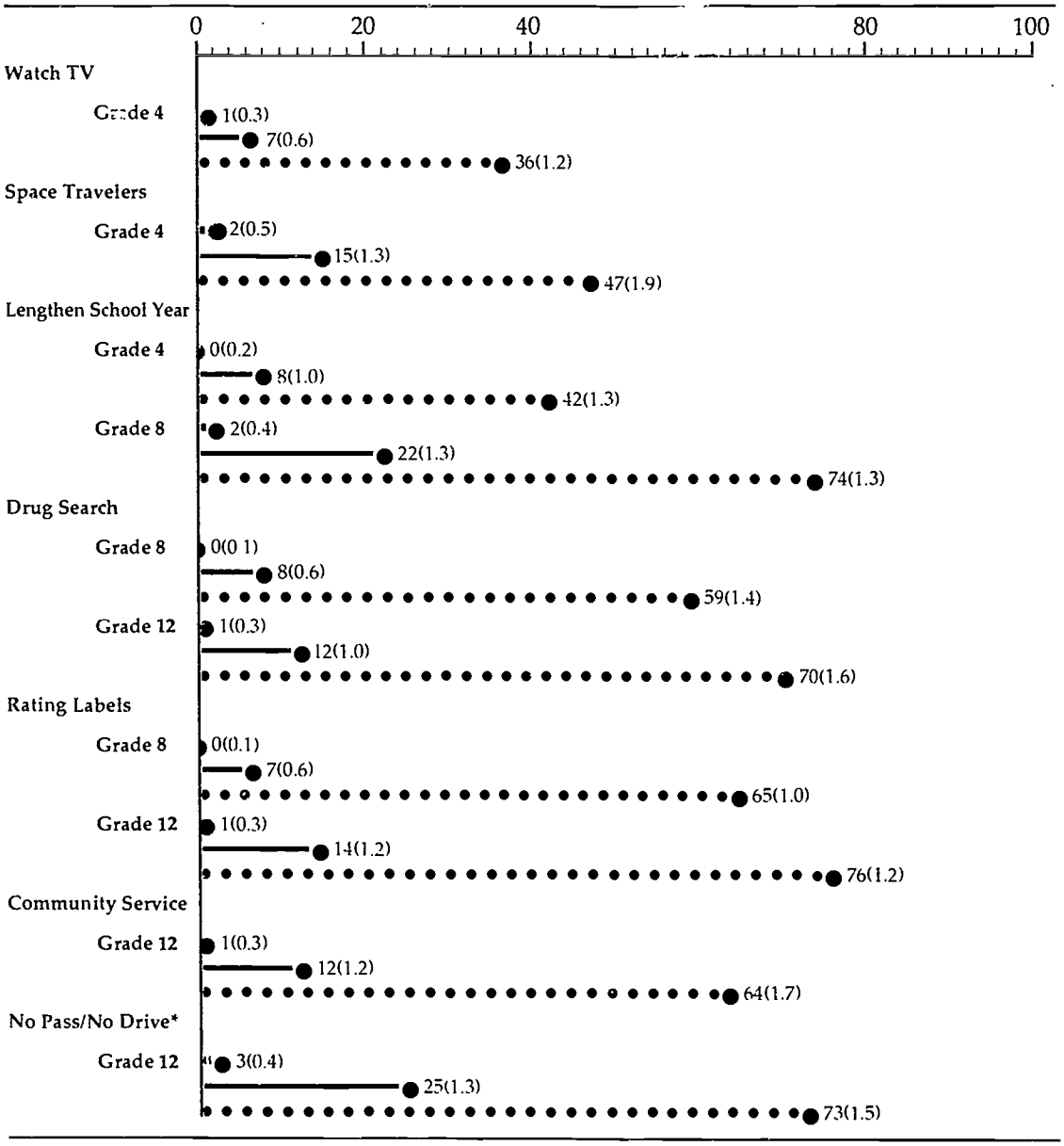
The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). When the proportion of students is either 0 percent or 100 percent, the standard error is inestimable. However, percentages 99.5 percent and greater were rounded to 100 percent and percentages 0.5 percent or less were rounded to 0 percent. Percentages may not total 100 percent due to rounding error.

*Students were given 50 minutes to respond to No Pass/No Drive, 25 minutes for all other persuasive tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Figure 2.1 – Persuasive Writing

Percentages of Student Responses At or Above Elaborated, Developed, or Minimally Developed, Grades 4, 8, and 12



Elaborated or Better Responses
Developed or Better Responses
Minimally Developed or Better Responses

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Combined percentages may differ slightly from the sum of separate percentages shown in TABLE 2.1. The combining was based on unrounded percentages, whereas the percentages shown in the table have been rounded.

*Students were given 50 minutes to respond to No Pass/No Drive, 25 minutes for all other persuasive tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

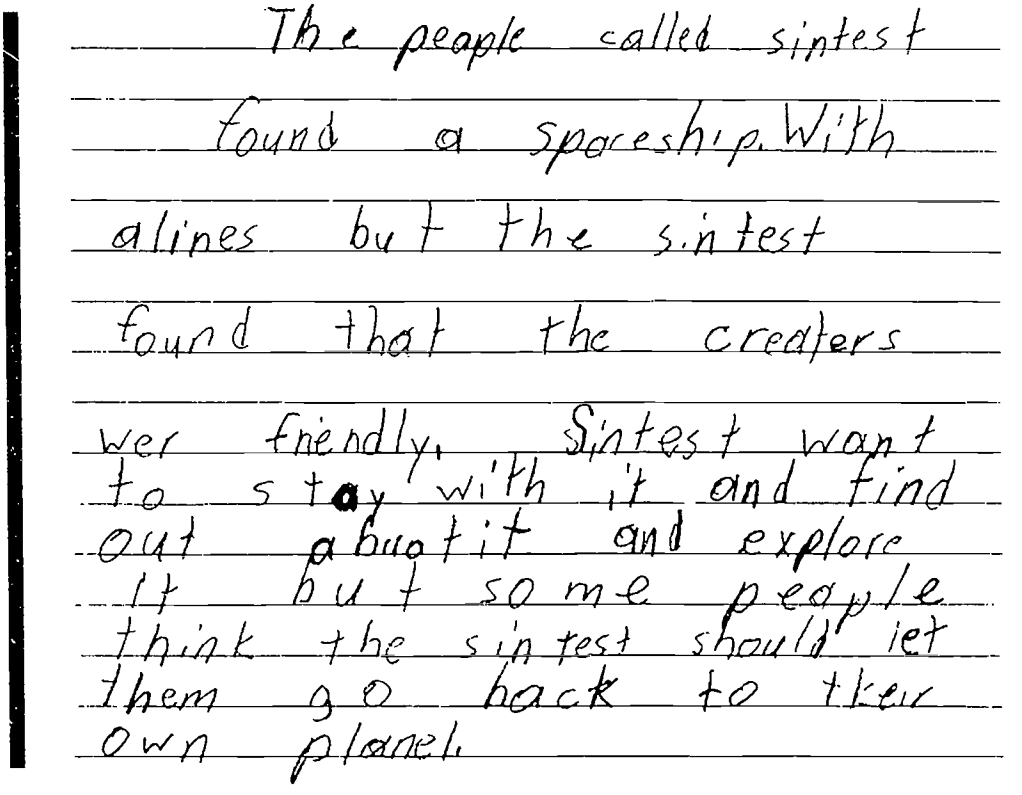
Sample Student Responses

Two of the persuasive tasks — Space Travelers and Drug Search — are discussed below in detail. The remaining tasks are being held secure for possible use in future assessments to measure trends in students' writing achievement.

THE SPACE TRAVELERS TASK — GRADE 4

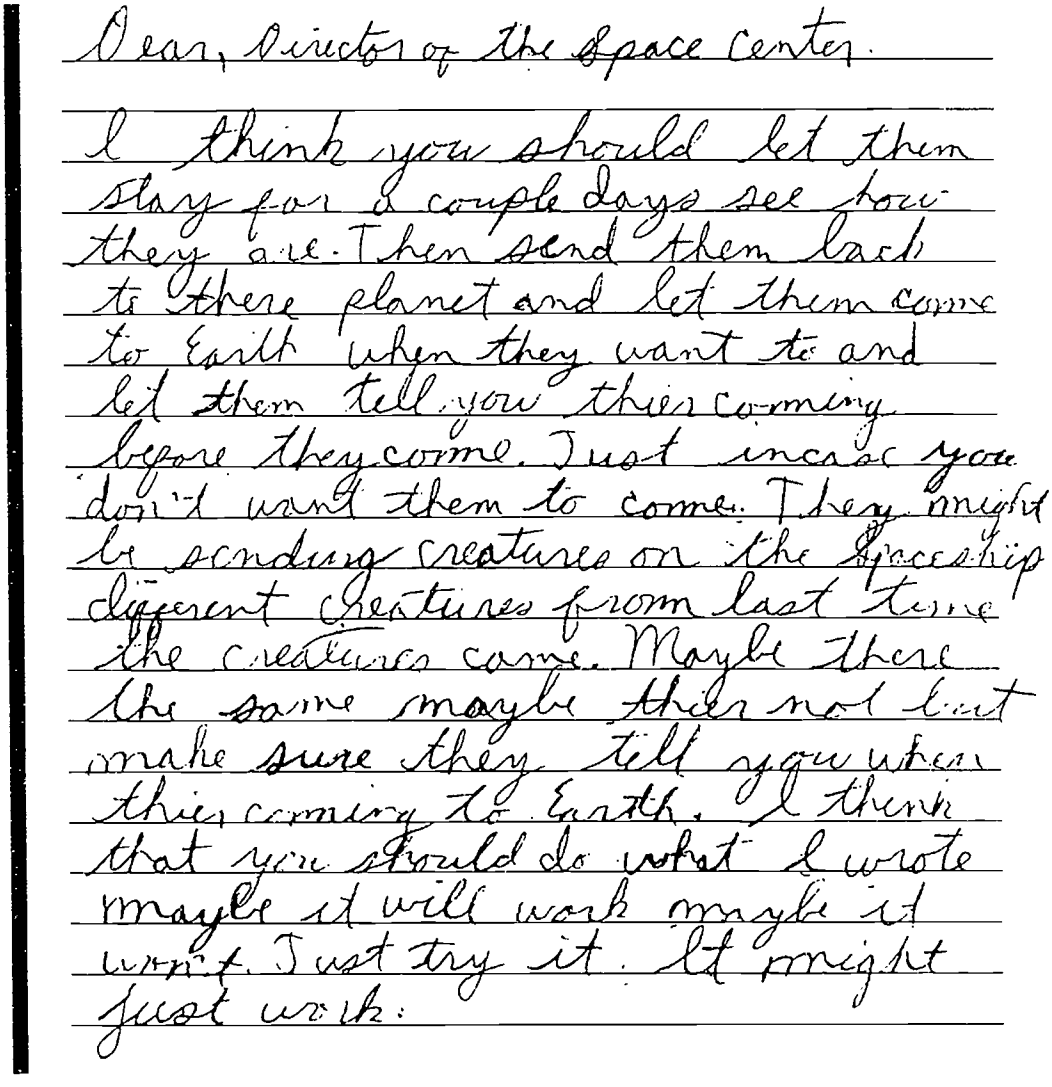
The Space Travelers task asked fourth graders to consider whether friendly creatures from another planet should be allowed to return to their planet. In the scenario, the space creatures have let the United States Space Center know that their ship must return to their planet, but some scientists want to keep the spaceship and study the creatures. The fourth graders were asked to write to the director of the space center telling what should be done and giving reasons to support their ideas.

Fifteen percent of the fourth graders' papers were rated as *response to topic*, the lowest rating. Papers in this category addressed the general topic, but did little more. For example, the following response describes the potential problem between the scientists and the friendly space creatures, but offers no opinion about what should be done.



The people called sintest found a Spaceship. With alines but the sintest found that the creaters wer friendly. Sintest want to stay with it and find out abuat it and explore it but some people think the sintest should let them go back to their own planet.

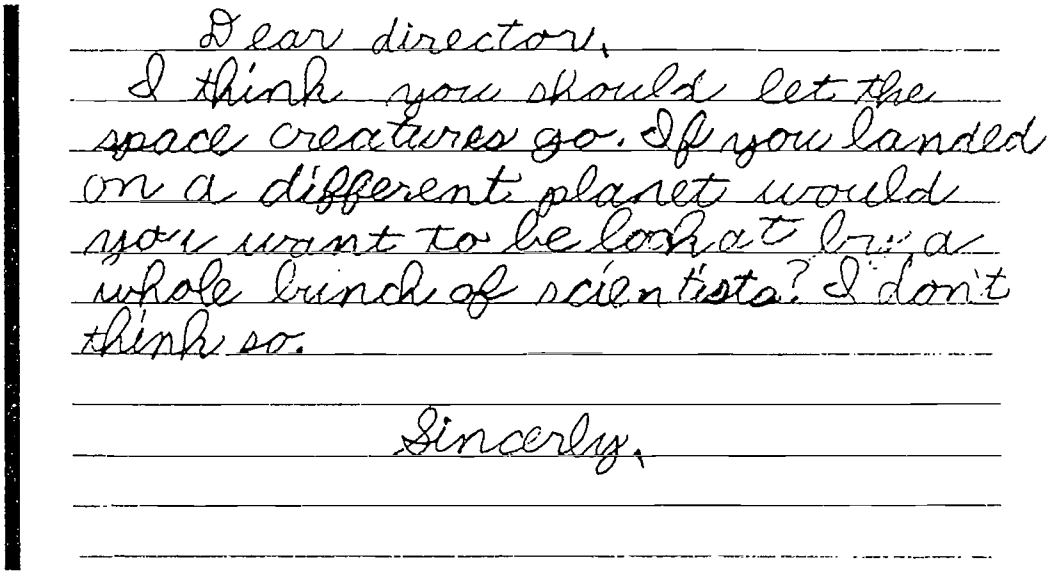
Twenty-eight percent of the fourth graders wrote *undeveloped* responses. Responses in this category provided some suggestions to the director of the space center about possible courses of action, but gave no support for these suggestions. For example, the following writer suggested letting the creatures travel freely between earth and their planet, observing that "maybe it will work maybe it won't." However, no reasons were given for why the plan might or might not work.



Dear, Director of the Space Center.

I think you should let them stay for a couple days see how they are. Then send them back to there planet and let them come to Earth when they want to and let them tell you they coming before they come. Just incase you don't want them to come. They might be sending creatures on the Spaceship different Creatures from last time the creatures came. Maybe there the same maybe they not but make sure they tell you when they coming to Earth. I think that you should do what I wrote maybe it will work maybe it won't. Just try it. It might just work.

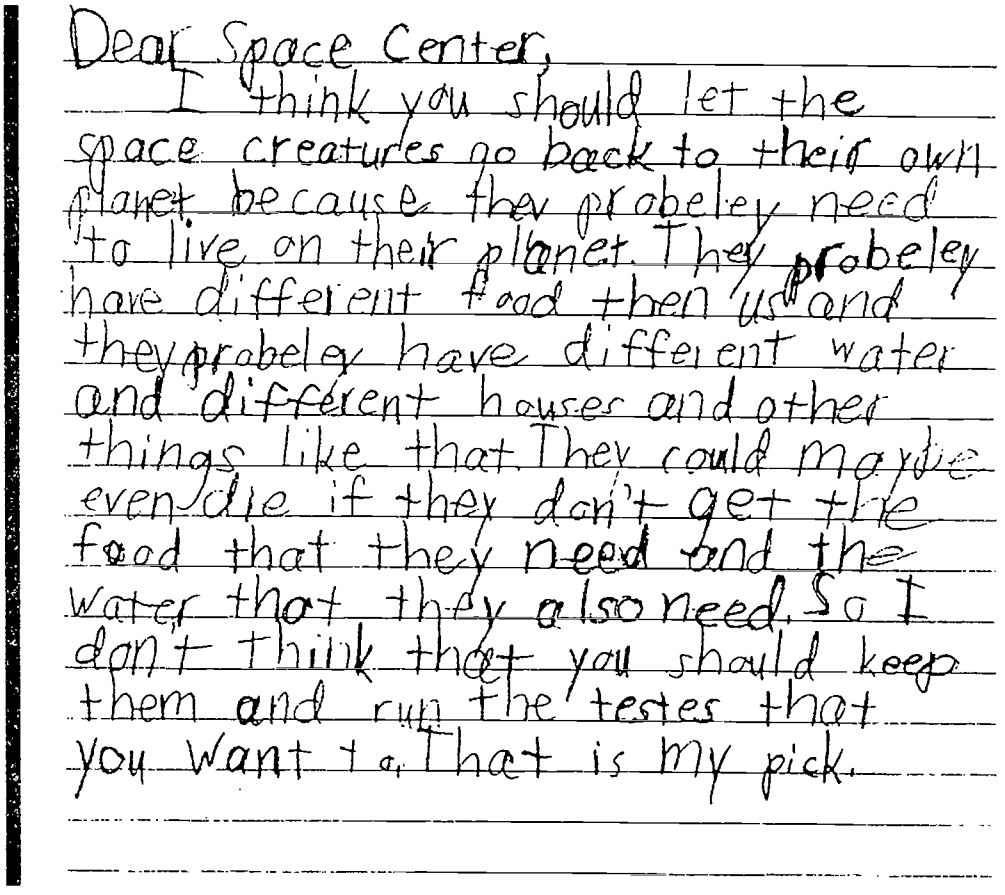
About one-third of the fourth-grade responses (32 percent) were rated as *minimally developed*. Papers in this category offered advice and gave brief reasons, but did not explain the reasons in ways that might convince a reader. For example, the following paper contains clear advice accompanied by an emotional appeal about the propriety of studying the space creatures. However, the ideas offered are unelaborated — unexplained and undefended.



Dear director,
I think you should let the space creatures go. If you landed on a different planet would you want to be look at by a whole bunch of scientists? I don't think so.

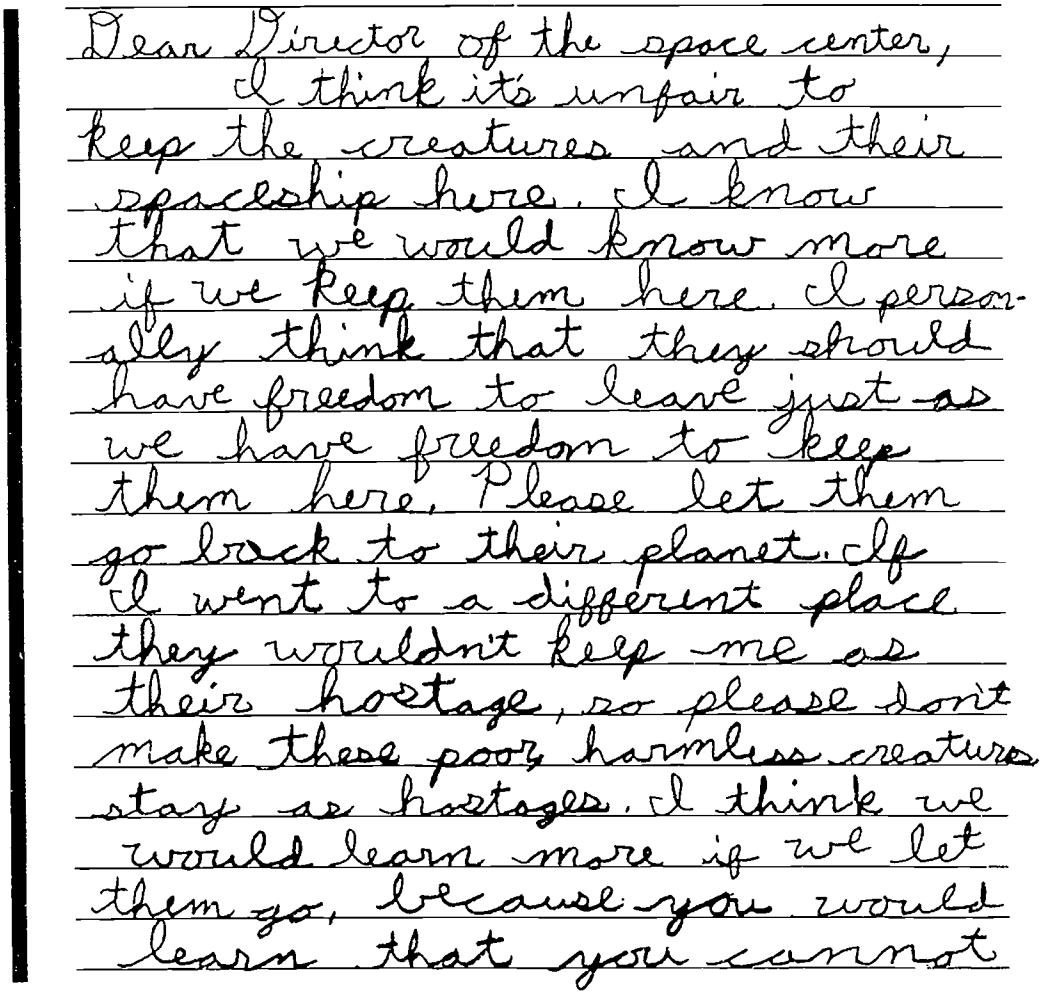
Sincerly,

Thirteen percent of the fourth-grade responses were rated as *developed*. Papers in this category both posit a course of action and briefly explain why it is sensible, with sufficient explanation to possibly convince others of the plan's value. The following example contains both a clear plan and a short argument about why the space creatures should be allowed to return to their own planet.



Dear Space Center,
I think you should let the space creatures go back to their own planet because they probeley need to live on their planet. They probeley have different food then us and they probeley have different water and different houses and other things like that. They could maybe even die if they don't get the food that they need and the water that they also need. So I don't think that you should keep them and run the testes that you want to. That is my pick.

Two percent of the fourth-grade papers were classified as *elaborated*. Responses in this category either included a number of reasons why their suggested plan might work or a coherent plea similar to the one presented below.



Dear Director of the space center,
I think its unfair to keep the creatures and their spaceship here. I know that we would know more if we keep them here. I personally think that they should have freedom to leave just as we have freedom to keep them here. Please let them go back to their planet. If I went to a different place they wouldn't keep me as their hostage, so please don't make these poor harmless creatures stay as hostages. I think we would learn more if we let them go, because you would learn that you cannot

know everything, somethings have to be secrets. If we let them go they just might let us in on a few secrets about them, how they live, and where they live. So I'm begging you to let them go, and live their own lives, on their own planet.

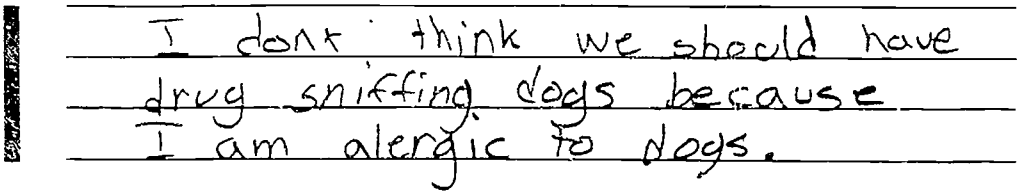
Yours Truly,

No fourth graders wrote responses rated *extensively elaborated*. To receive this rating, papers needed to be very persuasive — clearly written, well organized, and providing the type and amount of explanation or argument that might well convince their intended reader of the value of their plan. An example of this level of response to a persuasive task is presented in the discussion of eighth and twelfth graders' responses to the Drug Search task.

THE DRUG SEARCH TASK — GRADES 8 AND 12

Eighth and twelfth graders were asked how they would feel about a proposal by their local school board allowing school administrators to search students' lockers and personal belongings for drugs. According to this proposal, students found possessing drugs would be subject to arrest. Eighth and twelfth graders were asked to express their views about the proposal in an essay that hypothetically would be sent to the school board. In this particular persuasive task, the students were asked to weigh whether the proposal would affect individual rights and whether it would help control the potential drug problems in schools.

Only a few eighth and twelfth graders (4 and 3 percent, respectively) wrote papers that went no further than *response to topic*. These papers tended to mention something about drugs in schools, but did not posit a view about whether drug problems should be controlled. For example, the following paper reacts to the idea of drug sniffing dogs, but does not take a stand on drug searches.


I dont think we should have drug sniffing dogs because I am alergic to dogs.

About one-third of the eighth-grade papers (33 percent) and one-fourth of the twelfth-grade papers (26 percent) were rated as *undeveloped*. Papers in this category took a stand and provided a general or briefly stated reason supporting that stand. However, this reason was not developed, rendering it an insufficient argument to convince a reader of the worth of the idea. The response that follows is typical of student writing at this level.

I think that it would help because I think they need to keep the drugs out of the school. And I think that is our way to keep drugs out of school.

The majority of eighth- and twelfth-grade responses (51 and 58 percent, respectively) were rated *minimally developed*. Responses in this category contained a few reasons or a brief, general argument to support a position. For example, in the response below, the student took a stand, supporting it primarily with generalities rather than specific reasons.

My opinion on the subject of searching through lockers and personal belongings, is that this is an invasion of privacy.

Although many people may think that this is a good idea, it shows that no one has trust in teenagers today. This lowers their confidence and self-esteem.

As far as the drug-sniffing dogs are concerned, that is not a bad idea. If there were

any drugs in the school, they would be found by the dogs, and not by people searching through other people's personal belongings.

I believe that no one trusts kids today. I also believe that this has to stop because even though we are kids, we can tell a wrong from a right. And we know that the desicions we make affect us in every way. Of course, there are some kids that use drugs, drink, and have other bad influences. But it is our desicion to either stay away from them or do what they do.

Only 8 percent of the eighth-grade responses and 11 percent of the twelfth-grade responses were rated as *developed*. Such papers, in addition to taking a stand, provided a cohesive discussion, usually addressing both the issue of individual rights and the issue of controlling drugs in schools. An example of such a response is presented next.

I would support a proposal, by the school administrators, to have drug-related crime prevention. Drug related Crime in inner city schools has become ridiculous. Someone needs to take action on these teen delinquents.

Drug-related crimes do not usually occur in a small school More over I think steps should be taken to secure the little schools too.

I think all school administrators should consider such a proposal. Administrators, dogs and police are infringing on the rights of the students, but what other way is there to stop illegal drug use.

This proposal would most definitely help the drug problems in schools. This would cause teens to be scared to transact drugs on school property. Or even bring them to school. No teen wants to be embarrassed by the police or administrators in front of their friends. Not only would he or she be embarrassed but word would get through the school like wildfire. The student should be suspended and disallowed to return to that school indefinitely.

This proposal would surely make teens think before bringing and selling

drugs at school. All school administrators should have an open mind and be willing to accept the challenge of ensuring this high school's (teens') future.

Only 1 percent of the twelfth graders and a handful of eighth graders wrote papers rated either *elaborated* or *extensively elaborated*. The following examples illustrate the capabilities of these few students. The essay below, which was rated "elaborated," contains details about the issue of individual rights, proposes an alternative approach to solving the problem of drugs in schools, and has a conclusion.

Our country has certain qualities which separate it from many others in the world. One of these is our Constitution and its amendments. This piece of work represents our ideal of a nation whose principals are based on free-choice, good of the whole, and individual rights. When individual rights become threatened we often lose our esteem as a great country. This is why I feel that at all times they must be preserved. Our high school is planning to propose a plan where drug searches will be made in lockers and personal belongings

of students Drug sniffing dogs will also help in the search. I'll show in this essay how these action violate every students individual rights, and how the school can't possibly do this legally.

Our Bill of Rights contains the 1st ten amendments to our Constitution. The fourth(2) prevents the use of illegal search and seizure. By carrying out the proposed the school would be violating this amendment. Every student has his/her own right to privacy, especially at school, a time they get away from home pressures. According to local law our officials need probable cause to violate the search and seizure clause. By doing these mandatory checks, the board will need no probable cause, and will be granted power to still further the search. As you can see the proposal violates many of our founding beliefs and ideas. Our country has been standing strong for 200 years and I believe there's a reason. I believe we have stayed with the values our forefathers portrayed, over all this time. To violate them now could lead to a dislike of our leaders & officials. We do not need

to start restructuring our ideals now. The strength of our whole is in each of us individually.

Next I'd like to propose that the Board restructure its bid. I feel the need for action is neccessary with the drug problem, However we cannot violate individual rights in doing so. I think the board needs to possibly look into a student network, or anonymous hot-line. These two programs could show the school the prime suspects and the board could concentrate their powers on finding probable cause for a search. I believe this way our rights are kept and even a major problem will still be fought.

In Conclusion I hope you see my point with this issue. The drug search proposal violates our rights guaranteed to us from the day we were born. I do think however our board needs to look for new ways to combat the drug problem. All of these I feel will promote a closer, healthier, popular nation.

The following essay, rated "extensively elaborated," while not as detailed in content, shows a sophistication of argument quite rare nationwide.

Our founding fathers created the United States Constitution to outline a fair government and to maintain the equality of all men. The County School Board is proposing legislation that would alienate all those rights guaranteed to us through our constitution. While the proposal of strict drug enforcement may sound needed, and even appealing, it undermines the very principles that our country stands for.

The United States has always stood for equality and justice, often serving as a beacon of hope to those oppressed in far off lands. One of the truths that we have held to be self-evident is that of equal rights. In society, a legal search can be completed only after a search warrant is obtained by police. This assures justice and fairness throughout the legal process. Students on the high school level should not be deprived of these rights to privacy. If an administrator feels that a search is necessary on a particular student's locker, they should be required to obtain a proper and legal search warrant.

The high school atmosphere is a breeding ground for our Country's future leaders. The principles and morals that are to be instilled upon these students now will most definitely carry on into their future endeavors. We must teach these students fairness and equality. Otherwise there will be an environment of deceit and corruptness will do much more harm than the present drug problem.

The School Board has shown a much needed initiative in the war against drugs. However, the method chosen can not be used. The drug problems in high schools are most definitely increasing and must be stopped. On the same token, we must not sacrifice our Country's ethics and morals as we wage this war. It is mandatory that a new course of action be taken to combat this problem. If the actual motive of the proposal is to benefit the students, it is definite that the legislative powers will also concur. A new proposal must be orchestrated with the sole purpose of combating the drug problem, not causing turbulence on the moral and ethical level of our youths

Summary

Across the three grades assessed, only 7 to 25 percent of the students wrote developed or elaborated responses to the persuasive tasks, many of which touched issues relevant to their experiences and interests: curtailing television viewing, lengthening the school year, placing rating labels on music, and instituting mandatory community service, to name a few. Most students provided undeveloped or minimally developed responses. They generally made their opinions understood and presented one or two brief reasons in support of their points of view, but very few could develop their responses further. Even when twelfth graders were given 50 minutes in which to organize and orchestrate their points about whether drivers' licenses should be revoked for students with failing grades, only 3 percent of the responses were rated as elaborated or better.

3

Narrative Writing

Narrative writing involves production within such literary genres as stories or personal essays involving fact or fantasy. Sometimes it invites students to incorporate their personal observations, experiences, or beliefs into their writing. At other times it encourages students to go beyond their own experiences — to imagine other possibilities and other worlds.[7] Students' perceptions of events, both real and imagined, form the basis for thinking and writing both creatively and critically. Narrative writing provides opportunities for students to consider others' perspectives, to gain insights into the human condition, and to explore and interpret reality.[8] It fosters creativity and speculation by allowing the student to stand back as a more detached observer and grasp what is being felt and why. Thus, narrative writing offers an opportunity for students to analyze and understand emotions and actions.

[7]Moffett, J., *Teaching the Universe of Discourse* (Boston, MA: Houghton Mifflin, Co., 1968).

[8]Kinneavy, J. L., *A Theory of Discourse* (Englewood Cliffs, NJ: Prentice-Hall Inc., 1971).

The 1992 assessment provided students with three narrative writing tasks at grade 4 and four tasks at both grades 8 and 12; most of these were given in 25 minute time periods, with one of the tasks at grade 8 and one at grade 12 designed for 50 minutes.

Brief summaries of the narrative tasks follow:

Pet Dinosaur

Pretend that you have raised a pet dinosaur and write about one of your experiences together. (Grade 4)

Magical Balloon

Imagine that you own a magical balloon and write about one of your adventures with it. (Grade 4)

Another Planet

Write a story about an adventure as a space traveler on another planet. (Grades 4 and 8)

Dream Car

Create a dream car and write about an adventure with your imaginary car. (Grade 8; 50 minutes)

Embarrassing Incident

Think about an embarrassing situation you have been in and describe what happened. (Grades 8 and 12)

Grandchildren

Imagine that you are a 70-year-old grandparent. Write a story about something from your youth that you would tell to your grandchildren in the 21st century. (Grades 8 and 12)

Package

Pretend that someone hands you a package that will change your life and write a story about it. (Grade 12)

History Person

Choose any person from history and imagine that you spend a day together. Write a story about what happens. (Grade 12; 50 minutes)

The tasks ranged from purely imaginative pieces, such as fourth graders writing about an adventure with a magical balloon, to the retelling of a particularly embarrassing incident by eighth and twelfth graders.

As with the persuasive writing tasks, students sometimes had to consider both their audience and their role as writer. One prompt, for instance, asked them to assume the role of a grandparent telling a story to grandchildren in the 21st century. This required students both to fashion a suitable story for grandchildren and to adopt the imaginary role of a 70-year-old. The students who performed best as narrative writers created an engaging literary work while maintaining a clear awareness of the emotions of the story characters and the audience.

Achievement in Narrative Writing

Table 3.1 presents the percentages of student responses at each level for these narrative tasks, with Figure 3.1 illustrating the percentages at or above the elaborated, developed, and minimally developed levels. Across all three grades, 55 to 86 percent of the students wrote at least minimally developed narrative responses for the 25-minute tasks. However, only about one-fourth of the students at grade 4 (20 to 29 percent) and about one-half at grades 8 and 12 (30 to 59 percent) wrote developed or better responses. Only 2 to 13 percent of the responses were elaborated or better, indicating that most students had difficulty producing advanced narrative writing when assigned a topic within a specific time period.

Responses to the two 50-minute tasks (Dream Car at grade 8 and Person from History at grade 12) showed similar results, although there was a greater proportion of elaborated and extensively elaborated responses at grade 8 for Dream Car than for the other three tasks at that grade (21 percent versus 4 to 8 percent). At grade 12, the percentages of elaborated or better responses did not differ according to time given (14 percent for History Person versus 10 to 16 percent for the other three tasks).

Responses to topics given at more than one grade level reflected growth in narrative writing skills between grades 4 and 8 and between grades 8 and 12. On all three tasks, improvements in the responses at the higher grade level occurred primarily in the proportion of developed and elaborated responses, with corresponding decreases in the proportion of undeveloped responses.

Table 3.1

Student Performance on Narrative Writing Tasks, Grades 4, 8, and 12

Writing Task	PERCENTAGES OF STUDENTS						
	No Response	Response to Topic	Undeveloped Response to Task	Minimally Developed	Developed	Elaborated	Extensively Elaborated
Pet Dinosaur							
Grade 4	5(0.7)	4(0.6)	30(1.4)	37(1.4)	21(1.5)	3(0.5)	0(0.2)
Magical Balloon							
Grade 4	5(0.8)	6(0.8)	19(1.3)	41(1.5)	25(1.5)	4(0.5)	1(0.2)
Another Planet							
Grade 4	6(0.8)	7(0.6)	32(1.5)	35(1.5)	18(1.3)	2(0.4)	0(0.2)
Grade 8	2(0.4)	2(0.4)	15(0.7)	36(1.5)	37(1.5)	7(0.6)	1(0.2)
Dream Car*							
Grade 8	3(0.5)	3(0.5)	27(1.0)	19(1.2)	27(1.3)	15(1.0)	6(0.6)
Embarrassing Incident							
Grade 8	3(0.5)	4(0.6)	28(1.3)	35(1.1)	25(1.2)	4(0.6)	0(0.1)
Grade 12	1(0.3)	3(0.4)	10(0.8)	28(1.2)	43(1.5)	14(1.1)	2(0.4)
Grandchildren							
Grade 8	3(0.5)	2(0.3)	32(1.2)	31(1.3)	28(1.2)	4(0.5)	1(0.3)
Grade 12	1(0.3)	3(0.5)	22(1.1)	31(1.3)	30(1.1)	11(0.8)	2(0.5)
Package							
Grade 12	2(0.3)	4(0.6)	14(1.2)	33(1.5)	37(1.3)	9(0.9)	1(0.2)
History Person*							
Grade 12	1(0.3)	2(0.5)	17(1.2)	42(1.6)	23(1.3)	11(1.0)	4(0.6)

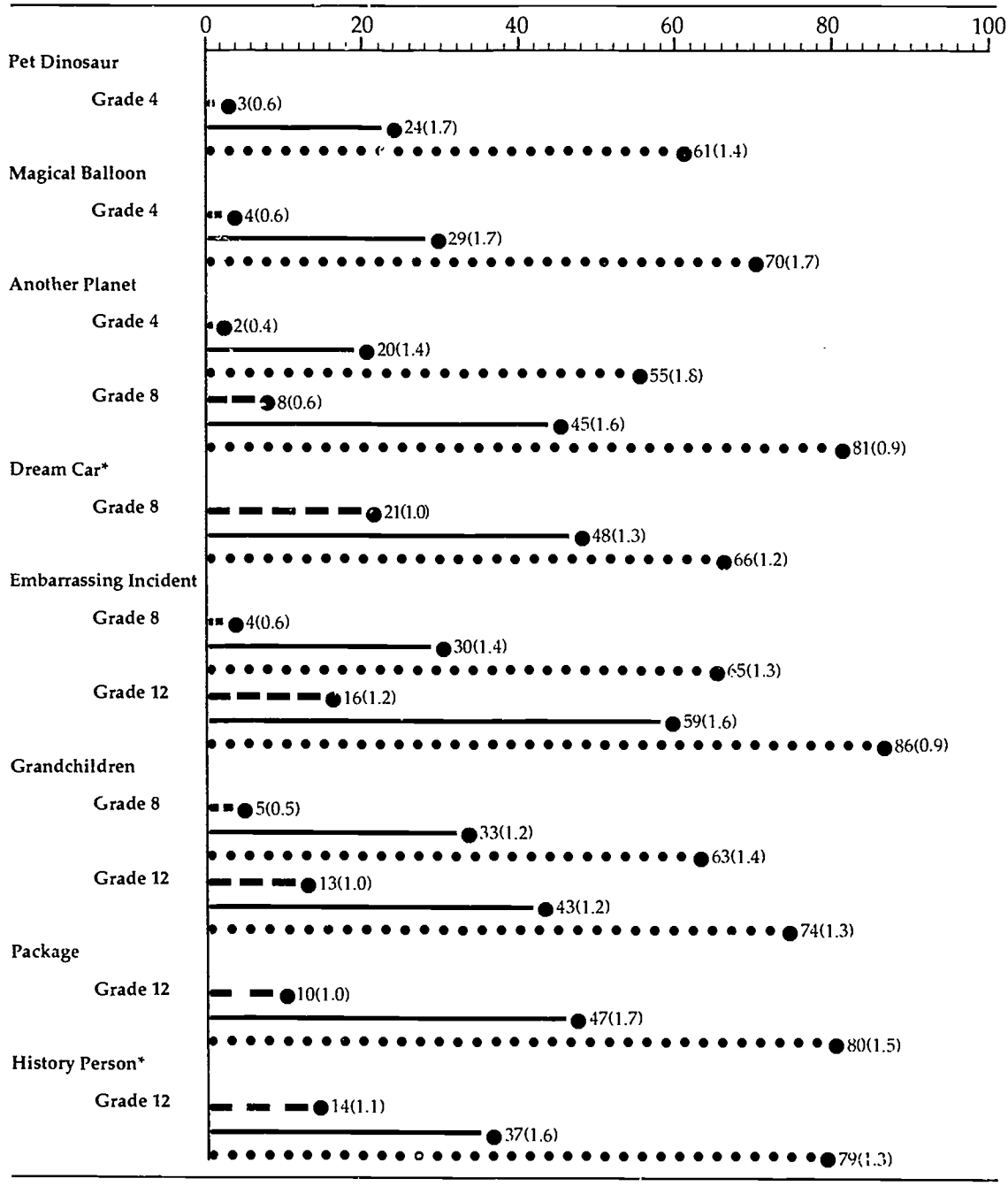
The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). When the proportion of students is either 0 percent or 100 percent, the standard error is inestimable. However, percentages 99.5 percent and greater were rounded to 100 percent and percentages 0.5 percent or less were rounded to 0 percent. Percentages may not total 100 percent due to rounding error.

*Students were given 50 minutes to respond to Dream Car and History Person, 25 minutes for all other informative tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Figure 3.1 – Narrative Writing

Percentages of Student Responses At or About Elaborated, Developed, or Minimally Developed, Grades 4, 8, and 12



Elaborated or Better Responses
Developed or Better Responses
Minimally Developed or Better Responses

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Combined percentages may differ slightly from the sum of separate percentages shown in TABLE 3.1. The combining was based on unrounded percentages, whereas the percentages shown in the table have been rounded.

*Students were given 50 minutes to respond to Dream Car and History Person, 25 minutes for all other narrative tasks.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

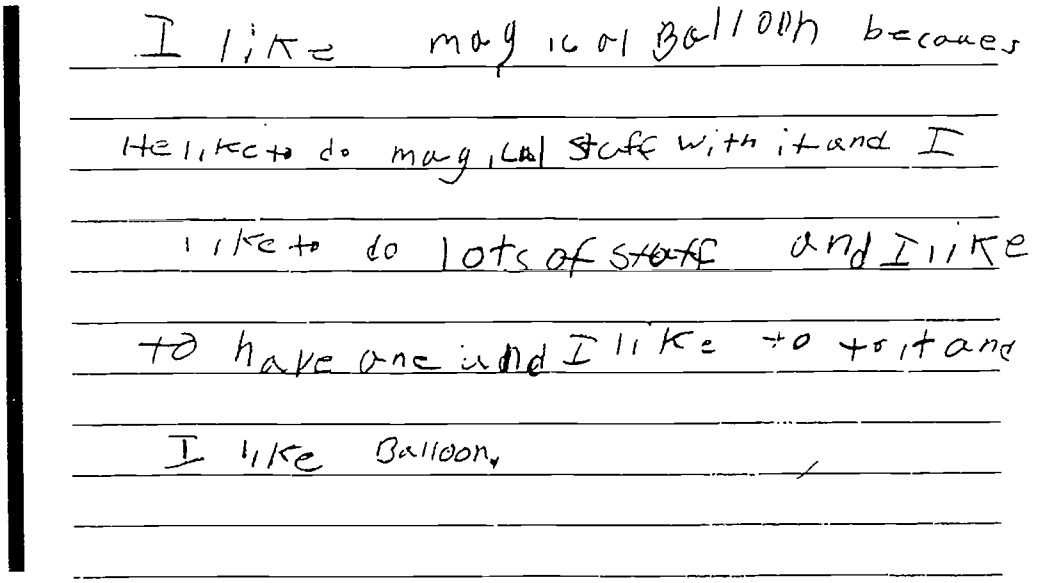
Sample Student Responses

Responses to two of the narrative tasks (Magical Balloon at grade 4 and Embarrassing Incident at grades 8 and 12) will be used to illustrate levels of student performance. Other tasks are being held secure for possible use in future assessments.

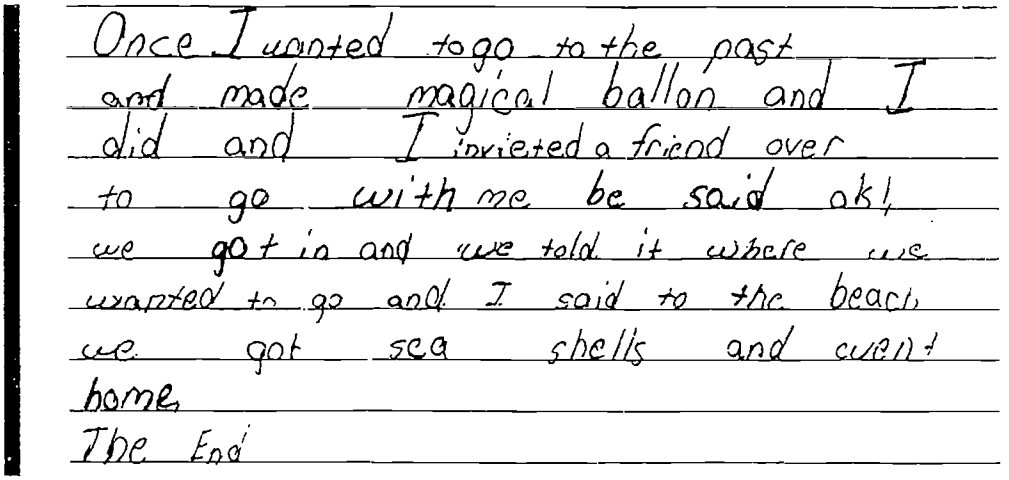
THE MAGICAL BALLOON TASK — GRADE 4

The Magical Balloon prompt asked students to write a story about a magical balloon that helped them have a wonderful adventure. The task encouraged students not only to use their imagination in creating a persona for the balloon, but also in describing their escapades together.

On this task, writing categorized as *response to topic* mentioned balloons or something magical, but did not tell of an adventure with a special balloon. Only 6 percent of the fourth-grade students provided this type of response, as illustrated in the example below.


I like magical Balloon because
He like to do magical stuff with it and I
like to do lots of stuff and I like
to have one and I like to to it and
I like Balloon.

One-fifth (19 percent) of the fourth-grade responses to the Magical Balloon task were classified as *undeveloped*. These responses began to tell a story about a magical balloon, but they did not progress beyond providing an initial setting or describing routine events. The example below, in which the student very briefly mentions a conventional trip to a beach, is typical of the responses in this category.


Once I wanted to go to the past and made magical ballon and I did and I invieted a friend over to go with me be said ok! we got in and we told it where we wanted to go and I said to the beach we got sea shells and went home.
The End

Nearly half of the responses (41 percent) were *minimally developed*. These responses addressed the imaginative situation of having a magical balloon, but failed to develop a clear sequence of events that composed an adventure and often contained gaps that made it difficult to follow the plot. In the following example, the student had an adventure at the fair, but it remains unclear as to who shot the balloon and why.

The magical balloon

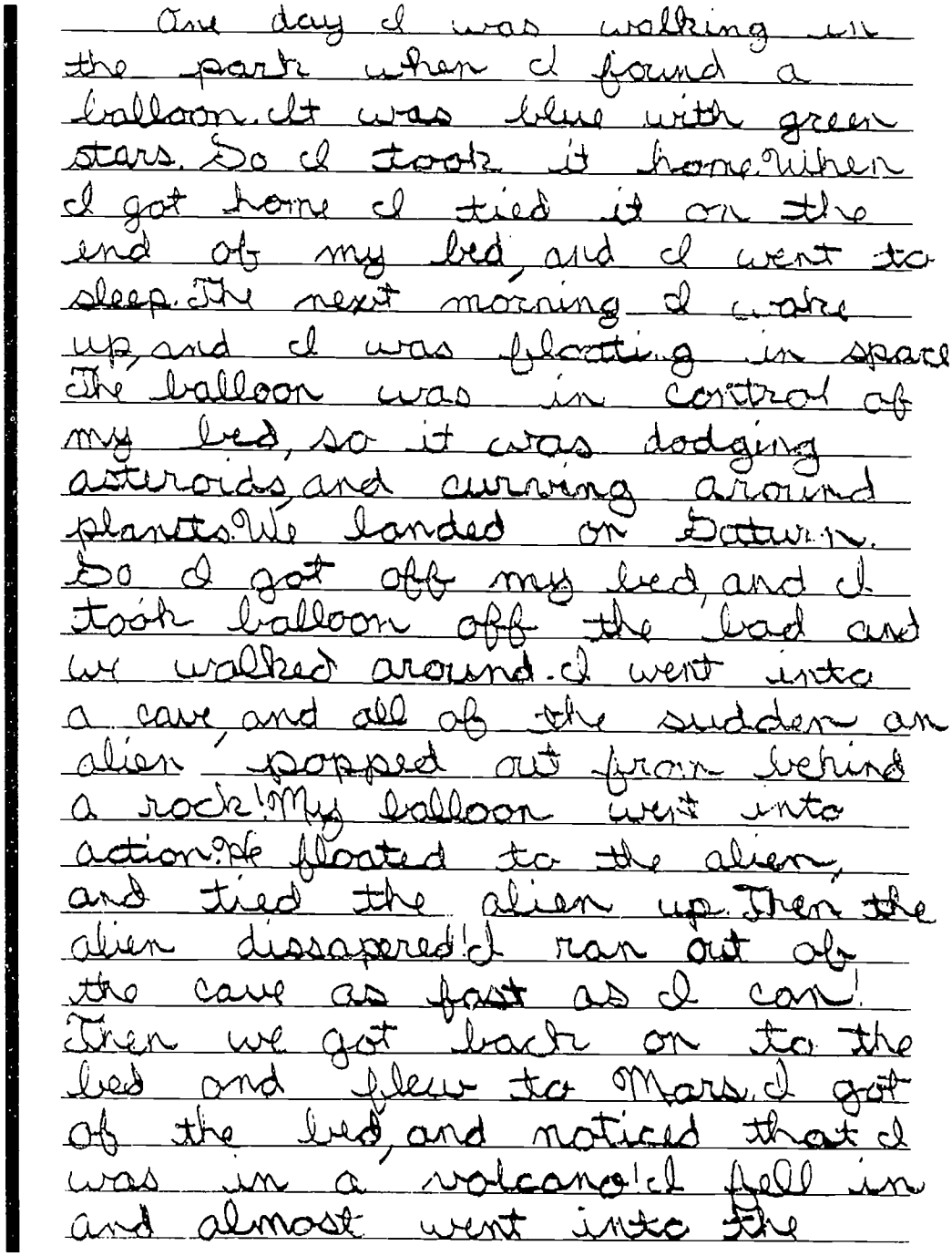
One day me and my family went to the fair. I saw a game that I liked so I asked my mom and dad could I have a ticket so they gave me a ticket and they said I went to play the game. I put the ticket in the machine and I began to play. When I started I had to shoot down five dusk and I did. I won a big balloon. I got the balloon. I started flowing in the air they shot it down once but it went back up in the air so they shot it down that time it did not go back up so I let go of it.

THE END

Approximately one-quarter (25 percent) of the responses were *developed* stories that were sequenced appropriately. These stories were clearly presented, but lacked the depth and richness of detail that characterized the more elaborated responses. For example, in the following paper the writer tells a clear story about an adventure with a magical red balloon, but the plot of the story is very simple.

I was strolling about in my neighborhood. It was a hot, sunny day. As I was strolling something suddenly happened. There was a magic balloon parked right in front of my house. I started walking toward the balloon slowly. When I was close enough I saw that the red, magical balloon was empty, so I started crawling in it. All of a sudden the balloon started floating. I was afraid at first, but then I started getting used to it. The magic balloon took me to another world, with colorful butterflies and hopping toads. It had a pond with water liles. This place was beatiful. It was an adventure. Then the magical balloon returned me home. This was a wonderful and super day.

Elaborated stories used inventive details or multiple episodes to describe an engaging adventure with the balloon. Just 4 percent of the fourth graders' responses were classified as elaborated. In the example below, the student tells of an exciting adventure in space, though the story becomes slightly rushed toward the end.



One day I was walking in the park when I found a balloon. It was blue with green stars. So I took it home. When I got home I tied it on the end of my bed, and I went to sleep. The next morning I woke up, and I was floating in space. The balloon was in control of my bed, so it was dodging asteroids, and running around planets. We landed on Saturn. So I got off my bed, and I took balloon off the bed and we walked around. I went into a cave, and all of the sudden an alien popped out from behind a rock! My balloon went into action! It floated to the alien, and tied the alien up. Then the alien dissapered! I ran out of the cave as fast as I can! Then we got back on to the bed and flew to Mars. I got of the bed, and noticed that I was in a volcano! I fell in and almost went into the

lasso, but my balloon caught me just in time. Finally we went home. I was glad to be back.

The End

Just 1 percent of the fourth-grade students' responses to the Magical Balloon task were classified as *extensively elaborated*. These stories included extensive details within episodes and suggested characters' feelings or underlying motives, organized into a cohesive narrative.

I was riding in my magical balloon one day and the wind came and blew my magical balloon over the sea and I didn't know what to do because I was going miles away from my home. I thought I would crash into the waterfall which was getting closer and closer. I kept saying to myself how good life was and finally said, "I wish I was home with my family!" Then before I knew it, I was with my family!

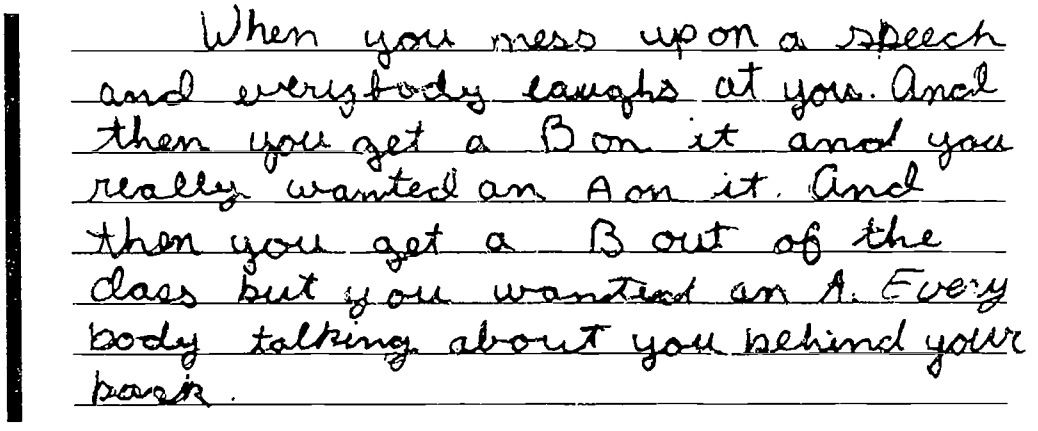
I tried to tell my family about my journey over the sea and how my balloon really was magic but they told me to quit making up stories. Well then I got to thinking, what if the journey was really made up in my head? What if I really just imagined everything. There was an easy way to find out and I was going to. I went outside and I said, "I wish my dog Skippy was back." I know there was no way that Skippy could come back after what happened to her. Then all of a sudden, she was back! Every since then I have had great journeys and everything I want just from my magic balloon.

The End

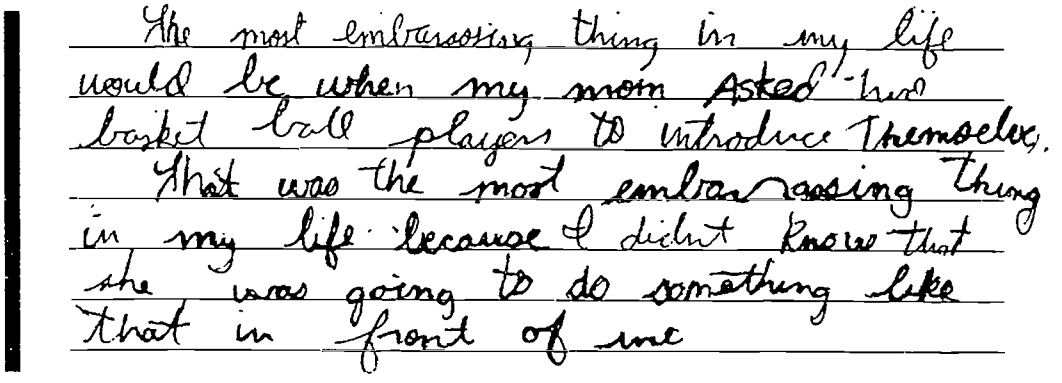
THE EMBARRASSING INCIDENT TASK — GRADES 8 AND 12

The Embarrassing Incident task asked students to write a story about something embarrassing that had happened to them. Here, students were not required to use their creativity to invent an episode; instead, they had to manipulate an actual event to create a convincing, and often amusing, narrative. Twelfth graders showed their best narrative performance on this topic, with 59 percent writing responses that were developed or better.

Students whose writing was rated as *response to topic* did not demonstrate a clear understanding of the task. Four percent of the eighth-grade responses and 3 percent of the twelfth-grade responses were classified as response to topic. Most of these responses mentioned general situations that could cause embarrassment without identifying a specific embarrassing moment from their past, as in the example below.


When you mess up on a speech and everybody laughs at you. And then you get a B on it and you really wanted an A on it. And then you get a B out of the class but you wanted an A. Every body talking about you behind your back.

Twenty-eight percent of the eighth-grade responses and 10 percent of the twelfth-grade responses to the embarrassing incident task were rated as *undeveloped*. These papers identified a particularly embarrassing incident, but they failed to create a story from it, as the following example illustrates.


The most embarassing thing in my life would be when my mom Asked the basket ball players to introduce themselves. That was the most embarrassing thing in my life because I didnt Know that she was going to do something like that in front of me

The *minimally developed* responses had a clear beginning, middle, and end, but they were marked by brevity and a lack of detail. Often the sense of embarrassment was not evident. Thirty-five percent of the eighth-grade responses and 28 percent of the twelfth-grade responses were rated as minimally developed. Most of these failed to elaborate on why the incident was so mortifying. The next example illustrates the limitations in these responses.

One day I was called down to the nurses office to take a hearing test. I knew that I did have a slight hearing problem however I didnt want it to be bad enough that I could have to get a hearing test. So I just started raising my hands so it looked like I could here the noises. Before long the nurse said mam we havent even started the test yet! I was so embarressed but now that I look back at the experience it brings laughter to me everytime.

Approximately one-quarter (25 percent) of the eighth-grade responses and nearly half (43 percent) of the twelfth-grade responses were rated as *developed*. As the example below demonstrates, these responses included details about the experience and attempted to create a mood through such literary devices as foreshadowing.

I caught the ball and slowly started dribbling towards the basket. Each bounce of the basketball echoed in the gym, and with each bounce I gained speed. I glanced over my right shoulder and saw that I had a clean breakaway. My teammates yelled out "Kamarine! Kamarine!," and I took their excited voices as encouragement. The sweat droplets rolled down my face as I neared the basket. I went up into my lay-up like I had always practiced. One step, two steps, shoot! The ball went through the hoop and I exploded with excitement. As I turned around with a proud smile on my face, I noticed all of my teammates bent over in anxiety. The crowd was laughing, my coach was yelling, and the other team was cheering. I had shot at the wrong basket!

Fourteen percent of the twelfth-grade responses and 4 percent of the eighth-grade responses were *elaborated*. These responses went a step beyond developed responses by providing more detail and by describing the cause of the embarrassment. In the example below, the student describes her first day as a waitress in great detail.

I am a waitress. For the past six months I have been unjustly waiting tables at an elegant steak and seafood restaurant. When a friend of mine suggested that I apply to work with her, I was skeptical. I had never before waited tables, and I had this unbreakable preconceived notion that waitresses were goddesses. They had to be, or how else could they carry those huge trays with a myriad of plates of different shapes and sizes without dropping them! I, unfortunately, am a mere human, and I knew there was no possible way for me to carry those weighty trays.

Nevertheless, I got the job. I received my khaki knee length split skirt, my crisp white tuxedo shirt, and my shiny

Note: For confidentiality, restaurant name removed.

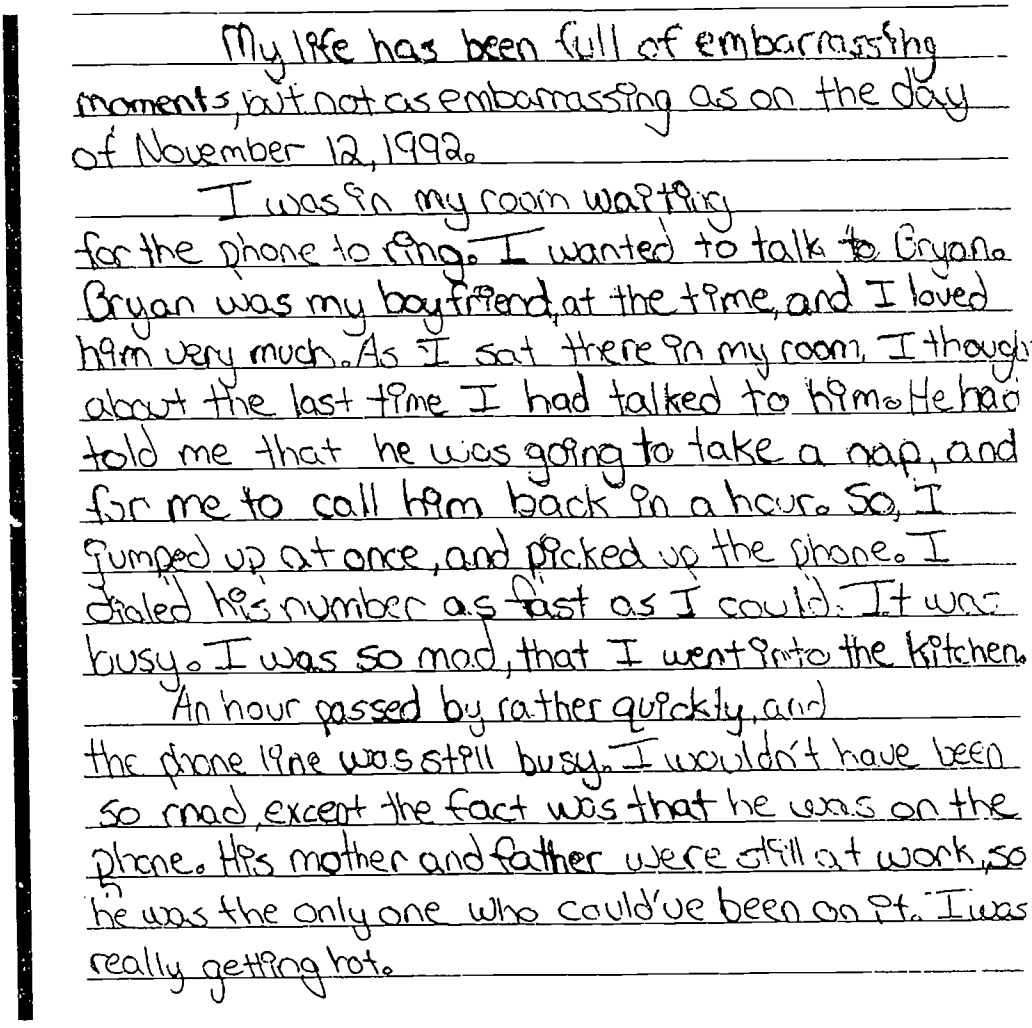
teal satin bow tie. Many young women my age would have felt uncomfortable to say the least, in my new uniform given its nineteenth century motif. I, however, had attended private schools my entire life and felt at ease in my uniform (since everyone else was wearing one too!). I was ready to begin my training.

I was introduced to Merinie, a veteran waitress, who had worked at since it opened three years ago. She showed me around the restaurant, introduced to the menu, and last but not least, acquainted me with the tray. She handed me a smaller tray, one used to carry cocktails, and asked me to hold it. Needless to say, I was horrified. Then she set two glasses of champagne on the tray. I was holding the tray with both hands at the height of my waist with my

eyebrows raised, and my eyes were opened as wide as they could be. Minnie, using her godlike skills, somehow sensed my fear. She told me it would be much easier if I held the tray with one hand instead of two. Did not she know that it is much harder to balance a tray one one hand? But it was too late. She was already walking towards her table, and she was signaling for me to follow. I, like a blind sheep, followed. I reached the table somewhat successfully, only spilling a small amount of champagne over the rim of the glasses. However, when I got to the table, and saw those dressed-up people looking at me, something happened. I lost my sense of balance, and those champagne glasses leaped off my tray, and into the lap of the lady in the blue dress. I ran to the back terrified while in the background I heard Minnie apologizing.

It took me a long time to recover from that embarrasing moment. For months my face turned red at the thought of it. Today, however, many successful tray carries later, I am able to laugh.

Few students at either grade 8 or 12 (0 and 2 percent, respectively) wrote responses that were rated as *extensively elaborated*. These responses used details in conjunction with foreshadowing and other devices to build up to the climactic moment of embarrassment, as in the example below. In addition, they described exactly how they felt, often both at the time of the incident and in retrospect.



My life has been full of embarrassing moments, but not as embarrassing as on the day of November 12, 1992.

I was in my room waiting for the phone to ring. I wanted to talk to Bryan. Bryan was my boyfriend at the time, and I loved him very much. As I sat there in my room, I thought about the last time I had talked to him. He had told me that he was going to take a nap, and for me to call him back in a hour. So, I jumped up at once, and picked up the phone. I dialed his number as fast as I could. It was busy. I was so mad, that I went into the kitchen.

An hour passed by rather quickly, and the phone line was still busy. I wouldn't have been so mad, except the fact was that he was on the phone. His mother and father were still at work, so he was the only one who could've been on it. I was really getting hot.

Thirty minuets seemed like thirty days. By this time I had already decided exactly what I was going to say to him. I was really gonna chew him out. I just couldn't understand why in the world he told me to call back when he knew he'd be on the phone. I also couldn't understand why he didn't hang up with whoever he was talking to to talk to me. I mean, wasn't I more important?

Then finally, fifteen minuets later. The line was free. Someone picked up, and I just started going off. I didn't even give him a chance to say anything, but hello. I told him never to tell me to call me, and tell me to call back in a hour. I told him that if whoever he was talking to was more important than me, than maybe he needs to start looking for a new girlfriend. Then there was dead silence. Then I heard a snicker in the background. Then I heard him say, "Would you like to talk to Bryan. I'm sorry, but I had to call into the office." Then I heard a roar of laughter coming for Bryan and his father.

Talk about dying from embarrasment! I felt like crawling in a hole. Bryan's father took in wonderfully though. Every time anyone mentions it, he just starts laughing up a storm. Bryan loved it too. I guess he just liked using it for something to rub in.

Maybe for some people it sounds minor, but for me it was awful!

Summary

Across grades and tasks, most students demonstrated some understanding of the requirements of narrative writing. From 55 to 85 percent of the responses that students wrote were minimally developed or better. Also, about one-fourth of the students at grade 4 and about one-half at grades 8 and 12 wrote developed or better responses. The best performance was by twelfth graders (59 percent developed or better responses) on a task requiring a story about an embarrassing incident that had happened to them. Relatively few narrative responses, however, were rated as elaborated or better. While the majority of students began to tell a story, most did not provide the richness of detail, organization, and cohesion that marks effective narrative writing.

4

Profiling Students' Writing

In Chapters 1 through 3, students' performance on the NAEP writing assessment was presented by levels of accomplishment on individual writing tasks. But we can also consider overall achievement across tasks and ask what better- or poorer-performing students at each grade tended to be able to do. To examine this for each of the three grades assessed, the different levels of task accomplishment for each writing task were mapped onto the overall NAEP writing scale (with its range of 0 to 500, mean of 250, and standard deviation of 50; please see Chapter 5). Details about both the scaling and item-mapping procedures can be found in the Procedural Appendix.

Mapping was carried out by identifying the point on the scale at which students had a 65 percent probability of achieving a particular level of accomplishment on a particular task. For example, on the informative writing task asking students to describe their school lunchtime, 65 percent of fourth-grade students who were at 269 on the overall writing scale wrote

developed or better responses. Thus, beginning at point 269 on the NAEP scale, students were likely (65 percent) to provide a developed or better response to this task. Fourth graders higher on the NAEP scale were even more likely to provide responses that were developed or better, while those lower on the scale were less likely. In this analysis, however, developed or better performance was mapped onto the NAEP writing scale at 269. On the same task, beginning at 346, at least 65 percent of the students (about two-thirds) wrote responses rated as elaborated or better. Hence an elaborated or better response to the school lunchtime task was mapped at 346. Responses were mapped separately for each grade level.[9]

The resulting item maps are presented in Figures 4.1 through 4.3. These maps reflect how students with different estimated scores on the overall NAEP writing scale are most likely to do on various specific writing tasks that were administered at each grade. Percentile scores for each grade are also indicated on the overall writing scale, for the 10th, 25th, 50th, 75th, and 90th percentiles (see Table 5.2). These help in understanding what relatively better and relatively poorer-achieving students at each grade were able to do across the tasks that were given. This contrasts with the approach taken in Chapters 1 through 3, which examined the characteristics of different levels of performance on each of the individual tasks.

[9]This technique is an adaptation of a method originally developed to report the results of NAEP's 1985 literacy assessment of young adults. (Irwin S. Kirsch and Ann Jungeblut, *Literacy: Profiles of America's Young Adults* (Princeton, NJ: Educational Testing Service, 1986). Further details of procedures for item mapping are presented in the Procedural Appendix to this report.

Fourth Graders

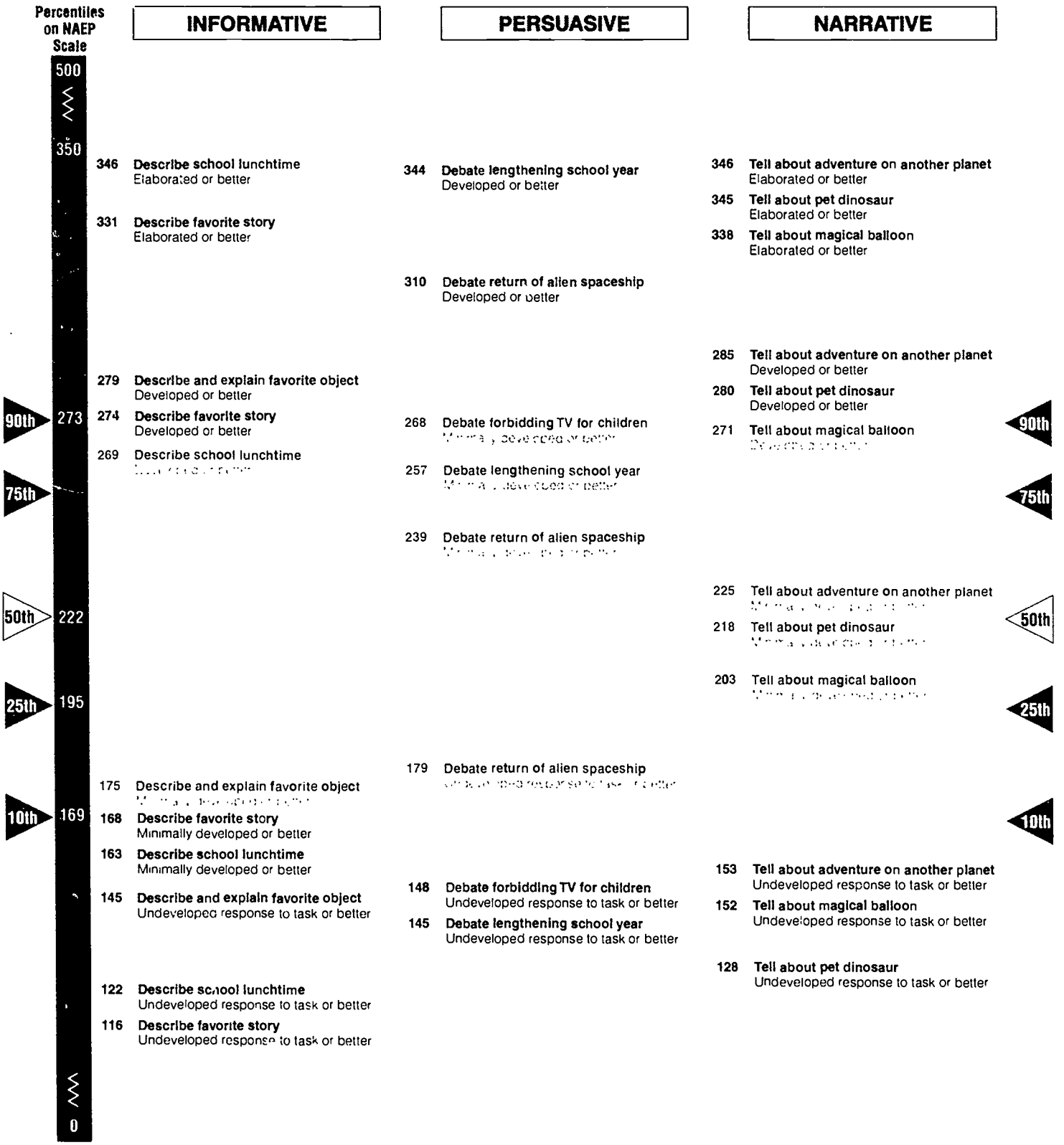
The writing task results mapped in Figure 4.1 give a sense of the kinds of responses likely to be given by fourth graders at different points on the overall NAEP writing scale. Students in the bottom 10 percent of fourth graders (169 or below on the overall NAEP writing proficiency scale) were likely to respond to some aspect of the task, but to do so in a very abbreviated or disjointed manner. (For the persuasive writing task asking about the return of an alien spaceship, students in the bottom 10 percent were not likely even to respond to the task.) Only on the two easiest informative tasks given at grade 4 (Favorite Story and School Lunchtime) were students at this level able to respond at a minimal level, indicating some understanding of what successful completion of the task would require.

Students at the 25th percentile in grade 4 (scoring 175 on the overall NAEP writing proficiency scale) were likely to write at least minimally developed responses to all of the informative writing tasks administered at that grade, and to give undeveloped or better responses to the persuasive and narrative writing tasks. Thus, they were able to produce a rudimentary report, but to give only a general response to the persuasive and narrative tasks.

Fourth graders at the 50th percentile (222 on the NAEP writing scale) showed more development of their narrative writing skills than did students at the 25th percentile, writing at least minimally developed responses to two of the three narrative tasks. By the 75th percentile (250 on the NAEP writing scale), students at grade 4 were likely to be able to write at least minimally developed responses to all three narrative writing tasks and to the persuasive task about whether to let alien space travelers return to their planet. These minimally developed responses suggest fourth graders have a basic understanding of the requirements of the tasks, though the answers were likely to be brief or vague.

By the 90th percentile (273 on the NAEP writing scale), fourth graders showed further development in all three types of writing. On the easier of the narrative and informative writing tasks, they began to write responses rated developed or better. These responses indicated a clear understanding of elements appropriate to informative and narrative writing, as well as a command of the structures necessary to development within these types of writing. Even at the 90th percentile, however, fourth graders were unlikely to provide developed or better responses to any of the persuasive writing tasks. Their persuasive writing revealed an understanding of the basic rhetorical features of persuasion, but did not provide effective support for their arguments. (Elaborated or better responses were not mapped when the frequency was extremely small.)

Figure 4.1 Difficulty Values Along the Writing Scale for the Different Levels of Performance on the Informative, Persuasive, and Narrative Tasks, Grade 4



Source: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

NOTE: In this graphic illustration, the locations of scale points are necessarily *approximate* for tasks clustered closely together. Each writing task was empirically mapped onto the NAEP writing scale based on students' performance. Task performance is shown at the scale point where students with the proficiency had a 65 percent probability of providing writing of the quality described, or better.

Eighth Graders

At grade 8, the responses of students at the 10th percentile on the NAEP writing scale (213 or below) were likely to be brief and undeveloped (see Figure 4.2). Even these low-performing eighth graders were likely to provide at least minimally developed responses, however, on two of the informative tasks: a 25-minute task asking them to describe and explain a favorite object, and a 50-minute task asking them to describe a school problem.

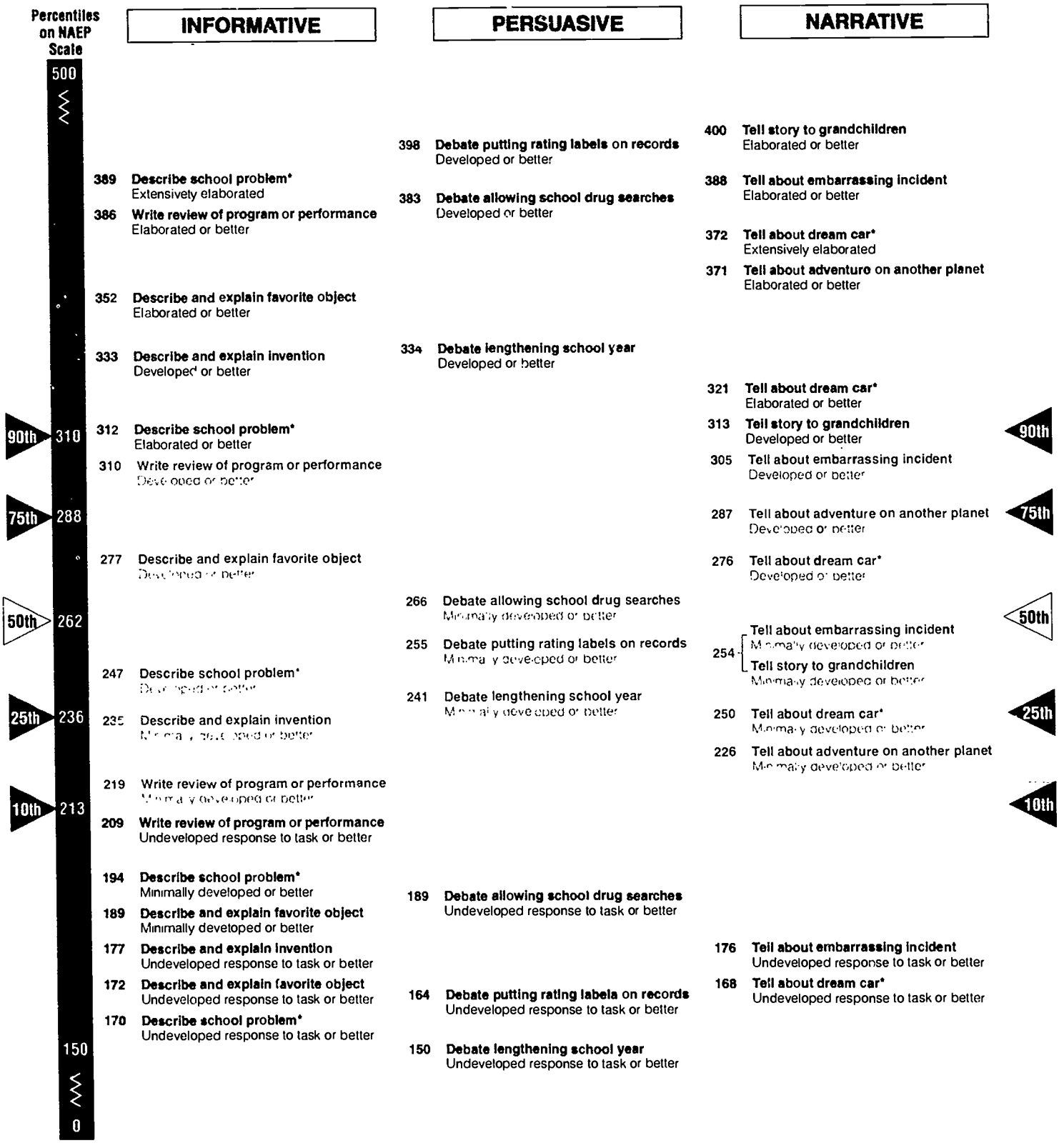
Students at the 25th percentile (236 on the overall scale) were likely to provide at least minimally developed responses to each of the four informative writing tasks given at grade 8, as well as to a narrative task about an adventure on another planet. On the three remaining narrative tasks and on the three persuasive writing tasks given at grade 8, however, they had more difficulty, being likely to give only undeveloped or better responses. These undeveloped responses indicate an awareness of the demands of the task, but an inability to carry it out.

Eighth graders at the 50th percentile (262 on the NAEP writing scale) showed further development of all three types of writing, providing at least minimally developed responses to all four narrative tasks and to two of the three persuasive tasks. In informative writing, students at the 50th percentile began to provide developed responses, in response to a 50-minute task (School Problem).

By the 75th percentile (285 on the overall scale), students at grade 8 were likely to give at least minimally developed responses to all of the tasks, indicating an understanding of the basic features and structures characteristic of informative, persuasive, and narrative writing. For two of the informative tasks (Favorite Object and School Problem) and two of the narrative tasks (Dream Car and Adventure on Another Planet), eighth graders at the 75th percentile were likely to write developed or better responses, indicating an ability to provide necessary supporting detail.

The most proficient eighth graders — those at the 90th percentile (310 or above) — were likely to provide developed or better responses to three of the four narrative tasks and to three of the four informative tasks. Responses to the persuasive tasks were most likely to be rated minimally developed or better, even for the writers at the 90th percentile. Thus, at the 90th percentile, eighth-grade writers seem to have a growing command of the structural features and rhetorical devices appropriate to narrative and informative writing, and an understanding of what is needed in persuasive writing without necessarily being able to develop the evidence required for effective argument.

Figure 4.2 Difficulty Values Along the Writing Scale for the Different Levels of Performance on the Informative, Persuasive, and Narrative Tasks, Grade 8



* 50-minute prompt; all others 25-minute prompts. Source: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

NOTE: In this graphic illustration, the locations of scale points are necessarily *approxima* clustered closely together. Each writing task was empirically mapped onto the NAEP writing scale based on students' performance. Task performance is shown at the scale point where students with the proficiency had a 65 percent probability of providing writing of the quality described, or better.

Twelfth Graders

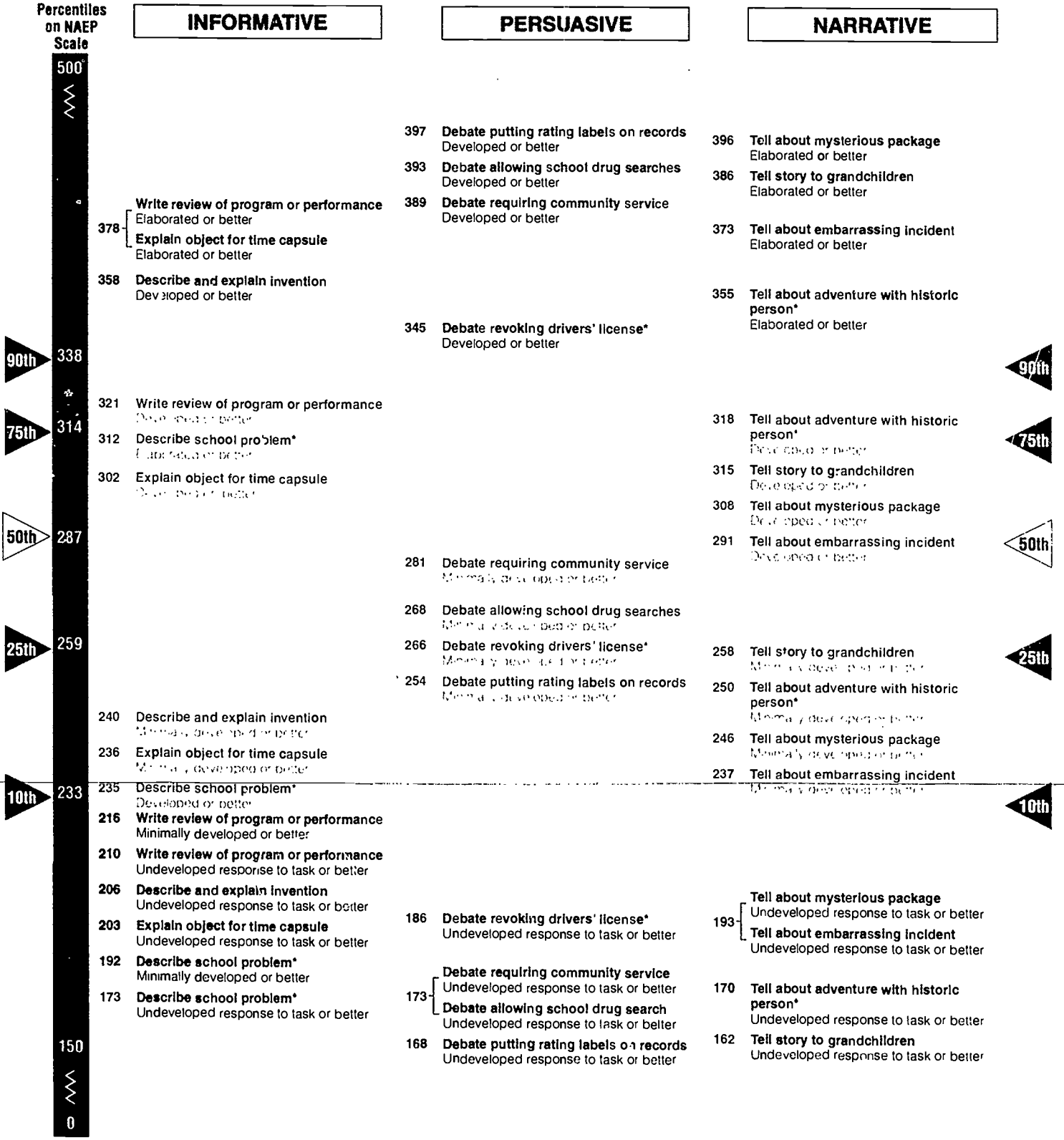
Figure 4.3 presents comparable results for the writing tasks given at grade 12. On these tasks, even the poorest-performing twelfth graders — those at the 10th percentile in overall achievement (233 on the writing scale) — were likely to at least begin to respond to each task, even if they did so in an undeveloped or somewhat confused way. On two of the informative tasks (Performance Review and School Problem), these writers were likely to provide at least a minimally developed response, demonstrating a basic understanding of the requirements of informative writing.

Twelfth graders at the 25th percentile had an understanding of the basic elements of informative and narrative writing. They provided at least minimally developed responses to all of the informative and narrative tasks, and developed or better responses to the one 50-minute informative task (School Problem). The persuasive writing tasks continued to provide more difficulties, however. On only one of the four persuasive tasks were these students likely to write at least minimally developed responses (Record Rating Labels); on the remainder, they were likely to write undeveloped or better responses.

By the 50th percentile (287 on the overall scale), writers showed further growth in their understanding of persuasive writing, being likely to provide at least minimally developed responses to each of the tasks they were given.

Better-performing twelfth grade writers — those at the 75th percentile (314 on the NAEP writing scale) — were likely to write at least minimally developed responses to all three types of writing and were learning to write developed or better responses to some of the informative and narrative tasks. On the informative tasks, writers at the 75th percentile moved beyond minimally developed responses for two of the four tasks, being likely to write developed or better responses to the Time Capsule task and elaborated or better responses to the School Problem task. On the narrative tasks they similarly moved beyond minimally-developed responses to developed or better responses on two of the four tasks (Mysterious Package and Embarrassing Incident).

Figure 4.3 Difficulty Values Along the Writing Scale for the Different Levels of Performance on the Informative, Persuasive, and Narrative Tasks, Grade 12



* 50-minute prompt; , others 25-minute prompts. Source: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment

NOTE: In this graphic illustration, the locations of scale points are necessarily *approximate* for tasks clustered closely together. Each writing task was empirically mapped onto the NAEP writing scale based on students' performance. Task performance is shown at the scale point where students with the proficiency had a 65 percent probability of providing writing of the quality described, or better.

The best of the twelfth grade writers — those at the 90th percentile (338 on the writing scale) — showed some consolidation of the skills demonstrated by writers at the 75th percentile. They were likely to write developed or better responses to all of the narrative writing tasks and to three of the four informative tasks. Their performance on the persuasive writing tasks continued to be limited to minimally developed or better, however. Thus, their informative and narrative writing demonstrated a knowledge of rhetorical structures and supporting detail appropriate to these genres. Their persuasive writing similarly revealed a clear understanding of the basic rhetorical features of persuasion, but continuing difficulty in the use of evidence in support of effective arguments.

Difficulty of Types of Writing and Individual Tasks

Mapping students' performance on the writing scale reveals the relative difficulty levels of various types of writing. For example, at all three grade levels, students at the highest scale levels were likely to write elaborated responses to the informative and narrative tasks, but were not likely to do so for the persuasive writing tasks. This reflects the difficulty students at all three grade levels had with the complex constraints persuasive writing places on the writer, requiring an understanding of one's audience and of the means of persuasion to which that audience would most likely respond.

The mappings in Figures 4.1 to 4.3 also allow an examination of the difficulty levels of individual writing tasks. At grade 4, students' responses to the individual tasks are clustered along the scale by level of response. For example, undeveloped responses to all three informative writing tasks fell between 163 and 175, developed responses between 269 and 279, and elaborated responses at 331 and above. Similar patterns are apparent in the narrative and persuasive writing tasks, though they were somewhat more spread out along the scale. This indicates that, for fourth graders, within each of the purposes assessed by NAEP, none of the topics proved to be much harder or much easier than the others.

At grades 8 and 12, a similar pattern of clustering by level of response occurs for the 25-minute tasks, but the 50-minute tasks included at these grade levels showed more variation. In particular, the 50-minute informative task (School Problem at both grades) was noticeably easier at all levels of response than were the 25-minute tasks, and the 50-minute narrative task (Dream Car at grade 8 and Historic Person at grade 12) was somewhat easier, particularly at the highest levels of performance. For persuasive writing, however, levels of performance on the 50-minute task given at grade 12 (Driver's License) were similar to those on the other (25-minute) tasks.

Summary

In Chapters 1 through 3, the proportion of students who were able to provide elaborated or better responses to individual writing tasks provided one kind of standard against which their success could be measured. By that standard, few students at any grade level were very successful on the tasks included in the assessment. The results in this chapter provide another kind of standard that can be examined, as reflected in what the top 10 percent of students were able to do, and in the contrast between their performance and that of their lower-performing peers.

Results presented in this chapter highlight the great range of response within and across grades on the tasks included in the 1992 writing assessment. At grade 4, the poorest writers (those at the 10th percentile or below) were likely to manage only undeveloped responses to any of the tasks. The best fourth-grade writers (those at the 90th percentile), on the other hand, demonstrated a clear understanding of the elements necessary to informative and narrative writing, and some command of the structures necessary to development within these types of writing. Even the best writers at this grade level, however, were unlikely to provide developed responses to the persuasive writing tasks or elaborated responses to the informative or narrative tasks.

By grade 12, the lowest 10 percent of the writers were still having difficulty providing even minimally developed responses to narrative and persuasive tasks appropriate to their grade level, though they did reach that level on two of the four informative tasks. The top 10 percent of twelfth graders, on the other hand, were likely to write developed or better responses to informative and narrative tasks, and, on the 50-minute assignments, to elaborate upon their responses in appropriate ways. The students' responses to grade-appropriate persuasive writing tasks, however, continued to lag behind their successful efforts at producing reports and stories.

5

Overall Writing Achievement for Subgroups of Students

The national performance results from NAEP's 1992 writing assessment are summarized in Table 5.1, which also shows average writing performance by race/ethnicity, gender, and region. As was mentioned in Chapter 4, the results across tasks have been aggregated using sophisticated item response theory (IRT) scaling techniques that account for the multi-level student responses to the individual writing tasks (see the Procedural Appendix for details). The writing scale ranges from 0 to 500, with a mean of 250 and standard deviation of 50. The overall average performance for the fourth graders was 222, while the overall averages for the older students were 262 for eighth graders and 286 for twelfth graders.

Table 5.1

Average Writing Achievement for the Nation and Demographic Subpopulations, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Percentage	Average Proficiency	Percentage	Average Proficiency	Percentage	Average Proficiency
Nation	100(0.0)	222(1.2)	100(0.0)	262(1.0)	100(0.0)	286(1.0)
White	70(0.2)	229(1.3)	70(0.2)	268(1.1)	71(0.5)	291(1.1)
Black	16(0.1)	195(2.3)	16(0.1)	242(2.2)	15(0.4)	268(1.8)
Hispanic	9(0.2)	208(2.0)	10(0.2)	248(1.7)	9(0.4)	277(1.8)
Asian/Pacific Islander	2(0.2)	233(3.9)	3(0.2)	267(4.6)	4(0.2)	292(2.9)
American Indian	2(0.2)	215(3.5)	1(0.2)	248(4.3)	1(0.1)	270(8.2)
Male	49(0.5)	215(1.2)	50(0.5)	252(1.1)	49(0.6)	275(1.2)
Female	51(0.5)	228(1.6)	50(0.5)	272(1.2)	51(0.6)	296(1.2)
Northeast	21(0.8)	228(2.6)	22(0.7)	265(1.9)	25(0.6)	287(2.0)
Southeast	23(0.7)	215(1.9)	25(0.5)	253(1.7)	23(0.7)	276(1.5)
Central	28(0.6)	226(2.2)	25(0.5)	265(2.4)	26(0.7)	290(2.3)
West	28(0.7)	219(2.0)	28(0.5)	263(1.6)	26(0.8)	290(1.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Race/Ethnicity. At grade 4, White and Asian/Pacific Islander students had higher average writing proficiency than Black, Hispanic, or American Indian students. At grade 8, the pattern was similar, although the difference in average proficiency between Asian/Pacific Islander and American Indian students was not statistically significant. At grade 12, White and Asian/Facific Islander students had higher average writing proficiency than Black or Hispanic students, with American Indian students not showing statistically significant differences with any subgroup. Also, Hispanic twelfth-grade students and American Indian fourth-grade students had higher average writing proficiencies than twelfth- and fourth-grade Black students, respectively.

Gender. At all three grades, females had higher writing proficiency than males. The margin between female and male students was smaller at grade 4 (13 points) than at grades 8 and 12 (20 and 21 points).

Region. At grade 4, students in the Northeast and Central regions had higher average proficiencies than those in the Southeast, and students in the West did not have a significantly different proficiency from any of the other three regions. At grades 8 and 12, students in the Northeast, Central, and West had similar average writing proficiencies, all of which were higher than those for eighth and twelfth graders in the Southeast.

Percentile Distributions

Average performance results for demographic subpopulations, as well as for various other student groups, mask variations in performance within each grade — that is, some students in any given grade perform far better or worse than their peers, as do students within particular subpopulations. Table 5.2 presents the percentile distributions of writing proficiency for race/ethnicity and gender at each grade, providing a view of the considerable overlap across the three grades in ranges of writing performance.

For the nation, the range of performance within each grade exceeded the range of performance across grades at any given percentile. For all three grades, the difference between the 10th and 90th percentiles was approximately 100 points. However, the range across grades at the 10th, 50th, or 90th percentiles was about 65 points. Even though it should be kept in mind that students were given grade-appropriate materials, the overlap in performance suggests that within grades the lower-performing students may be as much as four years or more behind the higher-performing students.

The 10th percentile at grade 8 (213) was lower than the 50th percentile at grade 4 (222), indicating that the poorer-performing eighth graders may have writing capabilities more similar to fourth graders than to their grade-level peers. Similarly, the 25th percentile at grade 12 (259) was approximately equivalent to the 50th percentile at grade 8 (262), suggesting that the top half of the eighth graders may write better than the bottom fourth of the twelfth graders. In fact, the lower-performing twelfth graders may be at particular risk as they graduate from high school and attempt to find jobs or pursue their education. For example, the 10th percentile for Black and Hispanic twelfth graders (219 and 224) was roughly equivalent to the 50th percentile at grade 4 (222).

Table 5.2

Percentiles and Standard Deviations for the Nation, Race/Ethnicity, and Gender, Grades 4, 8, and 12

		PERCENTILES						
	Standard Deviation	5	10	25	50	75	90	95
GRADE 4								
Nation	41(0.6)	153(2.0)	169(1.9)	195(1.4)	222(1.3)	250(1.1)	273(1.5)	287(1.1)
White	38(0.7)	166(1.7)	180(1.5)	204(1.8)	230(1.9)	256(1.2)	279(1.2)	291(1.8)
Black	38(1.1)	132(3.2)	146(2.9)	170(3.1)	196(2.1)	221(3.2)	244(3.0)	257(4.0)
Hispanic	41(1.8)	141(3.7)	156(2.8)	182(3.1)	209(2.9)	236(2.9)	259(3.3)	273(2.6)
Asian/Pacific Islander	40(2.7)	166(14.4)	178(10.2)	206(6.6)	235(5.7)	262(5.2)	281(6.3)	297(8.5)
American Indian	40(4.0)	154(11.5)	166(8.3)	188(6.4)	213(5.1)	241(8.6)	265(12.0)	279(10.9)
Male	40(0.6)	148(1.8)	164(1.9)	189(1.6)	216(1.9)	243(1.2)	266(2.0)	280(1.4)
Female	41(0.8)	159(3.6)	176(2.8)	202(2.1)	229(1.4)	256(1.6)	280(1.4)	293(2.6)
GRADE 8								
Nation	38(0.5)	198(1.5)	213(1.5)	236(1.1)	262(1.1)	288(1.1)	310(1.4)	323(1.9)
White	36(0.4)	208(7.7)	221(1.4)	244(1.5)	268(1.2)	293(1.2)	314(1.6)	327(1.7)
Black	36(1.1)	183(2.3)	195(2.6)	218(3.5)	242(2.9)	266(3.1)	287(3.2)	300(2.5)
Hispanic	37(1.0)	186(3.9)	200(2.3)	223(2.0)	248(2.2)	273(2.4)	296(1.6)	309(3.5)
Asian/Pacific Islander	40(2.7)	200(6.8)	214(4.2)	240(5.9)	268(5.1)	295(5.4)	318(6.6)	330(8.4)
American Indian	39(2.8)	177(7.3)	194(36.3)	221(5.4)	254(6.5)	276(4.1)	297(7.2)	307(5.2)
Male	37(0.6)	190(1.3)	204(1.2)	227(1.1)	252(1.5)	277(1.2)	299(1.3)	313(2.3)
Female	36(0.7)	211(2.5)	225(2.7)	248(1.2)	272(1.3)	296(1.3)	317(1.8)	330(2.1)
GRADE 12								
Nation	40(0.4)	218(2.0)	233(1.4)	259(1.5)	287(1.1)	314(1.0)	338(1.0)	351(1.5)
White	39(0.5)	225(2.0)	240(1.5)	265(1.4)	292(1.4)	318(1.2)	341(1.4)	354(1.2)
Black	39(1.0)	204(2.6)	219(3.0)	241(1.8)	268(2.5)	293(2.7)	318(3.0)	333(3.8)
Hispanic	40(1.9)	209(5.9)	224(4.2)	250(1.9)	278(3.4)	305(2.8)	328(2.9)	340(4.6)
Asian/Pacific Islander	41(1.8)	221(7.0)	237(3.5)	265(4.8)	294(3.5)	320(2.2)	343(2.5)	358(6.5)
American Indian	42(4.1)	199(14.8)	214(9.6)	240(9.7)	270(11.8)	298(7.0)	324(11.7)	338(10.9)
Male	40(0.7)	208(3.1)	224(1.6)	248(1.2)	276(1.3)	303(1.1)	326(1.4)	340(1.7)
Female	38(0.6)	232(2.4)	246(2.1)	271(1.9)	297(1.0)	223(1.2)	345(1.2)	358(1.9)

The standard errors of the estimated proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

School Characteristics

Table 5.3 contains the average writing proficiency for the top one-third of the schools compared to the bottom one-third of the schools, for public as compared to private schools (both Catholic and non-Catholic private schools), and for students attending schools in four different community types. Students were classified by the type of community in which their schools were located and by principals' reports of the percentages of students whose parents were classified into various occupational categories. The advantaged urban category represents about 10 percent of the students at each grade attending schools in suburban and urban communities where high proportions of the students' parents had professional or managerial jobs. Similarly, the disadvantaged urban category represents another 10 percent of the students who attended schools in suburban and urban locales where high proportions of the parents were on welfare or not regularly employed. The extreme rural category represents the approximately 10 percent of students attending schools in the most rural areas, where many of the parents were farmers or farm workers. The 70 percent of students not falling into one of these three "extreme" community categories were classified as attending schools in "other" types of communities.

Top One-Third/Bottom One-Third of the Schools. To examine the relationship between the level of schools' performance and level of students' performance, for each grade assessed, NAEP sorted schools by their students' average proficiency on the writing assessment, identifying the top one-third and bottom one-third of the schools. By definition, the average writing proficiency of the top-performing schools is higher than that of the bottom-performing schools. Yet, there was a tremendous range in writing proficiency demonstrated by the two groups of students within each of the grades. For example, the magnitude of the difference within each grade (34 to 42 points) is about as great as the differences from fourth to eighth and eighth to twelfth grades (40 and 24 points). This indicates that students in the lower-performing third of the schools may be about four years of schooling behind their grade-level peers in the top-performing one-third of the schools.

Public/Private Schools. At all three grades, students attending private schools (either Catholic or non-Catholic) had higher average writing proficiencies than those attending public schools.

Size and Type of Community. At all three grades, advantaged urban students performed better than students attending schools in rural communities and in communities classified as other. The students in the latter two groups had higher average proficiencies than students in disadvantaged urban communities. The exception was at grade 8, where the difference between average proficiency for advantaged urban students and extreme rural students was not statistically significant.

Table 5.3
Average Writing Proficiency by School and Community Characteristics, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Percentage	Average Proficiency	Percentage	Average Proficiency	Percentage	Average Proficiency
Nation	100(0.0)	222(1.2)	100(0.0)	262(1.0)	100(0.0)	286(1.0)
Top One-Third Schools*	34(2.7)	241(1.6)	23(2.1)	280(2.1)	32(2.9)	303(1.8)
Bottom One-Third Schools*	30(2.0)	199(2.0)	35(3.6)	245(1.4)	29(3.0)	269(1.1)
Public	87(1.2)	220(1.3)	89(0.9)	260(1.2)	87(1.1)	283(1.0)
Catholic	8(1.0)	234(2.3)	7(0.9)	274(2.4)	9(1.2)	305(1.6)
Other Private	4(0.9)	238(3.1)	4(0.6)	277(2.6)	4(0.7)	304(3.2)
Advantaged Urban	11(1.7)	243(2.9)	9(1.6)	278(3.8)	12(2.2)	293(2.6)
Disadvantaged Urban	8(1.1)	192(2.4)	10(1.4)	242(2.3)	10(1 4)	271(2.4)
Extreme Rural	10(2.2)	218(4.3)	9(2.4)	265(5.0)	10(1.3)	282(2.3)
Other	70(2.9)	223(1.6)	72(3.0)	262(1.0)	68(2.8)	287(1.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

*Top and bottom one-third schools are calculated by computing a mean for each school, then ranking and dividing the schools into thirds. Thus, the top or bottom one-third schools may each contain more or less than one-third of the students.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 5.4 shows the demographic characteristics of students in the top-performing one-third of the schools and the bottom-performing one-third of the schools. The demographic composition of the top-performing one-third of the schools differed from that of the bottom-performing one-third of the schools in important ways. For example, 81 to 88 percent of the students in the top third of the schools were White students, whereas the bottom-third schools had racial/ethnic diversity: approximately half the students were White students, about one-third were Black students, 12 to 16 percent were Hispanic students, and there were small percentages of Asian/Pacific Islander and American Indian students.

While about one-fourth of the students in the top-third schools were in advantaged urban communities and only a handful were in disadvantaged urban communities, the converse was found for bottom-third schools. About one-fourth of students in the bottom-third schools were in disadvantaged urban communities, while only small percentages were in advantaged urban communities.

The top-third schools encompassed both public and private schools. The percentage of private school students ranged from 22 percent at grade 4 to 35 percent at grade 12. In contrast, nearly all the students in the bottom-third schools attended public schools — from 93 to 96 percent.

Table 5.4

Demographic Characteristics of Students in the Top-Performing One-Third Schools and the Bottom-Performing One-Third Schools in Writing Proficiency, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Top One-Third	Bottom One-Third	Top One-Third	Bottom One-Third	Top One-Third	Bottom One-Third
White	88(1.3)	42(2.5)	85(1.7)	50(3.7)	81(1.9)	55(3.3)
Black	3(0.6)	38(1.9)	4(0.7)	29(2.5)	7(1.5)	30(2.6)
Hispanic	5(0.8)	16(1.2)	7(1.0)	16(1.5)	7(1.1)	12(2.3)
Asian/Pacific Islander	3(0.8)	2(0.3)	3(0.9)	2(0.4)	4(0.6)	2(0.8)
American Indian	1(0.3)	2(0.4)	1(0.2)	2(0.5)	0(0.1)	1(0.2)
Public	78(2.9)	93(2.6)	73(3.3)	96(0.9)	65(4.4)	98(0.6)
Catholic	16(2.6)	4(1.2)	11(2.1)	2(0.6)	10(2.4)	1(0.4)
Other Private	6(1.4)	1(0.5)	16(2.7)	2(0.6)	24(4.3)	1(0.4)
Advantaged Urban	27(4.3)	1(0.8)	23(5.1)	2(1.8)	21(4.7)	3(2.0)
Disadvantaged Urban	0(0.0)	26(3.6)	0(0.4)	24(3.9)	1(0.9)	22(3.5)
Extreme Rural	8(4.0)	13(4.5)	16(5.5)	6(2.9)	7(1.4)	10(2.9)
Other	65(5.4)	60(5.7)	61(7.1)	68(5.2)	71(4.6)	65(4.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 5.5 contains the average writing proficiencies for twelfth-grade students by their type of high school program and plans after leaving high school.

Table 5.5

Average Writing Proficiency by Students' Reports on Type of High School Program and Post-Graduation Plans, Grade 12

What Best Describes Your High School Program?	Percentage of Students	Average Proficiency
Academic/College Preparatory	60(1.1)	300(0.9)
General	35(1.0)	275(1.2)
Vocational/Technical	5(0.4)	257(3.5)
What Will Be Your Main Activity in the Year After You Leave High School?	**Percentage of Students**	**Average Proficiency**
Attending a four-year college, service academy, or university	57(1.0)	299(1.0)
Attending a two-year college	17(0.9)	279(1.5)
Attending a vocational, technical, or business school	9(0.5)	267(2.0)
Working full-time	9(0.5)	265(2.1)
Serving in the regular military service	5(0.3)	261(3.2)
Other	3(0.2)	263(3.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Type of High School Program. The twelfth graders in college preparatory high school programs performed better than the students in general programs, who, in turn, performed better than the students in vocational/technical programs.

Plans After High School. Consistent with the findings for type of high school program, seniors planning to attend a four-year college had higher average writing proficiency than those with other plans after graduation. Fifty-seven percent of the seniors reported plans to attend a four-year college, service academy, or university, a proportion similar to the 60 percent who reported being in a college preparatory high school program. Another 17 percent of the twelfth graders reported plans to attend a two-year college. They had higher average writing proficiency than their classmates who planned to work, attend vocational/technical school, or enter the military.

Home Environment

American high school students spend less than 10 percent of their time at school.[10] Therefore factors related to the home environment, such as the parents' involvement with their children's studies, or the types of reading materials available in the home, can have a significant effect on students' ability to write. Table 5.6 presents the data for characteristics related to students' home environment: their parents' education level, the types of reading materials in their homes, the frequency with which they discuss schoolwork with someone at home, and the frequency with which English is spoken at home.

Parents' Level of Education. A positive relationship existed at all three grades between the highest level of education attained by either parent and students' writing proficiency. At grade 4, about one-third of the students (32 percent) did not know their parents' education level. However, for those who said they knew this information, students with parents who had graduated from college or had some education after high school had higher average proficiency than students whose parents had no further education after high school or who did not graduate from high school. At grades 8 and 12, students whose parents had graduated from college had higher average writing proficiency than students with parents who had some education after high school, but did not graduate from college. The latter had higher average writing proficiency than students whose parents had no education beyond high school or who did not graduate from high school.

Types of Reading Materials in the Home. The availability of literary and reference materials in the home appeared to have a similar positive relationship with average writing proficiency. Students were asked if their family owned more than 25 books, had an encyclopedia, or subscribed regularly to either a newspaper or any magazines. Across the three grades, students who reported access at home to all four of these types of reading materials had the highest average writing proficiency. Students who reported access to at least three of these types of reading materials showed higher average writing proficiency than those reporting two or fewer types.

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[10] *America's Smallest School: The Family* (Princeton, NJ: Educational Testing Service, 1992).

Table 5.6

Average Writing Proficiency by Students' Reports on Parents' Education, Reading Materials in the Home, Discussing Homework, and Language Spoken in the Home, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Percentage	Average Proficiency	Percentage	Average Proficiency	Percentage	Average Proficiency
Parents' Highest Level of Education						
Graduated college	41(1.0)	232(1.2)	40(1.1)	271(1.4)	42(1.0)	296(1.2)
Some education after high school	9(0.4)	228(2.5)	20(0.6)	265(1.0)	26(0.5)	287(1.7)
Graduated high school	14(0.5)	213(1.6)	25(0.8)	254(2.0)	22(0.7)	275(1.3)
Less than high school	4(0.3)	208(3.5)	8(0.4)	250(1.7)	8(0.5)	271(1.9)
I don't know	32(0.8)	213(1.6)	8(0.4)	241(2.2)	2(0.2)	250(3.1)
Types of Reading Materials in the Home						
4 types	37(1.1)	232(1.3)	50(0.9)	270(1.1)	58(0.7)	291(1.1)
3 types	35(0.5)	222(1.1)	30(0.6)	259(1.3)	27(0.5)	285(1.4)
0 to 2 types	28(0.9)	209(2.1)	20(0.6)	247(1.5)	15(0.5)	270(1.6)
Frequency of Discussing Schoolwork with Someone at Home						
Almost Every Day	54(0.7)	227(1.2)	38(0.7)	269(1.2)	30(0.5)	295(1.4)
Once or Twice a Week	22(0.6)	222(1.6)	31(0.4)	263(1.4)	34(0.6)	291(1.1)
Once or Twice a Month	6(0.3)	217(4.9)	11(0.4)	259(1.5)	15(0.4)	282(1.3)
Never or Hardly Every	18(0.6)	207(1.8)	21(0.5)	250(1.3)	21(0.6)	269(1.4)
Frequency of English Being Spoken at Home						
Always	65(1.0)	223(1.3)	68(0.7)	263(1.1)	74(0.7)	288(1.1)
Sometimes	30(1.0)	222(1.5)	24(0.6)	260(1.3)	16(0.5)	284(1.5)
Never	5(0.3)	210(2.6)	8(0.3)	250(1.7)	10(0.6)	279(1.4)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Parental Discussion about Schoolwork. Another home factor to consider is parental involvement. At grade 4, students who discussed their schoolwork with someone at home on a daily or weekly basis demonstrated higher average writing proficiency than those who discussed their schoolwork never or hardly ever. At grades 8 and 12, there was a direct relationship between frequency of home discussion about schoolwork and writing proficiency. Students who engaged in daily discussion had higher average proficiency than students who engaged in weekly discussion, who, in turn, outperformed students who discussed their schoolwork less frequently. About one-fifth of the students (18 to 21 percent) at all three grades assessed reported that they never or hardly ever discussed their schoolwork with someone at home.

English Spoken at Home. Relatively few students at any of the three grades (from 5 to 10 percent) indicated that people in their home never spoke English. These students demonstrated lower average writing proficiency than those who lived in English-speaking homes or in homes where English was spoken even sometimes.

Study Habits at Home

Table 5.7 shows students' reports about how much time they spend on homework and how many pages they read each day for school and homework. These figures are contrasted with the amount of daily time students reported spending on the largely nonacademic activity of watching television.

Table 5.7

Average Writing Proficiency by Students' Reports on Time Spent Watching Television, Completing Homework, and Number of Pages Read Daily for School, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Percentage	Average Proficiency	Percentage	Average Proficiency	Percentage	Average Proficiency
Time Spent Viewing Television Each Day						
One hour or less	18(0.5)	227(2.0)	13(0.4)	269(2.0)	28(0.6)	296(1.5)
2-3 hours	40(0.7)	230(1.5)	47(0.7)	266(1.1)	47(0.6)	288(1.2)
4-5 hours	22(0.6)	222(2.0)	27(0.6)	259(1.2)	19(0.5)	276(1.5)
6 hours or more	21(0.6)	203(2.2)	14(0.4)	242(2.2)	6(0.4)	262(2.1)
Time Spent on Homework Each Day						
More than 1 hour	16(0.8)	218(2.0)	27(0.7)	269(1.6)	31(0.6)	300(1.5)
1 hour	27(0.8)	226(1.9)	41(0.6)	265(1.0)	32(0.5)	289(1.0)
1/2 hour	38(1.0)	222(1.7)	20(0.7)	256(1.6)	19(0.5)	282(1.1)
Don't do any	3(0.2)	196(3.9)	6(0.4)	240(2.2)	7(0.3)	265(2.3)
None assigned	16(1.1)	224(2.3)	7(0.6)	251(3.2)	11(0.5)	262(3.1)
Number of Pages Read Each Day in School and for Homework						
More than 20	22(0.8)	224(1.8)	11(0.5)	267(2.2)	16(0.8)	303(1.6)
11 to 20	32(0.6)	228(2.0)	27(0.4)	269(1.6)	29(0.4)	295(1.7)
6 to 10	24(0.7)	222(2.7)	30(0.6)	263(1.5)	25(0.6)	284(1.4)
0 to 5	23(1.0)	212(2.3)	32(0.8)	254(1.2)	30(0.8)	271(1.6)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Television Viewing. At all three grades, students who reported watching six or more hours of television a day had the lowest average writing proficiencies. Students watching four or five hours daily, while more proficient than students watching six or more hours, had lower writing proficiencies at grades 8 and 12 than students who watched an hour or less daily. In addition, it is interesting to compare students' television watching habits to those for doing homework. While 83, 88, and 72 percent of the fourth, eighth, and twelfth graders, respectively, reported watching more than an hour of television daily, just 16, 27, and 31 percent reported spending more than an hour a day on their homework.

Homework. Students' reports about the time spent on their homework reveal that for all three grades, students who usually neglected to do their assigned homework had significantly lower average writing proficiencies than students who did at least some homework every night. Between 7 and 16 percent of the students, however, reported that they were never assigned homework. At grade 12, these students did not write as well as students who did homework every night. At grades 8 and 12, students who reported doing more than one hour of homework per night had the highest average proficiency. At grade 4, the highest average writing proficiency occurred for students who reported doing homework for an average of an hour a day.

Reading for Schoolwork. At all three grades, students reading five or fewer pages daily had lower average writing proficiencies than students reading 11 or more pages per day. Approximately one-fourth (23 percent) of the fourth graders and one-third (30 to 32 percent) of the students at grades 8 and 12 reported reading five or fewer pages for their schoolwork — including the reading done during school and for homework.

Summary

In general, White and Asian/Pacific Islander students at all three grades had higher average writing proficiencies than Black, Hispanic, and American Indian students (although the differences between Asian/Pacific Islander and American Indian students were not statistically significant at grades 8 and 12). At grade 12, Hispanic students had higher average proficiency than Black students. At all three grades, female students wrote more effectively than their male counterparts. At grades 8 and 12, students from the Southeast had lower proficiency than those from the other three regions.

Private school students demonstrated higher average writing proficiency than public school students at all three grades, and students in advantaged urban communities outperformed students in disadvantaged urban communities. Of the twelfth-grade students, those who planned to attend a four-year college after graduation and were in college preparatory high school programs had the highest average writing proficiency.

The percentile results for the nation and demographic groups, as well as the average writing achievement for students in the top-performing one-third of the schools, as compared to those in the bottom-performing one-third of the schools, highlight the vast range of performance within each grade. The data indicate that the lower-performing students within each grade are four or more years of schooling behind their higher-performing grade-level peers. For example, the bottom 10 percent of the eighth graders performed below the 50th percentile at grade 4 and the bottom 25 percent of the twelfth graders performed below the 50th percentile at grade 8. The 10th percentile for Black and Hispanic twelfth graders was roughly equivalent to the 50th percentile at grade 4. Similarly, fourth graders in top-third schools had higher average proficiency than eighth graders in bottom-third schools, and eighth graders in top-third schools had higher average proficiency than twelfth graders in bottom-third schools.

Home factors studied in relation to average writing proficiency revealed that students whose parents had graduated from college or had some education after high school wrote better than those whose parents had no further education after high school or did not finish high school. In addition, students whose parents discussed schoolwork with them on a daily or even weekly basis outperformed students who never or hardly ever discussed their schoolwork with their parents. About one-fifth of the students (18 to 21 percent) at each of the three grades reported never or hardly ever discussing their schoolwork with someone at home. Students

who had three or four types of literary or reference materials available at home had higher average writing proficiency than students with two or fewer types. Although relatively few students reported living in households where no English was spoken, those who did had lower average writing proficiencies than students living in households where at least some English was spoken.

Television and homework habits were also related to student writing achievement. Students watching six or more hours of television daily and those reading five or fewer pages per day for their schoolwork consistently demonstrated lower average writing proficiencies than students who only watched one or two hours of television daily and those who read more than 11 pages per day. Although 21 percent of the fourth graders watched six or more hours of television each day, this dropped to 14 percent at grade 8 and 6 percent at grade 12. Approximately one-fourth (23 percent) of the fourth graders and one-third (30 to 32 percent) of the students at grades 8 and 12 reported reading five or fewer pages for their schoolwork — including the reading done during school and for homework.

Part II

What Is the Status of Writing Instruction?

Part II of this report focuses on the instructional factors that provide the context for learning to write in our nation's schools. NAEP collected these data through questionnaires completed by the school principals or their designees at grades 4, 8, and 12; the students themselves at grades 4, 8, and 12; and the teachers of the eighth graders who participated in the assessment. Chapter 6 contains information about the general emphasis given to writing in the school curriculum, including the amount of instructional time and the frequency of longer written assignments. In Chapter 7, data are provided about the resources for writing instruction with a focus on the availability and use of computers. Data about teachers' training also is included. Chapter 8 addresses classroom instructional approaches, including teachers' reports about their emphasis on the writing process.

Research About Good Instructional Practice

During the past 20 years, the field of English language arts has reached a new consensus about the conditions and approaches that are most effective in the teaching of writing. Some of this consensus reflects the results of research into the ways in which accomplished writers go about their business.[11] Some reflects carefully controlled research studies.[12] And some reflects the accumulated wisdom of expert practitioners who have examined and reformulated their practice.[13]

Rather than a simple formula or set of materials, the consensus that has emerged in the field stresses a number of enabling conditions that contribute to success in learning to write. These include:

- a school environment that values writing and reinforces high standards of achievement
- writing assignments that range over a wide variety of genres and topics
- an instructional environment that introduces students to the strategies and approaches upon which accomplished writers draw to further their own writing (e.g., planning, drafting, and revising strategies)
- writing assignments that encourage sustained involvement over a period of time, allowing multiple drafts and time for reflection and revision
- the use of computerized word-processing programs, particularly for older writers, to facilitate drafting and revision[14]
- the availability of ongoing response to and evaluation of work-in-progress, often through the use of a writing partner or small group to provide responses

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[11] See, for example, Flower, L. S., and Hayes, J. R., "A Cognitive Process Theory of Writing," *College Composition and Communication*, 32, 365-387 (1981).

[12] For a review, see Hillocks, G., Jr., *Research on Written Composition* (Urbana, IL: National Conference on Research in English, 1986).

[13] Andrasick, K. D., *Opening Texts: Using Writing to Teach Literature* (Portsmouth, NH: Heinemann, 1990); Atwell, N., *In the Middle: Writing, Reading, and Learning with Adolescents* (Montclair, NJ: Boynton/Cook, 1987); Graves, D., *Writing: Teachers and Children at Work* (Exeter, NH: Heinemann, 1983).

[14] Bangert-Drowns, R. L., "The Word Processor as an Instructional Tool: A Meta-analysis of Word Processing in Writing Instruction," *Review of Educational Research*, 63(1), 69-93 (1993).

- a shift in emphasis in grading and evaluation from correctness in form toward concern with quality of thought and ability to sustain and elaborate an argument or point of view[15]

Collectively, these emphases are often referred to as "process-oriented instruction" or "process writing," but individually they may be part of almost any approach to the teaching of writing. (Even teachers who have rejected current emphases on process-oriented instruction, for example, are unlikely to reject the importance of planning and revising, or of the quality and organization of ideas.)

The Background Questionnaires

To supplement the achievement results, students, teachers, and school administrators were asked to complete questionnaires about their background and instructional practices in writing. To design the Background Questionnaires for the 1992 assessment, a committee of consultants knowledgeable about education policy worked with the writing development committee and staff from the ETS Policy Research Division. The *1992 Background Questionnaire Framework* covered five policy areas: Instructional Content, Instructional Practices and Experiences, Teacher Characteristics, School Conditions and Context, and Conditions Beyond School.[16] Students completed questionnaires about demographics and home contexts for learning as well as about writing instructional activities and experiences in their schools. For the eighth-grade students participating in the assessment, the teachers responsible for their writing instruction answered questionnaires about instructional content and practices as well as about their background and school conditions. Because the sampling for teacher questionnaires was based on participating students, the responses

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[15]On the evolution and characteristics of process-oriented writing instruction, see Langer, J. A., and Allington, R., "Curriculum Research in Reading and Writing," in P. Jackson (Eds.), *Handbook of Research on Curriculum* (pp. 687-725) (New York: Macmillan, 1992); Langer, J. A. and Applebee, A. N., "Reading and Writing Instruction: Toward a Theory of Teaching and Learning," *Review of Research in Education, 13*, 171-94, 1986; Applebee, A. N., "Problems in Process Approaches: Toward a Reconceptualization of Process Instruction," in A. R. Petrosky and D. Bartolomae (Eds.), *The Teaching of Writing. 85th Yearbook* (Chicago: National Society for the Study of Education, 1986).

[16]*National Assessment of Educational Progress, 1992 Background Questionnaire Framework* (Princeton, NJ: National Assessment of Educational Progress, Educational Testing Service, 1992).

do not necessarily represent all eighth-grade teachers in the nation. Rather, they represent instruction for the representative sample of students assessed. The school questionnaires, completed by the principals of participating schools, contained questions about school policies and resources. Three different school questionnaires were used, one for each grade assessed. All data collected for the NAEP project is confidential. No participant's name, whether student, teacher, or school administrator, leaves the school. Data for participants are identified only by booklet or questionnaire identification numbers, which are used only to match up unnamed teachers and schools with unnamed students, for purposes of large group data analysis.

The Analyses

The chapters in Part II of this report examine the extent to which various aspects of the consensus about effective instruction have made their way into the nation's classrooms, as well as their differential implementation in better-performing and poorer-performing schools. The questionnaire response percentages about various instructional contexts and activities enable NAEP to examine students' exposure in school to writing as well as the extent to which various aspects of the research consensus about effective instruction have entered the nation's writing classrooms. Questions about differential distribution and implementation of these instructional features are addressed by comparing responses for subgroups of students.

In particular, this report explores differential implementation in better-performing schools as compared to poorer-performing schools. Regression analyses were used to compare various situations found in the top-performing one-third of the schools with those in the bottom-performing one-third. Three major areas of differences were identified: curricular emphasis on writing, resources for writing instruction, and instructional emphasis on the writing process (see Procedural Appendix). Within these areas, the response percentages for the top one-third performing schools and the bottom one-third performing schools are provided for a number of variables, such as computer access, the frequency of long writing assignments, and amount of time spent on writing homework.

Associations with writing proficiency also will be examined, though these must be interpreted cautiously given the correlational nature of National Assessment data and the complexity of the contexts in which

instruction is implemented. Associations may result because certain practices lead to higher levels of achievement, or because of differential instruction in which teachers tailor what they do based on their perceptions of students' writing abilities. That is, some instructional strategies may be more effective or appropriate for higher-achieving students, while others are more suitable for lower-achieving students. In particular, various remedial techniques are often associated with lower average proficiency — not because these strategies in any way cause lower achievement, but because the poorer-performing students need the special assistance. Because NAEP is a survey, the lack of a systemic relationship between the frequency of an instructional activity and average writing proficiency may simply mean that higher- and lower-performing students were receiving the same types of instruction. Also, when instructional levels are low, and particular activities are not being implemented to very high degrees, it is difficult to observe variability in achievement associated with those activities.

Relationships between average proficiency and contextual variables are also affected by socioeconomic factors, which make it easier for wealthy school districts to hire better educated and more experienced teachers, and to provide more instructional materials than poorer districts, which also have to contend with a variety of social problems attendant with poverty, which in turn tend to depress student achievement.

In considering the findings reported in the chapters of Part II of this report, the reader should keep firmly in mind the high degree of interrelatedness among all the factors involved. It is impossible to ascribe cause and effect to single variables, in the sense that one single variable and not others will result in higher achievement. It also is extremely difficult to determine if the explanatory variables emerging from an analysis are actually the most significant variables or only related to other more powerful variables.

The data in Part II provide considerable information about the status of writing instruction in our nation's schools and point to potential areas for improvement. However, it would be unwarranted to expect that any set of analyses, including those encompassing a database as extensive as NAEP's, would be able to specify the keys for unlocking all the myriad gateways to educational reform in this area. That will take continued diligence, effort, and common sense by researchers and practitioners.

6

Schools' Curricular Emphasis on Writing

One emphasis of recent reforms in the teaching of writing has been the call for students at all levels, and in all subjects, to engage in more frequent writing activities. At the same time, a variety of studies have indicated that all writing activities are not the same: that particular kinds of writing, for particular kinds of purposes, support the development of certain kinds of writing abilities and not others.[17] Thus, in addition to writing more frequently, students need to be encouraged to write for more varied audiences and purposes, including some in-depth, longer assignments. This chapter will consider the curricular emphasis schools place on writing as well as the nature and frequency of students' writing assignments. Subsequently, Chapters 7 and 8 will take up the related questions of the resources that are available to support writing instruction, and the instructional approaches used in writing classrooms.

[17]Hillocks, G., Jr., *Research on Written Composition: New Directions for Teaching* (Urbana, IL: ERIC Clearinghouse on Reading and Communication Skills, 1986).

There are many variations among schools and teachers in approaches to writing instruction. To begin to examine this variation, differences in emphases on writing instruction in the top-performing and bottom-performing third of the schools were examined. At grade 8, a regression analysis was used to examine differences between these two groups as reflected in teacher and student reports (see Procedural Appendix for further details). Overall, the regression on variables related to curricular priority and emphasis on writing instruction accounted for 35 percent of the variation between groups (R=.59).

The new assessment procedures used in the 1992 writing assessment (e.g., prompts, response times, and rating and scaling procedures) preclude comparisons between student performance in 1992 and those in any previous assessments. However, NAEP did administer a questionnaire in 1988 to teachers of the eighth graders who participated in that writing assessment. Also, the students completed questionnaires at all three grade levels. When possible, comparisons are made between responses about instructional conditions and practices provided by teachers and students in 1992 and those obtained in 1988, even though comparable proficiency results are not available for the 1988 assessment.[18]

To examine the emphasis placed on writing instruction in our nation's schools, the principals of the schools (or their designees) were asked about the school-wide priority given to writing and literacy. Also, teachers and students were asked questions about writing assignments and assessment. The questions focused on the amount of time spent on writing instruction and the amount of writing involved, as well as the nature of the assignments and assessments themselves. Finally, since a school's emphases and the kinds of feedback provided can influence students' perceptions of themselves as writers, students were asked about how they perceived their own competence in writing and how much they enjoyed writing.

School-Wide Emphasis on Literacy

Writing instruction takes place within a school-wide context that may give greater or lesser priority to the development of literacy in general and writing abilities in particular. As one indication of such school-wide emphases, principals of students in grades 4 and 8 were asked the extent to which their schools had established special priorities for reading, writing, or mathematics instruction during the past two years.

[18]A separate assessment of changes in writing achievement was conducted, maintaining conditions and prompts between 1984, 1988, 1990, and 1992. These results will be reported separately in *NAEP 1992 Trends in Academic Progress*.

Their reports, summarized in Table 6.1, indicate that the majority of students at these two grades were in schools that paid special attention to the development of literacy and mathematics skills. At grade 4, 75 percent were in schools that had established writing as a special priority, and 83 percent were in schools that had established reading as a priority. At grade 8, both reading and writing had been established as priorities in the schools of approximately two-thirds of the students. Mathematics received approximately the same attention as writing at both grades.

Table 6.1 also contrasts the priorities given to these three areas in schools grouped in the top one-third and the bottom one-third in overall achievement in writing at grades 4 and 8. At grade 4, schools in the bottom one-third in overall writing achievement were significantly more likely to establish reading as a special priority than they were to give priority to writing. At grade 8, the differences were no longer significant, though the top one-third schools actually were somewhat more likely to emphasize writing than they were reading, while the bottom one-third continued to emphasize reading over writing.

Table 6.1

Schools' Reports on Reading and Writing as Priorities, Grades 4 and 8

	YES, READING IS A SPECIAL PRIORITY	YES, WRITING IS A SPECIAL PRIORITY	YES, MATHEMATICS IS A SPECIAL PRIORITY
Has your school identified any of the following subjects as a priority in the last two years?	Percent of Students	Percent of Students	Percent of Students
GRADE 4	83(2.6)	75(3.3)	72(3.2)
Top One-Third	85(4.4)	76(4.9)	69(4.7)
Bottom One-Third	91(3.4)	71(5.8)	79(4.1)
GRADE 8	65(3.2)	67(3.6)	68(3.3)
Top One-Third	61(5.8)	69(4.8)	58(6.4)
Bottom One-Third	74(5.8)	67(6.8)	74(5.3)

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Time Spent on Writing Instruction

The priority that a school as a whole may assign to a particular subject may not necessarily be reflected in the amount of instructional time that subject will receive. To begin to examine this, Table 6.2 summarizes responses of eighth-grade teachers to a question about the amount of time spent *each week* on writing instruction. Fifteen percent of the eighth graders received 30 or fewer minutes of instruction per week, 40 percent received about 60 minutes, 22 percent received 90 minutes, and 23 percent received two hours or more. Since such a relatively high percentage of the eighth graders received about one hour of weekly instruction, these figures can be looked at in two ways: 85 percent of the students had teachers who reported spending 60 minutes or more on writing instruction each week, or conversely, a majority — 55 percent — were in classes where teachers reported spending only an hour or less on writing instruction each week.

The figures do reflect an increase in the amount of time devoted to writing instruction at the eighth grade in the four years since the previous assessment. In 1988, 30 percent of the students had teachers who reported that they spent 30 minutes or less on teaching writing (compared with 15 percent in 1992), 72 percent had teachers who spent 60 minutes or less (compared with 55 percent), and only 28 percent had teachers who spent 90 minutes or more (compared with 45 percent).

Table 6.2

Teachers' Reports on Amount of Time Spent Each Week Instructing and Helping Students with Writing, Grade 8, 1988 and 1992

In this class, about how much time do you spend each week on instructing and helping students with their writing?	30 MINUTES OR LESS		60 MINUTES		90 MINUTES		120 MINUTES OR MORE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation								
1992	15(1.6)	259(2.1)	40(2.0)	264(1.5)	22(2.0)	264(2.8)	23(2.3)	265(2.1)
1988	30(2.5)	—	42(2.2)	—	17(1.5)	—	11(0.6)	—
High Ability								
1992	9(3.1)	271(6.6)	36(4.7)	284(4.2)	29(4.8)	282(4.7)	26(4.2)	282(3.0)
Average Ability								
1992	15(2.4)	266(3.0)	45(3.1)	266(2.6)	20(2.6)	263(3.5)	20(2.4)	269(2.5)
Low Ability								
1992	21(3.5)	242(3.9)	36(3.4)	248(3.4)	21(3.5)	245(3.5)	23(4.8)	246(2.9)
Mixed Ability								
1992	14(3.2)	262(4.0)	38(4.1)	265(2.5)	23(3.8)	266(4.0)	26(5.0)	264(3.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

— Comparable proficiency data are not available for 1988.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

At each ability level students who received 30 minutes or less of writing instruction each week tended to write less proficiently than those who received two hours or more, but variation in proficiency was large and the differences were not statistically significant. Similarly, students in high-ability classes apparently spent more time on writing instruction than those in low-ability classes. For example, 91 percent of high-ability eighth-grade students, but only 80 percent of low-ability students, received an hour or more of writing instruction per week, although again this difference was not statistically significant.

Table 6.3 summarizes responses to a related question that asked eighth-grade teachers how much time they expected students to spend *outside of class* each week on writing assignments. Most eighth graders (64 percent) were expected to spend one to two hours on their writing assignments outside of school each week. Twenty-six percent were not expected to spend much out-of-class time on writing assignments — less than one hour per week.

Table 6.3

Teachers' Reports on the Amount of Time They Expected Students to Spend Outside of Class Each Week on Writing Assignments, Grade 8

How much time do you expect students to spend outside of class each week on writing assignments?	LESS THAN ONE HOUR		ONE HOUR		TWO HOURS		THREE HOURS OR MORE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation	26(2.1)	260(1.9)	36(2.4)	262(1.8)	28(2.3)	266(1.9)	10(1.4)	270(3.4)
High Ability	13(3.2)	278(4.6)	34(4.7)	278(3.7)	30(4.2)	284(3.2)	23(3.9)	287(4.5)
Average Ability	25(3.3)	262(3.4)	40(3.9)	265(2.8)	27(3.0)	269(2.7)	8(2.3)	266(3.6)
Low Ability	39(4.2)	247(2.9)	27(2.6)	242(3.6)	29(4.5)	247(3.8)	5(2.3)	238(7.2)
Mixed Ability	24(4.0)	261(3.3)	38(5.1)	262(2.2)	29(4.7)	268(3.5)	9(2.5)	269(7.0)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Differences by ability level, however, were more marked for out-of-class assignments than for in-class instruction. Eighth-grade students in high-ability classes were more likely to be expected to spend three hours or more a week outside of school on writing assignments (23 percent, compared to only 5 percent of students in low-ability classes). Conversely, students in low-ability classes were more likely to be expected to spend less than an hour a week on writing assignments (39 percent, compared to 13 percent of the students in high-ability classes).

The amount of time that students were expected to spend on writing assignments outside of class was also more strongly related to writing proficiency. For the nation as a whole, for example, students who were

expected to spend less than an hour each week on writing assignments had an average proficiency of 260, while those who were expected to spend three hours or more had an average proficiency of 270.

Data in Table 6.1 indicated that school administrators reported that the percentages of eighth graders in schools placing special priority on writing — 67 percent — was nearly identical to the percentage in schools placing special priority on mathematics — 68 percent. However, as shown in Table 6.4, teachers reported considerably more time given to instruction and homework in mathematics than in writing. For example, according to teacher reports, nearly three times as ma··· ·ighth graders received two or more hours of weekly mathematics · . ·· as received a like amount of writing instruction (87 percent vers·· ·· ercent). Similarly, teachers reported only 38 percent of eighth gra . expected to spend two hours or more on writing assignments outsi·e of school *per week*, compared to 69 percent expected to spend 30 minutes or more on mathematics homework *each day* (totalling at least two and a half hours per week).

Table 6.4

Teachers' Reports on the Amount of Mathematics Instruction and Homework, Grade 8

MATHEMATICS INSTRUCTION EACH WEEK

TWO AND ONE-HALF HOURS OR LESS		MORE THAN TWO AND ONE-HALF HOURS, BUT LESS THAN FOUR HOURS		FOUR HOUR OR MORE	
Percent of Students	Average Mathematics Proficiency	Percent of Students	Average Mathematics Proficiency	Percent of Students	Average Mathematics Proficiency
13(1.9)	269(3.7)	55(2.6)	270(1.5)	32(2.8)	267(2.0)

AMOUNT OF MATHEMATICS HOMEWORK ASSIGNED EACH DAY

15 MINUTES OR LESS		30 MINUTES		45 MINUTES OR MORE	
Percent of Students	Average Mathematics Proficiency	Percent of Students	Average Mathematics Proficiency	Percent of Students	Average Mathematics Proficiency
31(2.1)	260(1.9)	49(2.5)	268(1.4)	20(2.1)	283(2.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Mathematics Assessment.

This is not meant in any way to imply that less time should be devoted to mathematics instruction[19] but only to highlight the relatively low instructional priority that writing has in the eighth-grade curriculum. Considering both in-class instructional time and time for outside homework assignments, the majority of eighth graders appear to spend two hours or less per week on writing. In comparison, the majority of eighth graders spend five hours or more per week on mathematics.

Students' Writing Assignments

Frequency of Writing Assignments of Various Lengths. Writing assignments can vary in length from brief notes to extended research projects. In out-of-school contexts, the length of a piece is generally directly related to the purpose for which it is intended, and students need to learn to write as much as is needed to get their message across. However, to learn to do this, they need experience writing papers of varying lengths; for example, the planning and organizational strategies are different when writing a synopsis as opposed to a short story. To begin to examine variety in writing assignments, students at grades 8 and 12 and teachers at grade 8 were asked how often papers of various lengths were assigned. The results are summarized in Table 6.5.

At grades 8 and 12, about two-thirds of the students reported writing papers of one or two paragraphs at least weekly (68 and 65 percent at the two grades, respectively), and most wrote papers of one or two pages at least monthly (81 and 87 percent, respectively). Differences between grade levels were most apparent for longer papers, with the majority of eighth graders (52 percent) reporting never or hardly ever being assigned writing of three or more pages, while the majority of twelfth graders (64 percent) reported being asked to write papers of this length at least monthly.

Students' responses to these questions also reflected an increasing emphasis on writing of a variety of lengths compared with responses to the previous assessment. At grade 8, students in 1988 were less likely to report at least weekly writing of one or two paragraphs (61 percent, versus 68

[19]Mullis, I. V. S., Dossey, J. A., Owen, E. H., and Phillips, G. W., *NAEP 1992 Mathematics Report Card for the Nation and the States* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1993).

Mullis, I. V. S., Dossey, J. A., Gorman, S., Latham, A. S., Jenkins, F., and Johnson, E. G., *Effective Schools and Instruction in Mathematics: Perspectives from the NAEP 1990 and 1992 Assessments of the Nation and the States* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1994).

percent in 1992) or of one or two pages (33 percent, versus 38 percent), or at least monthly writing of three or more pages (40 percent, versus 48 percent). Increases in the amount of writing also were reported at grade 12, particularly for writing of three or more pages (an amount reported at least monthly by 40 percent of twelfth graders in 1988, compared with 64 percent in 1992).

Table 6.5

Students' Reports on the Frequency of Writing Assignments of Specified Lengths, Grades 8 and 12, 1988 and 1992

How often are papers of the following lengths assigned in your English class?	AT LEAST WEEKLY		ONCE OR TWICE A MONTH		NEVER OR HARDLY† EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
GRADE 8						
One or two paragraphs						
1992	67(1.1)	263(1.3)	22(0.8)	262(1.5)	12(0.6)	254(1.7)
1988	61(1.1)	—	26(0.9)	—	13(0.8)	—
One or two pages						
1992	38(1.0)	260(1.7)	43(0.7)	267(0.8)	19(0.9)	254(2.2)
1988	33(0.7)	—	38(1.1)	—	29(0.9)	—
Three or more pages						
1992	15(0.5)	250(2.0)	33(0.9)	270(1.4)	52(1.1)	260(0.9)
1988	15(0.5)	—	25(0.8)	—	61(0.7)	—
GRADE 12						
One or two paragraphs						
1992	65(1.0)	288(1.1)	20(0.6)	282(1.7)	15(0.8)	285(1.9)
1988	58(1.2)	—	24(1.0)	—	16(0.8)	—
One or two pages						
1992	40(0.9)	290(1.5)	47(0.8)	288(0.7)	13(0.5)	270(2.3)
1988	30(1.0)	—	46(1.0)	—	24(1.0)	—
Three or more pages						
1992	13(0.5)	283(2.5)	51(0.7)	294(0.9)	37(0.7)	278(1.6)
1988	10(0.4)	—	30(1.0)	—	60(1.0)	—

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

— Comparable proficiency data are not available for 1988.

†The scale was reduced from 5 to 4 categories in 1992, with "never or hardly ever" replacing "a few times a year" and "never"; labels for the remaining categories remained unchanged.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

As Table 6.6 indicates, teachers' reports at grade 8 show a similar pattern to that of the students. The majority of students had teachers who reported assigning papers of one or two paragraphs once or twice a week (80 percent), one or two pages once or twice a month (53 percent), and never or hardly ever assigning papers of three or more pages (58 percent).

Teachers' reports on frequency of writing assignments also revealed some differences in emphasis between top-performing and bottom-performing schools. In general, students in the top-performing schools were assigned more extensive writing than were their peers in bottom-performing schools: thus, 44 percent of the eighth graders in top-performing schools were asked to write one or two pages at least weekly, compared with only 25 percent in bottom-performing schools. Similarly, 51 percent were asked to write three or more pages once or twice a month, compared to only 25 percent in bottom-performing schools. Giving assignments of three or more pages also differentiated between top- and bottom-performing schools in the regression analyses.

Table 6.6

Teachers' Reports on the Frequency of Writing Assignments of Specified Lengths, Grade 8

How often do you give writing assignments of the following lengths?	AT LEAST WEEKLY		ONCE OR TWICE A MONTH		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
One or two paragraphs	80(2.5)	264(1.3)	17(2.3)	261(2.2)	3(0.9)	256(6.7)
Top One-Third	83(3.9)	282(2.2)	14(3.9)	283(3.3)	3(1.8)	280(9.6)
Bottom One-Third	75(4.5)	247(1.6)	19(3.6)	247(2.7)	6(2.2)	246(8.7)
One or two pages	34(2.4)	267(1.9)	53(2.8)	263(1.6)	12(2.1)	255(3.2)
Top One-Third	44(4.0)	283(2.8)	47(4.3)	281(2.4)	9(3.0)	280(5.4)
Bottom One-Third	25(2.8)	249(3.1)	57(4.7)	248(2.2)	18(4.4)	244(4.0)
Three or more pages	4(1.1)	273(4.3)	38(2.8)	269(1.7)	58(2.8)	259(1.6)
Top One-Third	5(2.4)	288(11.5)	51(4.9)	283(2.3)	43(4.5)	279(3.2)
Bottom One-Third	3(1.3)	255(3.4)	25(4.7)	252(2.8)	73(4.3)	245(2.0)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

For the teachers' reports at grade 8, students who were never or hardly ever asked to complete a writing assignment of whatever length tended to have lower average writing proficiency scores than students who were asked to do so monthly or weekly. The differences were particularly large, and statistically significant, for writing of three or more pages. The relationship between average proficiency and the eighth graders' own reports about frequency of writing assignments of varying lengths showed a more complicated pattern, however. The highest average writing proficiency levels occurred for students who reported at least monthly assignments of one or more pages at grade 8, or of three or more pages at grade 12. Weekly assignments of one or more pages at grade 8, or of three or more at grade 12, on the other hand, were associated with somewhat lower average writing proficiency. This may reflect teachers' attempts to provide additional writing instruction to lower-performing students, or it may reflect a use of writing and other seatwork as a technique to maintain discipline and control in difficult classes.

Frequency of Types of Writing Assignments. To examine the extent to which students were being provided with opportunities to engage in a variety of types of writing, for a variety of purposes, students in grades 4, 8, and 12, and teachers of eighth-grade students were asked how often particular types of writing were assigned.

At grade 4, students were asked how frequently they were asked to write a story or report, or to write in a journal or learning log, without further differentiating among types of writing. Their responses, summarized in Table 6.7, indicate that 62 percent reported log or journal writing and 82 percent reported story or report writing on at least a monthly basis.

At grade 8, assignments included story or narrative writing (75 percent of the students reporting they did such writing at least monthly), report or summary writing (78 percent), essays or themes requiring analysis or interpretation (66 percent), persuasion (57 percent), and log or journal writing (53 percent). By grade 12, writing requiring analysis or interpretation was reported as frequent (84 percent of the twelfth graders reported such writing at least monthly), as was report or summary writing (82 percent). Story or narrative writing occurred less frequently by grade 12 (62 percent), as did log or journal writing (45 percent), while experience with persuasive writing remained relatively constant compared to grade 8 (with 53 percent reporting such writing at least once or twice a month).

There were some associations between types of writing assignments and average writing proficiency. In particular, story writing at grades 4 and 8, and essays or themes requiring analysis and interpretation at grades 8 and 12, were associated with higher writing proficiency scores.

Table 6.7

Students' Reports on Types of Writing Assigned for English Class, Grades 4, 8, and 12

How often do you get the following kinds of writing in English class?	AT LEAST MONTHLY		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Write in a log or journal				
Grade 4	62(1.5)	224(1.2)	38(1.5)	221(1.8)
Grade 8	53(1.7)	261(1.1)	47(1.7)	264(1.4)
Grade 12	45(1.5)	285(1.0)	55(1.5)	288(1.3)
Story or report				
Grade 4	82(0.8)	225(1.2)	18(0.8)	210(2.3)
Story or Narrative (personal or imagined experience)				
Grade 8	75(1.0)	265(1.0)	25(1.0)	253(1.4)
Grade 12	62(0.9)	285(1.0)	38(0.9)	289(1.3)
Report or summary				
Grade 8	78(0.8)	263(1.2)	22(0.8)	258(1.3)
Grade 12	82(0.6)	287(1.0)	18(0.6)	282(2.1)
Essay or theme in which you analyze or interpret				
Grade 8	66(0.6)	264(1.1)	34(0.6)	258(1.3)
Grade 12	84(0.5)	290(1.0)	16(0.5)	268(2.1)
Persuasive essay or letter				
Grade 8	57(1.0)	261(0.9)	43(1.0)	263(1.5)
Grade 12	54(0.9)	285(1.2)	46(0.9)	288(1.1)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

There were also some differences in the types of writing assignments given to students in the top-performing and bottom-performing thirds of the schools at grades 8 and 12 (Table 6.8). At grade 8, the top-performing schools were more likely than the bottom-performing schools to require their students to write essays or themes involving analysis and interpretation, and to write stories or narratives on a monthly basis. They were somewhat less likely than the lower-performing schools to ask for summary or report writing, or persuasive writing, on a weekly basis. More frequent assignments requiring analysis and interpretation and fewer requiring reports or persuasion also were differentiating factors in the regression analyses. At grade 12, only the degree of emphasis on analysis and interpretation continued to differentiate the two groups.

Table 6.8

Students' Reports on Types of Writing Assignments in the Top-Performing and Bottom-Performing One-Third of the Schools, Grades 8 and 12

	AT LEAST ONCE OR TWICE A WEEK	ONCE OR TWICE A MONTH	NEVER OR HARDLY EVER
Essay or Theme Involving Analysis and Interpretations			
Grade 8	26(0.6)	40(0.6)	34(0.6)
Top One-Third	26(1.7)	43(1.3)	30(1.7)
Bottom One-Third	27(1.4)	36(1.1)	36(1.5)
Grade 12	38(0.9)	46(0.8)	16(0.5)
Top One-Third	41(1.9)	48(1.7)	11(0.9)
Bottom One-Third	38(1.0)	42(0.8)	20(1.0)
Story or Narrative (Personal or Imagined Experience)			
Grade 8	33(1.1)	43(0.8)	25(1.0)
Top One-Third	32(2.3)	48(2.3)	20(1.6)
Bottom One-Third	33(1.5)	37(0.9)	29(1.7)
Grade 12	22(0.8)	40(0.6)	38(0.9)
Top One-Third	21(1.7)	40(1.1)	39(2.0)
Bottom One-Third	25(1.1)	39(1.3)	36(1.6)
Report or Summary of Something Read or Known About			
Grade 8	32(0.7)	46(0.8)	22(0.8)
Top One-Third	29(1.5)	51(1.5)	20(1.2)
Bottom One-Third	34(1.5)	42(1.5)	23(1.6)
Grade 12	43(0.8)	40(0.8)	18(0.6)
Top One-Third	45(1.4)	38(1.2)	17(1.2)
Bottom One-Third	44(1.2)	38(1.3)	18(1.1)
Essay or Letter to Persuade Others			
Grade 8	21(0.6)	36(0.7)	43(1.0)
Top One-Third	17(1.5)	37(1.6)	46(2.4)
Bottom One-Third	25(1.2)	34(1.1)	41(1.7)
Grade 12	15(0.5)	39(0.8)	46(0.9)
Top One-Third	13(0.9)	39(1.1)	48(1.2)
Bottom One-Third	18(0.8)	38(1.5)	44(1.6)

The standard errors of the estimated percentages appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Teachers' reports at grade 8 paralleled those from students on the relative emphasis given to different types of writing (Table 6.9) . Teachers reported that stories or narratives were assigned most often (90 percent at least monthly) followed by reports and summaries (88 percent at least monthly), and by essays or themes requiring analysis or interpretation (78 percent at least monthly). Teachers reported that 34 percent of the students were never or hardly ever asked to write persuasive essays or letters, and that 36 percent were never asked to write in journals or learning logs. As with the student reports at grade 8, the writing of essays or themes requiring analysis or interpretation, as well as story or narrative writing, was associated with higher writing proficiency scores.

Table 6.9

Teachers' Reports on Types of Writing Assigned, Grade 8

How often do you give the students the following types of writing assignment?	AT LEAST MONTHLY		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Journal or learning log	64(2.0)	265(1.3)	36(2.0)	262(1.8)
Story or narrative (personal or imagined experience)	90(1.7)	264(1.3)	10(1.7)	254(2.7)
Report or summary	88(1.3)	263(1.1)	12(1.3)	265(2.5)
Essay or theme in which they analyze or interpret	78(2.7)	265(1.2)	22(2.7)	256(2.4)
Persuasive essay or letter	66(2.7)	265(1.2)	34(2.7)	261(2.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Methods for Assessing Writing

In recent years the methods being used to assess writing achievement have become increasingly important. As more attention has focused on the quality and depth of student thinking, there have been moves away from traditional multiple-choice formats toward writing activities that involve students in extended thought and language — in thinking about ideas as well as communicating them.[20] To examine ways in which such concerns are being reflected in classroom assessment methods, the 1992 assessment asked eighth-grade teachers to report the frequency with which they used each of the following instruments to assess student progress in writing: multiple-choice tests, short-answer tests, long essays, and individual or group presentations or portfolios.

Their responses, presented in Table 6.10, indicate that the most frequent methods for assessing writing ability were short-answer tests and projects, presentations, and portfolios. Long essays were reported somewhat less frequently, and multiple-choice tests least of all. (Sixty-three percent of eighth-grade students had teachers who reported never or hardly ever using multiple-choice formats to assess student writing.) Since an array of thought-provoking projects, presentations, and portfolios has the ability to tap a wide range of thinking and writing, it is worthy of note that more than three-fourths (77 percent) of the students had teachers who reported using such activities as the basis for assessing student progress.

Some differences were evident in the assessment practices in the top-performing and the bottom-performing schools. For example, more frequent use of long essays to assess student progress in writing was identified as a differentiating factor in the regression analyses. In the top-performing schools, students were more likely to be assessed on the basis of long essays (76 percent at least monthly, compared with 49 percent in the bottom-performing schools) or individual or group projects, presentations, or portfolios (84 percent compared with 76 percent in the bottom-performing schools). Both of these approaches suggest a greater emphasis in the top-performing schools on students' thinking and reasoning skills. In the sample as a whole, the use of each of these approaches also tended to be associated with higher levels of student writing proficiency.

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[20] Daly, E., editor, *Monitoring Children's Language Development: Holistic Assessment in the Classroom* (Australian Reading Association, 1989).

Table 6.10

Teachers' Reports on Methods for Assessing Writing, Grade 8

How often do you use each of the following to assess student progress in writing?	AT LEAST WEEKLY		ONCE OR TWICE A MONTH		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Multiple-choice tests	10(1.6)	260(4.0)	27(2.3)	262(2.0)	63(2.4)	264(1.3)
Top One-Third	8(3.0)	284(7.2)	26(3.9)	282(3.0)	66(4.8)	281(2.0)
Bottom One-Third	12(2.9)	245(4.3)	28(4.2)	246(2.4)	60(3.6)	248(2.1)
Short-answer tests	26(1.8)	263(2.0)	49(2.6)	264(1.8)	25(2.6)	262(2.0)
Top One-Third	31(4.4)	281(3.6)	42(5.3)	284(2.2)	27(5.6)	278(3.2)
Bottom One-Third	26(3.6)	245(2.5)	49(4.2)	248(2.4)	25(2.5)	248(2.5)
Long essays	10(1.5)	266(3.6)	50(2.0)	267(1.4)	40(2.2)	258(1.7)
Top One-Third	13(3.3)	281(5.4)	63(4.7)	283(2.1)	24(4.3)	278(2.8)
Bottom One-Third	5(1.5)	250(4.7)	44(3.3)	249(2.2)	51(3.3)	245(2.7)
Individual or group projects, presentations, or portfolios	18(2.1)	266(1.7)	59(2.7)	264(1.6)	23(2.0)	259(1.7)
Top One-Third	22(4.5)	282(2.3)	62(4.5)	283(2.4)	16(2.7)	278(3.9)
Bottom One-Third	14(2.7)	246(3.2)	62(3.7)	249(2.2)	24(3.2)	243(2.7)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Students' Perceptions of Their Own Writing

Students at all three grades were asked about how they perceived their competence as writers and how much they enjoyed writing. More specifically, students were asked to indicate the degree of their agreement or disagreement with two statements: "I am good at writing" and "I like to write." The results are presented in Table 6.11.

Across the grades, 66 percent of the fourth graders agreed that they were good writers compared to 42 to 43 percent of the students at grades 8 and 12. A similar change in perceptions occurred between grades 4 and 8 in response to the statement about liking writing. Seventy-two percent of the fourth graders agreed that they liked to write compared to 54 to 56 of the students at grades 8 and 12.

At all three grades, students who were positive about liking to write had higher average proficiency than those who were negative. The relationship was particularly clear at grades 8 and 12, where average writing proficiency showed a significant decrease with each category of response from strong agreement through disagreement about liking to write. Relationships between proficiency and students' judgments of whether they were good writers were more erratic, though at all three grades those who agreed that they were good at writing had higher average writing proficiency than those who disagreed.

Table 6.11

Students' Reports on Their Perceptions About Writing, Grades 4, 8, and 12

How do you feel about the following statements?	STRONGLY AGREE		AGREE		UNDECIDED		DISAGREE/ STRONGLY DISAGREE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
I am good at writing								
Grade 4	23(0.7)	223(1.7)	43(0.7)	226(1.8)	19(0.6)	226(1.7)	15(0.5)	[illegible](1.9)
Grade 8	10(0.4)	263(1.7)	33(0.6)	271(1.5)	35(0.5)	263(1.2)	22(0.5)	246(1.6)
Grade 12	9(0.4)	292(2.3)	33(0.6)	297(1.2)	34(0.5)	285(1.1)	24(0.6)	272(1.7)
I like to write								
Grade 4	27(0.8)	226(2.1)	45(0.7)	225(1.4)	16(0.7)	221(2.1)	13(0.5)	205(1.4)
Grade 8	16(0.4)	273(1.3)	38(0.6)	268(1.2)	21(0.5)	259(1.6)	25(0.6)	247(1.1)
Grade 12	17(0.5)	300(1.6)	39(0.7)	293(1.0)	20(0.5)	282(1.4)	25(0.8)	270(1.4)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Summary

This chapter focused on questions concerning schools' and teachers' emphases on writing instruction, including instructional time and the amount and kinds of writing students are asked to do in their English and language arts classes. The majority of students (three-fourths at grade 4 and two-thirds at grade 8) attended schools where the principals (or their designees) reported treating writing as an instructional priority. Reports of writing as a school-wide priority were closely paralleled by reports of school-wide emphases on mathematics, suggesting that the two subjects were viewed as similarly important.

The amount of time spent on the two subjects differed considerably, however. In grade 8, teachers reported that the majority of students received an hour or less of writing instruction each week (55 percent) and were expected to spend an additional hour or less outside of class on writing activities (62 percent). At the same grade level, teachers reported that most students received more than two and a half hours of mathematics instruction each week (87 percent) as well as a half an hour a day, or at least two and a half hours per week, of homework (69 percent). These figures suggest that a majority of eighth-grade students spend two hours or less a week on developing writing proficiency, compared with five or more hours a week developing skill in mathematics.

Eighth-grade students in lower-ability classes received nearly the same amount of in-class instruction in writing as did those in higher-ability classes, but they were expected to spend less out-of-class time on writing assignments. For example, teachers reported that students in lower-ability classes were more likely than those in higher-ability classes to spend less than an hour per week on writing assignments outside of school (39 percent, compared to only 13 percent in high-ability classes).

At grade 4, nearly half the students were asked to do some writing in a log or journal at least once or twice a week (47 percent), and about two-fifths did story or report writing each week (42 percent). Another 18 percent of fourth graders reported never or hardly ever writing stories or reports, however, and 38 percent were never asked to write in a log or journal.

Assignments at grade 8 included those of one or two paragraphs at least once or twice a week (79 percent) and assignments of one or two pages at least once or twice a month (88 percent). The most typical assignments required report or summary writing, narratives or story writing, and essays

or themes requiring analysis or interpretation. Persuasive writing received less emphasis.

By grade 12, students reported that essays involving analysis and interpretation were required more frequently, and narrative writing dropped in emphasis. Persuasive writing was reported on a regular basis by just over half of the students. Twelfth-grade students were also typically asked to complete longer assignments, of three or more pages, at least once or twice a month (63 percent).

Students' reports at grades 8 and 12 showed some increases between 1988 and 1992 in the amount of writing that they were being asked to do for their English classes. Both grades saw an increase in the proportion of students being asked to write one or two pages every week, as well as in the proportion being assigned papers of three or more pages every month (at grade 12, the percentage of students being asked to complete these longer assignments at least monthly rose from 40 percent in 1988 to 63 percent in 1992).

In general, eighth and twelfth graders who were never or hardly ever asked to complete writing assignments had lower average achievement than students asked to complete such assignments on a weekly or monthly basis, though there were some exceptions. At both grades, the highest average writing proficiency occurred for students who reported writing papers of three or more pages once or twice a month. Student reports of frequent writing of longer papers (one or more pages at grade 8, three or more at grade 12) were associated with somewhat lower average writing proficiencies. This may reflect teachers' attempts to provide extra practice for weaker writers, or the use of writing and other seatwork to maintain discipline and control in more disruptive classes.

The uses of and approaches toward assessment reported by students and teachers included more emphasis on short-answer tests as well as on projects and portfolios (all used at least monthly for about 75 percent of the students at grade 8) than on multiple-choice tests (never or hardly ever used for 63 percent of the students). Long essays, however, were used infrequently (never or hardly ever for 40 percent of the eighth graders).

The top-performing third of the schools differed from the bottom-performing third in the priority and emphasis given to writing instruction. In particular, the regression analyses conducted at grade 8 indicated that teachers in the top-performing schools reported more frequent writing assignments of three or more pages and more frequent use of long essays

to assess student progress in writing. Similarly, the students in the top-performing schools reported more frequent assignments requiring an essay or theme involving analysis and interpretation, less frequent assignments requiring only a report or summary of something read or known about, and less frequent assignments requiring an essay or letter to persuade others. Principals' reports indicated that the top-performing schools were also less likely to emphasize reading over writing as school-wide priorities.

7

Resources for Writing Instruction

The teaching of writing is affected by the general conditions of instruction, including the availability of resources and materials, the size of classes, availability of computers, the education and experience of the teachers, and the degree of autonomy teachers have in resource use and decision-making.[21] This chapter will review these general conditions as reported by schools and teachers, and describe their relationships to student writing proficiency.

There are many variations among schools and teachers in resources available for writing instruction, however. To begin to examine this variation, differences in resources between the top-performing and bottom-performing one-third of the schools were also examined. At grade 8, regression analyses were used to examine differences between these two

[21] Applebee, A., Langer, J., Mullis, I., Jenkins, L., and Foertsch, M., *Learning to Write in Our Nation's Schools* (Princeton, NJ: Educational Testing Service, 1990).

groups as reflected in teacher, student, and school reports. The first regression examined differences in the availability of resources, focusing on access to and use of computers. Overall, this regression accounted for 19 percent of the variation between groups (R=.44). The second regression examined differences in teacher education and training between the top-performing and bottom-performing schools. This regression was not significant as a whole.

Availability of Instructional Materials and Other Resources

No matter how high a priority schools place on writing, learning is more likely to occur when teachers obtain the materials they feel are necessary for effective instruction.[22] To begin to examine this, eighth-grade teachers were asked how well their school systems provided them with the instructional materials and other resources they needed to teach. Their responses, summarized in Table 7.1, indicate that 13 percent of eighth-grade students were in classes where the teachers felt they got all of the needed resources, and another 47 percent were in classes where teachers felt they got most of what they needed. Forty percent, however, were in classes where the teachers felt they did not get the resources they needed.

Proficiency scores were apparently higher for students whose teachers reported resources were readily available, though the differences were not statistically significant. Similarly, students in advantaged urban communities and high- or average-ability classes appeared to be the most likely to be in classes where teachers received all of the needed resources, but the variability was large and the differences among subgroups in resource availability were not statistically significant.

[22] Andersen, P. S., and Lapp, D., *Language Skills in Elementary Education*, fourth edition (New York: Macmillan Publishing Co , 1988).

Table 7.1

Teachers' Reports on the Availability of Instructional Materials and Resources for Writing Instruction, Grade 8

How many of the instructional resources you need does the school provide?	ALL		MOST		SOME OR NONE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation	13(1.9)	267(2.7)	47(2.9)	264(1.2)	40(2.7)	260(1.7)
Advantaged Urban	18(4.7)	284(5.8)	47(8.1)	283(4.1)	34(7.0)	272(5.4)
Disadvantaged Urban	8(2.7)	245(4.9)	53(5.2)	244(3.7)	40(5.4)	245(5.5)
Extreme Rural	14(11.0)	266(12.9)	52(12.4)	270(5.1)	35(11.9)	256(5.9)
Other	13(1.9)	266(2.8)	46(2.8)	264(1.2)	41(1.7)	261(1.8)
High Ability	16(3.6)	291(5.1)	48(5.3)	279(3.4)	36(5.0)	282(3.4)
Average Ability	15(2.8)	264(3.5)	46(3.5)	268(2.5)	39(3.4)	263(2.6)
Low Ability	8(2.1)	255(6.8)	42(4.6)	247(2.3)	49(4.6)	242(2.7)
Mixed Ability	8(1.8)	268(5.5)	49(4.5)	265(1.7)	43(4.1)	263(2.9)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Class Size and Ability Grouping

Class Size. Writing instruction requires a great deal of individualized attention, and that in turn means that a considerable portion of a schools' resources need to be devoted to keeping class sizes small.[23] The National Council of Teachers of English (NCTE), for example, recommends that secondary school writing teachers be responsible for teaching no more than 80 students per day — a reduction from an earlier recommendation of 100 students.

[23]Leu, D. J., Jr. and Kinzer, C. K., *Effective Instruction in the Elementary Grades* (Columbus, OH: Merrill Publishing Co., 1987).

Nationally, as shown in Table 7.2, 22 percent of the eighth graders who participated in the writing assessment were in classes of 20 or fewer students and another 32 percent had a class size of 21 to 25 students per class — class sizes that may meet NCTE's original, if not its more recent, recommendation. Thirty-two percent of eighth-grade students were in writing classes with 26-30 students, however, and another 15 percent were in classes larger than 30. Disadvantaged urban students varied the most from the national data, with 30 percent of the students in classes of more than 30 students, and just 10 percent in classes of 20 or fewer students.

Average writing proficiency was unrelated to class size, perhaps because class sizes need to be even smaller before real benefits accrue, or because these data do not reflect the changes in instructional approaches that are also necessary to make smaller class sizes effective.

Table 7.2

Teachers' Reports on the Number of Students in Their Writing Classes, Grade 8

For each writing class period indicated please give the number of students in that class.	1 TO 20		21 - 25		26 - 30		31 OR MORE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation	22(1.6)	264(1.9)	32(2.0)	264(2.0)	32(2.0)	264(1.6)	15(1.4)	261(3.1)
Advantaged Urban	26(5.4)	285(3.9)	33(4.7)	285(4.5)	31(5.1)	275(6.6)	10(3.7)	263(7.9)
Disadvantaged Urban	10(3.4)	243(12.2)	26(4.9)	248(6.1)	34(4.4)	247(3.3)	30(5.1)	244(7.2)
Extreme Rural	32(7.3)	266(4.6)	39(10.2)	262(6.5)	23(8.1)	264(9.5)	6(3.7)	237(5.8)
Other	22(1.9)	262(2.2)	31(2.5)	264(1.6)	32(2.5)	264(1.6)	15(1.7)	264(3.3)
High Ability	19(3.3)	278(4.8)	27(4.3)	283(4.5)	32(3.9)	284(3.7)	23(3.5)	280(4.2)
Average Ability	23(2.3)	270(3.1)	32(2.9)	266(3.2)	31(3.4)	267(2.3)	14(2.3)	257(4.0)
Low Ability	28(3.2)	248(3.3)	29(3.7)	246(2.6)	26(3.0)	243(3.3)	16(2.6)	247(5.2)
Mixed Ability	18(2.2)	268(3.4)	35(2.9)	266(2.9)	35(2.8)	261(2.2)	13(1.9)	263(3.6)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Grouping Students by Ability. Another approach that teachers sometimes use to target instruction more efficiently is grouping by ability, either through tracking students into classes at different ability levels, or through use of ability groups to organize within-class instruction. Ability grouping has been very controversial, however, with many educators arguing that it harms lower-ability students without significantly benefiting higher-achieving students.[24] As indicated in Table 7.3, 36 percent of eighth-grade students were in classes to which they were assigned by ability, down noticeably from 49 percent in the 1988 writing assessment. Another 23 percent in 1992 were in classes within which the teacher created ability groups for writing instruction.

Table 7.3

Teachers' Reports on Grouping Students by Ability, Grade 8, 1988 and 1992

	YES		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Are students assigned to this class by ability?				
1992	36(2.9)	266(1.8)	64(2.9)	262(1.3)
1988	49(3.2)	—	51(3.2)	—
Do you create groups within this class for writing instruction on the basis of the ability?				
1992	23(2.0)	263(2.5)	77(2.0)	264(1.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

— Comparable proficiency data are not available for 1988.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

[24] Andersen, R. C., Hiebert, E. H., Scott, J. A., and Wilkinson, I. A. G., *Becoming A Nation of Readers: The Report of the Commission on Reading* (Washington, DC: National Institute of Education, 1985).

As Table 7.4 shows, 13 percent of the eighth-grade students were in classes that their teachers described as primarily high ability and another 19 percent were in classes of primarily low ability, figures that are slightly but not significantly lower than in 1988. In terms of average writing proficiency, the "average" and "mixed" ability groups look essentially identical, and are significantly different from students in classes reported to be of high or low writing ability. Nevertheless, teachers did report that more students were in mixed-ability classes in 1992 than four years previously — 33 compared to 15 percent; there was a corresponding reduction in the proportion of students reported to be in average-ability classes, from 46 to 36 percent. These changes may reflect increasing support for heterogeneous grouping for English instruction.

Table 7.4

Teachers' Reports on the Writing Ability Levels of Their Classes, Grade 8, 1988 and 1992

What is the writing ability level of students in this class?	**Percent of Students**	**Average Proficiency**
Primarily High Ability		
1992	13(1.0)	282(2.1)
1988	17(1.3)	—
Primarily Average Ability		
1992	36(1.8)	266(2.1)
1988	46(2.0)	—
Primary Low Ability		
1992	19(1.3)	245(1.7)
1988	23(1.5)	—
Mixed Ability		
1992	33(2.0)	264(1.4)
1988	15(1.7)	—

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

— Comparable proficiency data are not available for 1988.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

Using Computers in Writing Instruction

The one resource that has received particular attention in the teaching of writing in recent years is the use of computers, both as an aid to drafting and revising, and as a medium for providing intensive drill and practice.[25] Because of the interest in computers, the assessment asked about their availability and about the ways in which they were used.

An initial question asked principals about the availability of computers as an aid to instruction at grades 4, 8, and 12. Their responses, summarized in Table 7.5, indicate different patterns of accessibility across the grades. In grade 4, about 45 percent of the students had computers available in their classrooms. This number dropped to 11 percent at grade 8 and 5 percent at grade 12. At all grades, however, roughly half of the students (48 to 51 percent) were in schools where computers were available to bring to their English classrooms when needed, and 66 to 73 percent were in schools with a separate computer laboratory available for English classes to use.

It is interesting to note that at grades 8 and 12 more students in the top-performing third of schools, compared to students in the bottom-performing third of schools, had computers available to them for English class in a separate laboratory or to be brought to their class when needed. There was considerable variation in these data, but the regression analyses at grade 8 also indicated that having computers available to English classes in a separate computer laboratory differentiated between top- and bottom-performing schools. Although students in schools reporting availability of computers tended to have slightly higher average writing proficiency levels, these differences were not statistically significant.

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[25]Bacig, T., Evans, R., and Larmouth, D., "Computer-Assisted Instruction in Critical Thinking and Writing," *Research in the Teaching of English*, 25, 365-382 (1991).

Joram, E., Woodruff, E., Bryson, M., and Lindsay, P., "The Effects of Revising with a Word Processor on Written Composition," *Research in the Teaching of English*, 26, 167-193 (1992).

Owston, R., Murphy, S., and Wideman, H., "The Effects of Word Processing on Students' Writing Quality and Revision Strategies," *Research in the Teaching of English*, 26, 249-276 (1992).

Schramm, R. M., "The Effects of Using Word Processing Equipment in Writing Instruction," *Business Education Forum*, 45 (5), 7-11 (1991).

Table 7.5

Schools' Reports on Computer Accessibility for Writing Instruction, Grades 4, 8, and 12

Are computers available in your English classes in any of the following ways?	YES		NO	
	Percent of Students	**Average Proficiency**	**Percent of Students**	**Average Proficiency**
Available all the time in English classrooms				
Grade 4*	45(4.1)	223(2.1)	55(4.1)	220(1.4)
Grade 8	11(2.1)	264(3.0)	89(2.1)	261(1.3)
Top One-Third	12(4.7)	280(4.9)	88(4.7)	281(2.4)
Bottom One-Third	6(1.9)	239(8.9)	94(1.9)	246(1.2)
Grade 12	5(1.3)	286(3.7)	95(1.3)	286(1.2)
Top One-Third	4(2.2)	298(4.3)	96(2.2)	303(1.7)
Bottom One-Third	4(1.4)	265(2.9)	96(1.4)	269(1.2)
Grouped in a separate laboratory available to English classes				
Grade 4*	66(3.3)	221(1.3)	34(3.3)	224(2.5)
Grade 8	69(2.5)	263(1.1)	31(2.5)	259(2.3)
Top One-Third	75(5.3)	281(2.2)	25(5.3)	280(3.9)
Bottom One-Third	65(4.6)	245(1.4)	35(4.6)	245(2.7)
Grade 12	73(2.5)	287(1.4)	27(2.5)	283(1.7)
Top One-Third	83(3.8)	303(2.0)	17(3.8)	303(1.7)
Bottom One-Third	71(4.5)	268(1.2)	29(4.5)	270(2.6)
Available to bring to English classes when needed				
Grade 4*	51(3.5)	225(1.9)	49(3.5)	218(1.7)
Grade 8	50(3.3)	264(1.5)	50(3.3)	260(1.6)
Top One-Third	52(5.6)	281(3.1)	48(5.6)	280(2.1)
Bottom One-Third	41(5.7)	247(2.0)	59(5.7)	244(1.7)
Grade 12	48(3.6)	288(1.9)	52(3.6)	284(1.2)
Top One-Third	55(6.6)	303(2.1)	45(6.6)	303(1.7)
Bottom One-Third	44(5.7)	271(1.2)	56(5.7)	267(1.6)

*For grade 4, the questions did not specify "English" classes.

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Teachers' comments on the availability of computers to their classes at grade 8 put these findings in a somewhat different light, however (Table 7.6). Teachers agreed that approximately 10 percent of eighth-grade students were in classrooms where computers were immediately available (compared with 11 percent on the corresponding school-level question). But teachers reported that 37 percent of the eighth graders were in classrooms where computers were not available for writing instruction at all, and another 53 percent were in classrooms where computers were available but difficult to access.

Again, differences between top-third and bottom-third schools were interesting: computers were less likely to be available at all for writing instruction in bottom-performing schools and were more likely to be available within the classroom in top-performing schools.

Table 7.6

Teachers' Reports on the Availability of Computers in Writing Classes, Grade 8

What is the availability of computers for use in your writing classes?	NOT AVAILABLE		AVAILABLE BUT DIFFICULT TO ACCESS		AVAILABLE WITHIN THE CLASSROOM	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation	37(2.7)	260(1.6)	53(2.9)	266(1.6)	10(1.6)	264(4.0)
Top One-Third	26(4.0)	282(2.1)	59(6.2)	282(2.7)	15(4.6)	280(4.3)
Bottom One-Third	48(5.5)	247(2.0)	46(6.1)	248(1.6)	7(1.9)	246(7.1)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Instructional Uses of the Computer. To begin to examine how computers were being used in writing instruction, teachers at grade 8 and students at grades 4, 8, and 12 were asked about the use of computers either for writing mechanics exercises or for extended writing of stories or reports.

Their responses, summarized in Tables 7.7 and 7.8, reflect a shifting emphasis in the ways computers are used in writing instruction at different grade levels. At grade 4, 44 percent of the students reported being asked to do spelling, punctuation, or grammar exercises on a computer once or twice a week, though only 30 percent reported equal emphasis on writing drafts or final versions of stories or reports. By grade 12, only 10 percent of the students reported being asked to complete exercises on a weekly basis, and 15 percent reported being asked to do drafts. Overall, students reported that the use of computers was higher in grade 4 (where 60 percent or more reported some instructional use of computers) than at grade 12 (where 52 percent or more reported some instructional use of computers). Teachers at grade 8 reported more limited use of computers than did their students, for both exercises and writing drafts or final versions. This may mean that students by grade 8 are making independent use of computers for writing, beyond the assignments the teachers ask them to do on a computer.

Differences between the experiences of students in top- and bottom-performing schools were also evident. At grade 4, students in top-performing schools were somewhat less likely than those in bottom-performing schools to report using computers at all for spelling, punctuation, and grammar exercises or for writing drafts or final versions. At grade 8, students in top-performing schools were less likely than those in bottom-performing schools to use computers for exercises (a factor also highlighted in the regression analyses) and somewhat more likely to use computers in drafting or writing final versions. By grade 12, the balance had shifted: students in top-performing schools were more likely than those in bottom-performing schools to use computers in writing drafts or final versions (62 compared to 42 percent using them at least monthly), though not for exercises in spelling, punctuation, or grammar.

Relationships between writing proficiency and computer use were mixed. At grade 4, students who reported never or hardly ever using a computer tended to have somewhat higher proficiency than those who used computers either for exercises or for writing stories or reports. This may reflect the use of computers for remediation among lower-achieving students. At grade 12, on the other hand, students who used computers for writing stories or reports tended to have higher average writing proficiency than those who did not. Uses of the computer for exercise work continued to be associated with lower writing proficiency at grade 12, however.

Table 7.7

Students' Reports on the Use of Computers for Writing Activities, Grades 4, 8, and 12

How often do you do each of the following on a computer?	ONCE OR TWICE A WEEK		ONCE OR TWICE A MONTH		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Do spelling, punctuation, or grammar exercises						
Grade 4	44(0.9)	217(1.6)	16(0.6)	219(2.1)	40(1.0)	232(1.3)
Top One-Third	40(1.7)	236(2.5)	15(1.1)	240(2.9)	45(1.7)	248(2.1)
Bottom One-Third	52(1.7)	199(2.3)	18(0.9)	195(2.9)	30(1.5)	209(2.7)
Grade 8	21(0.7)	250(1.3)	13(0.7)	257(1.9)	65(0.9)	269(1.2)
Top One-Third	18(1.5)	272(3.1)	13(1.0)	280(3.8)	70(1.8)	284(2.2)
Bottom One-Third	27(1.3)	237(1.8)	13(0.9)	238(2.5)	60(1.7)	253(1.6)
Grade 12	10(0.5)	272(1.7)	13(0.6)	276(2.3)	77(0.8)	291(1.0)
Top One-Third	8(0.6)	294(2.6)	13(1.1)	291(2.9)	79(1.3)	306(1.9)
Bottom One-Third	13(0.9)	254(2.4)	13(1.1)	262(3.2)	74(1.4)	274(1.2)
Write drafts or final versions of stories or reports						
Grade 4	30(1.2)	217(1.5)	33(0.9)	222(2.0)	36(1.2)	231(1.2)
Top One-Third	26(1.7)	238(2.4)	35(1.5)	240(2.2)	39(2.1)	246(1.9)
Bottom One-Third	40(1.7)	199(1.5)	30(1.4)	198(3.7)	30(1.2)	209(3.0)
Grade 8	16(0.8)	260(1.8)	33(0.8)	262(1.5)	51(1.2)	265(1.3)
Top One-Third	17(2.5)	281(2.8)	38(1.4)	281(2.3)	46(2.6)	281(2.8)
Bottom One-Third	16(0.9)	241(1.9)	30(1.3)	246(1.6)	54(1.7)	252(1.7)
Grade 12	15(0.6)	290(1.9)	37(0.9)	292(1.5)	49(1.2)	282(1.0)
Top One-Third	19(1.3)	307(2.7)	43(1.1)	308(2.2)	38(1.8)	297(2.0)
Bottom One-Third	11(1.0)	265(3.2)	30(1.7)	271(1.7)	58(2.4)	270(1.4)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 7.8

Teachers' Reports on the Use of Computers for Writing Activities, Grade 8

How often do you ask students to do each of the following on a computer?	ONCE OR TWICE A WEEK		ONCE OR TWICE A MONTH		NEVER OR HARDLY EVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Do spelling, punctuation, or grammar exercises	8(1.4)	263(3.1)	7(1.2)	266(4.3)	85(1.9)	263(1.2)
Top One-Third	13(4.5)	279(3.9)	12(3.1)	281(5.8)	75(6.0)	282(2.0)
Bottom One-Third	9(2.2)	246(3.6)	8(1.8)	252(3.9)	82(2.9)	247(1.8)
Write drafts or final versions of stories or reports	8(1.4)	264(4.5)	28(2.2)	267(1.9)	64(2.9)	262(1.4)
Top One-Third	7(2.2)	280(4.0)	37(4.8)	282(2.9)	55(5.4)	282(2.3)
Bottom One-Third	7(3.0)	251(5.4)	25(3.9)	249(2.6)	68(5.7)	246(1.6)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Experience of Writing Teachers

One of the most important resources on which schools rely is the education and experience of the teachers themselves. It is their knowledge and beliefs that determine how all other resources will ultimately be utilized.[26] The reports of the eighth-grade teachers about their teaching experience are summarized in Table 7.9. Two-thirds of the students (68 percent) had teachers with 11 or more years of teaching experience, and 16 percent had teachers who had taught for 25 or more years. Nine percent had teachers with two or fewer years of experience.

There apparently was some variation in experience among groups of students. For example, students in disadvantaged urban communities appeared more likely than those in advantaged urban communities to have

[26]Bloom, B., *Human Characteristics and School Learning* (New York: McGraw-Hill, 1976).

teachers with two or fewer years of experience (13 versus 4 percent), as did students in primarily low-ability classes compared to those in high-ability classes (16 versus 6 percent), although variability was large and the differences were not statistically significant. Years of experience showed a curvilinear relationship to average writing proficiency, with somewhat lower scores for students whose teachers had two or fewer years of experience, as well as for those with teachers with 25 or more years of experience.

Table 7.9

Teachers' Reports on Years of Teaching Experience, Grade 8

Counting this year, how many years have you taught at either the elementary or secondary level?	2 OR FEWER		3 - 10		11 - 24		25 OR MORE	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Nation	9(1.1)	259(3.1)	24(1.8)	263(2.2)	52(2.3)	264(1.4)	16(1.5)	259(2.3)
Advantaged Urban	4(1.9)	274(7.7)	23(5.8)	277(3.6)	59(7.5)	280(5.8)	13(4.6)	283(6.6)
Disadvantaged Urban	13(4.6)	246(9.7)	22(5.0)	243(4.0)	39(5.5)	252(2.6)	27(6.3)	233(5.8)
Extreme Rural	3(2.3)	280(7.9)	36(8.5)	264(9.5)	58(10.8	264(6.9)	3(2.5)	261(6.6)
Other	10(1.4)	259(3.1)	22(2.0)	264(2.5)	51(2.4)	264(1.3)	17(1.8)	262(2.3)
High Ability	6(1.9)	286(4.4)	20(3.3)	282(5.0)	61(4.1)	280(3.1)	12(2.4)	288(3.9)
Average Ability	9(1.4)	264(3.6)	21(2.8)	267(2.8)	50(3.5)	266(2.5)	20(3.5)	264(3.9)
Low Ability	16(3.8)	243(4.1)	24(3.5)	248(4.0)	47(3.5)	248(1.9)	13(2.7)	235(5.4)
Mixed Ability	8(1.7)	264(5.0)	23(3.2)	265(3.5)	54(4.2)	266(2.3)	15(3.0)	260(2.9)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Education of Writing Teachers

Teachers' Undergraduate Majors. Table 7.10 presents information about the eighth-grade teachers' major areas of undergraduate study. Overall, 57 percent of eighth-grade students had teachers who reported their undergraduate major fields of study included English, 22 percent English Education, 55 percent Education, and 41 percent other (teachers could indicate more than one major field). Although major fields of emphasis were not directly related to average writing proficiency, students in top-performing schools were more likely to have teachers with majors in English (69 versus 54 percent in bottom-performing schools).

Table 7.10

Teachers' Reports on Their Undergraduate Major Areas of Study, Grade 8

What were your undergraduate major fields of study?	YES		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
English				
Nation	57(2.0)	264(1.9)	43(2.0)	261(1.5)
Top One-Third	69(2.9)	281(3.2)	31(2.9)	280(2.7)
Bottom One-Third	54(3.2)	247(1.7)	46(3.2)	246(2.0)
English Education				
Nation	22(1.6)	264(2.6)	78(1.6)	263(1.2)
Top One-Third	28(4.5)	277(4.0)	72(4.5)	283(2.0)
Bottom One-Third	20(2.6)	248(2.7)	80(2.6)	246(1.7)
Education				
Nation	55(2.6)	264(1.4)	45(2.6)	262(1.5)
Top One-Third	55(5.7)	282(2.7)	45(5.7)	279(2.3)
Bottom One-Third	51(3.5)	245(2.2)	49(3.5)	274(1.8)
Other				
Nation	41(2.1)	264(1.9)	59(2.1)	262(1.1)
Top One-Third	43(3.8)	284(2.7)	57(4.8)	279(2.3)
Bottom One-Third	40(2.7)	246(2.4)	60(2.7)	247(2.0)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

Teachers' Academic Degrees. Many teachers continue to work for higher degrees beyond the bachelor's; in fact, some states require additional education for permanent certification. Teachers at grade 8 were asked about the highest academic degree they had earned. Their responses, summarized in Table 7.11, indicate that 52 percent of the students had teachers with a master's degree or higher. Although students whose teachers had obtained a master's degree had slightly higher average writing proficiency than those whose teachers had only a bachelor's, the difference was not statistically significant.

Table 7.11
Teachers' Reports on Highest Academic Degree Attained, Grade 8

What is the highest academic degree you hold?	Percent of Students	Average Proficiency
Bachelor's	48(2.4)	261(1.2)
Master's	43(2.6)	265(1.8)
Specialist's	8(1.2)	262(4.0)
Doctorate	1(0.4)	250(11.3)
Professional Degree	1(0.4)	284(9.5)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Coursework in Writing. In addition to the degrees they had attained, teachers at grade 8 were asked specifically about the extent of their coursework in writing and the teaching of writing. Table 7.12 summarizes their reports on the number of writing courses they had taken. The majority of students (63 percent) had teachers who reported having taken three or more writing courses, and only 7 percent of the students had teachers who reported never having taken a writing course.

Table 7.12

Teachers' Reports on the Number of Writing Courses That They Have Taken, Grade 8

How many composition, creative writing, or other writing courses have you taken?	Percent of Students	Average Proficiency
None	7(1.4)	257(2.7)
One or Two	30(2.3)	266(1.9)
Three or Four	36(2.1)	262(1.7)
Five or More	27(1.9)	262(1.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Some 84 percent of the students had teachers who reported special training in the teaching of writing (Table 7.13), a percentage that remains virtually unchanged since 1988. Sixty-two percent of the students had teachers who reported in-service training (versus 56 percent in 1988), 37 percent had teachers who reported undergraduate training (versus 31 percent in 1988), 32 percent had graduate training (unchanged since 1988), and 26 percent had continuing education in the teaching of writing (versus 17 percent in 1988). The increases in percentages of students whose teachers reported particular types of training in the teaching of writing, coupled with the unchanged percentage whose teachers reported no training, suggest that expanded in-service and preservice programs have increased the depth of preparation of some teachers but have been unable to reach the 16 to 17 percent of grade 8 teachers with no training at all in the teaching of writing.

Although students whose teachers reported some coursework in writing or special training in the teaching of writing had writing proficiency scores that were slightly higher than those of students whose teachers reported no coursework or training, the differences were not statistically significant.

Table 7.13

Teachers' Reports on Whether They Have Received Special Training in Teaching Writing, Grade 8, 1988 and 1992

Have you received any special training for teaching writing?	Percent of Students	Average Proficiency
No		
1992	16(1.8)	261(2.7)
1988	17(2.2)	—
Yes, In-Service Training		
1992	62(2.4)	263(1.3)
1988	56(2.1)	—
Yes, In Undergraduate Courses		
1992	37(2.2)	263(1.7)
1988	31(2.5)	—
Yes, In Graduate Courses		
1992	32(2.4)	266(1.7)
1988	32(2.7)	—
Yes, In Continuing Education		
1992	26(2.4)	266(1.7)
1988	17(1.8)	—

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). The categories were not mutually exclusive, so percentages may add up to more than 100 percent.

— Comparable proficiency data are not available for 1988.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

Teacher Autonomy in Making Instructional Decisions

The final aspect of resources for writing instruction to be considered in this chapter concerns the extent to which teachers feel that they have control over critical decisions about instructional materials. Many of the reform efforts of the past decade have emphasized the importance of teacher decision-making, whether in the context of site-based school management or in terms of planning an instructional program geared to the needs of a particular class.[27] Other reform efforts have emphasized the development of common standards for curriculum and assessment, or the improvement of instructional materials through the leverage provided by state or district adoption of textbooks and related materials.

Teachers' reports on the autonomy they have in various types of instructional decisions are summarized in Table 7.14. In general, teachers reported the most autonomy in determining the sequence of topics (where 45 percent of grade 8 students had teachers who reported complete autonomy), and considerably less autonomy in choosing course content (16 percent) and selecting materials (11 percent). In all three aspects of instructional decision-making, relatively small percentages of teachers reported little or no autonomy (ranging from 5 percent for sequence to 19 percent for selection of materials).

Students' writing proficiency levels showed an association with their teachers' reports of autonomy in instructional decision-making: for all three measures, teachers reporting complete autonomy had students with higher writing proficiency scores than those whose teachers reported little or no autonomy.

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[27] Shannan, P., "Commercial Reading Materials, a Technological Ideology, and the Reskilling of Teachers" in *Becoming Political: Readings and Writings in the Politics of Literacy Education*, P. Shannon, editor (Portsmouth, NH: Heinemann, 1992).

Table 7.14

Teachers' Reports on Their Autonomy in Instructional Decision-Making, Grade 8

How much control do you have in the following decisions?	SELECTING THE CORE INSTRUCTIONAL MATERIALS		DECIDING THE CONTENT, TOPICS, AND SKILLS THAT WILL BE TAUGHT		DECIDING THE SEQUENCE IN WHICH CONTENT, TOPICS, AND SKILLS ARE TAUGHT	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Complete	11(1.5)	269(3.1)	16(1.9)	267(2.6)	45(2.6)	266(1.3)
A Lot	38(2.4)	265(1.6)	49(3.0)	264(1.5)	40(2.4)	260(1.6)
Some	32(2.3)	262(1.4)	22(2.2)	261(1.8)	10(1.3)	262(3.1)
Little or None	19(1.8)	256(2.2)	13(1.9)	256(2.3)	5(1.2)	253(4.4)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Summary

For most students, the general conditions for writing instruction (as reflected in availability of resources, class sizes, and the experience and education of teachers) seem to be relatively good. Some 60 percent of the eighth graders were in classes where teachers reported having access to most of the resources they felt they needed for effective instruction, and more than half (54 percent) were in classes of 25 or fewer students. Most students were also in schools where computers were available for English instruction, though there was considerable variation in ease of access to these resources.

Writing teachers also appeared to be well qualified by education and experience. Some 68 percent of the eighth graders were taught by teachers with 11 or more years teaching experience, and all but 16 percent were taught by teachers who reported training in the teaching of writing. Given their education and the length of experience, eighth grade teachers in most schools were given at least some autonomy over selecting instructional

materials, the content to be taught, and how the content was arranged in sequence. For all three areas, eighth graders with teachers who reported complete autonomy had higher average writing proficiency than students whose teachers reported no autonomy.

On the other hand, 15 percent of the eighth graders nationally and 30 percent of those in disadvantaged urban communities were being taught writing in classes with more than 30 students. Forty percent were in classes where teachers reported receiving only some or none of the resources they needed. Also, according to their teachers, 37 percent of the eighth graders were in classrooms where computers were not available for writing instruction at all, and another 53 percent were in classrooms where computers were available but difficult to access. About one-third of the fourth graders (36 percent) and half of the eighth and twelfth graders (49 and 51 percent) reported never or hardly ever having the opportunity to use a computer to write drafts or final versions of stories or reports.

At grades 8 and 12, more students in the top-performing third of schools, compared to students in the bottom-performing third of schools, had computers available to them for English class in a separate laboratory or to be brought to their classes when needed. Teachers reported that computers were not available for 48 percent of the eighth graders in the bottom-performing schools, compared to 26 percent in the top-performing schools. Differences in the instructional uses of computers also were evident. At grade 4, students in top-performing schools were somewhat less likely to report using computers at all, perhaps reflecting the use of computers for remediation among lower-achieving students at this grade. By grade 12, the balance had shifted: Students in top-performing schools were more likely than those in bottom-performing schools to use computers in writing drafts or final versions of papers. Such findings suggest that even if general conditions for writing instruction are reasonable, considerable inequity in the distribution of resources remains.

Consistent with this finding, twelfth graders who used computers for writing stories or reports tended to have higher average writing proficiency than those who did not. Use of the computer for exercise work was associated with lower writing proficiency at grade 12, however.

8

Instructional Practices in Writing Classrooms

The past 20 years have seen a revolution in accepted practices in the teaching of writing. Driven partly by research into the writing processes of skilled writers and partly by classroom-based reform efforts such as the National Writing Project, the teaching of writing has increasingly sought to emphasize the varied processes that writers employ in the creation of effective writing, the importance of writing in a variety of different subject areas, and the integration of reading and writing activities.[28] At the same time, teachers

[28] Atwell, N., "Making the Grade," in *Understanding Writing: Ways of Observing, Learning, and Teaching*, second edition, T. Newkirk and N. Atwell, editors (Portsmouth, NH: Heinemann, 1988).

Britton, J., *Language and Learning* (Harmondsworth, England: Penguin, 1970).

Emig, J., *The Composing Processes of Twelfth Graders* (Urbana, IL: National Council of Teachers of English. NCTE Research Report No. 13, ERIC Document No. ED 058205, 1971).

Moffett, J., and Wagner, B. J., *Student-Centered Language Arts, K-12*, fourth edition (Portsmouth, NH: Boynton/Cook/Heinemann, 1992).

and the general public have continued to show concern for the development of basic writing skills, including accuracy in grammar and mechanics.[29]

Motivated by the desire to support students' development of higher-level literacy skills, instructional reform in writing has increasingly highlighted the need for complete and "authentic" writing activities coupled with reflection and feedback during all phases of the writing process.[30] From this perspective, sharing ideas and discussing written work are seen as highly effective ways for students to learn more sophisticated writing strategies.[31] Such activities provide students with broader audiences for their work, offer a range of possible models for accomplishing the writing task, and provide feedback about and suggestions for improving work in progress.[32]

This chapter examines a variety of instructional practices that have been highlighted in discussions of the teaching of writing, including the use of process-related instruction, grammar or skill-based instruction, integrated instruction of various types, small group instruction, teacher and peer response to writing, and the features that are emphasized in grading student work. Differences in emphases on writing instruction between the top-performing and bottom-performing one-third of the schools were also examined. At grade 8, a regression analysis was used to examine differences between these two groups as reflected in teacher and student reports. Overall, the regression on variables related to classroom instruction in writing accounted for 45 percent of the variation between groups (R=.67).

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[29]Mullis, I., Dossey, J., Foertsch, M., Jones, L., and Gentile, C., *Trends in Academic Progress* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1991).

Shaughnessy, M. P., *Errors and Expectations* (New York: Oxford University Press, 1977).

[30]Jaggar, A., and Smith-Burke, M. T., *Observing the Language Learner* (Newark, DE: International Reading Association and Urbana, IL: National Council of Teachers of English, 1985).

Freedman, S. W., *Response to Student Writing* (Urbana, IL: National Council of Teachers of English, 1987).

[31]Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., and Stevens, D. D., "Making Strategies and Self-Talk Visible: Writing Instruction in Regular and Special Education Classrooms," *American Educational Research Journal*, 28, 337-372 (1991).

Horgan, D., and Barnett, L., "Peer Review: It Works." Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL (ERIC Document Reproduction Service, No. 334-203, 1991).

[32]Atwell, N., *In the Middle: Writing, Reading, and Learning with Adolescents* (Montclair, NJ: Boynton/Cook, 1987).

Instructional Approaches in Teaching Writing

To provide an overview of current emphases in writing instruction, teachers in grade 8 were asked about their use of a variety of major instructional approaches, including process-oriented instruction, skill-based instruction, and integrated instruction of various kinds. The results, summarized in Table 8.1, suggest that teachers draw upon a variety of approaches in planning their instruction with a particular class. The most popular approach in grade 8 was instruction emphasizing writing processes, which was reported as "central" by the teachers of 71 percent of the students. This approach was followed by integration of reading and writing, which was central for 54 percent.

It is interesting to note that teachers of fourth graders who participated in NAEP's 1992 reading assessment also reported that integration of reading and writing was being given heavy emphasis for 54 percent of students at grade 4.[33] That the majority of fourth and eighth graders were receiving instruction with central or heavy emphasis on integrating reading and writing is consistent with considerable research about the effectiveness of this approach for teaching both reading and writing.[34]

Grammar or skill-based instruction was reported as central by the teachers of 49 percent of the grade 8 students and writing about literature as central for 40 percent. The most striking feature of these results, however, is the high proportion of teachers who made use of a combination of these approaches: 93 percent of the teachers reported using process instruction *and* grammar or skill-based instruction as either a central focus or as a supplement to instruction with their eighth-grade students.[35]

Teachers at grade 8 reported much less emphasis on writing across other subject areas (9 percent rated it as central, and 42 percent did not use it at all), on workbooks or worksheets (5 percent central, 39 percent not at all) or a writing textbook (23 percent central, 29 percent not at all).

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[33]Mullis, I. V. S., Campbell, J. R., and Farstrup, A. E., *NAEP 1992 Reading Report Card for the Nation and the States* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1993).

[34]Harste, J. C., Short, K. G., and Burke, C., *Creating Classrooms for Authors: The Reading-Writing Connection* (Portsmouth, NH: Heinemann, 1988).

[35]When responses are cross-tabulated, 93 percent of the teachers reported that they made at least some use of both process-oriented writing and skill-based instruction; 32 percent reported that both process-oriented writing and skill-based instruction were *central* to their teaching.

Writing proficiency levels show some association with the degree of emphasis on these different instructional approaches. Greater emphasis on writing process instruction was associated with higher average writing proficiency, as was writing about literature. In contrast, the degree of emphasis on skill-based instruction, writing in other subject areas, use of textbooks, or use of worksheets was not related to differences in average writing proficiency.

Table 8.1

Teachers' Reports on Instructional Approaches, Grade 8

Do you use any of the following instructional approaches?	YES, AS A CENTRAL PART OF INSTRUCTION		YES, AS A SUPPLEMENT TO INSTRUCTION		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Grammar or skill-based instruction	49(2.0)	262(1.6)	47(2.0)	266(1.4)	4(0.8)	259(6.6)
Writing process instruction	71(2.7)	266(1.2)	26(2.4)	258(2.3)	3(0.7)	250(8.1)
Integrated reading and writing	54(2.3)	265(1.3)	42(2.4)	264(1.9)	5(1.4)	254(6.0)
Writing about literature	40(2.4)	267(1.3)	47(2.5)	262(1.7)	13(1.9)	259(3.5)
Writing across other subject areas	9(1.4)	265(3.7)	50(2.2)	264(1.7)	42(2.2)	263(1.5)
Do you use a workbook or worksheets for writing instruction?	5(1.1)	260(4.6)	55(2.1)	262(1.6)	39(2.1)	266(1.6)
Do you use a textbook for writing instruction?	23(2.0)	260(2.1)	49(2.5)	265(1.7)	29(2.7)	264(2.1)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

In spite of the eclecticism reflected in the approaches teachers emphasized, the relative rankings for writing process instruction versus grammar or skill-based instruction suggest a shift in teachers' approaches during the four years between 1988 and 1992, at least at grade 8. In 1988, teachers were asked a similar question using a different rating scale. The results on the earlier item indicated as much support for grammar or skill-based instruction (59 percent of the eighth graders had teachers reporting "very much" emphasis) as for writing process instruction (with 52 percent receiving "very much" emphasis).[36] In the 1992 results, reports about the centrality of these two approaches showed a noticeable difference favoring writing process instruction (71 percent of eighth graders had teachers reporting writing process as central compared to 49 percent for grammar or skill-based instruction).

Emphasis on process-oriented instruction at grade 8 showed some variation with ability level of the class (Table 8.2). Students in low-ability classes were less likely to have teachers who emphasized process-oriented instruction (57 percent, versus 79 percent in high-ability classes). Teachers' reported emphasis on skill-based instruction at grade 8, however, did not vary with the ability level of the class.

Eighth-grade teachers' use of integrated instructional approaches also differed in the top-performing and bottom-performing schools. Students in the top one-third of the schools tended to have teachers who reported writing about literature as a central approach to instruction and who used writing across other subject areas as supplemental to instruction (Table 8.3). In particular, the regression analyses showed writing about literature as a central approach to be significant in differentiating between top- and bottom-performing schools. Some 40 percent of eighth grade students, however, had teachers who reported that none of these integrated approaches were central to their instruction.

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[36] Applebee, A. N., Langer, J. A., Jenkins, L. B., Mullis, I. V. S., and Foertsch, M. A., *Learning to Write in Our Nation's Schools: Instruction and Achievement in 1988 at Grades 4, 8, and 12* (Princeton, NJ, National Assessment of Educational Progress, Educational Testing Service, 1990).

Table 8.2

Teachers' Reports on Their Emphasis on Writing Process Instruction and Skill-Based Instruction, Grade 8

Do you use any of the following instructional approaches?	YES, AS A CENTRAL PART OF INSTRUCTION		YES, AS A SUPPLEMENT TO INSTRUCTION		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
WRITING PROCESS INSTRUCTION						
Nation	71(2.7)	266(1.2)	26(2.4)	258(2.3)	3(0.7)	250(8.1)
High Ability	79(3.2)	282(2.7)	20(3.0)	282(4.4)	1(0.7)	262(34.7)
Average Ability	74(3.5)	267(2.0)	24(3.3)	262(3.7)	2(0.6)	262(9.6)
Low Ability	57(5.2)	249(2.0)	38(4.7)	243(3.6)	5(1.5)	236(8.1)
Mixed Ability	74(4.2)	267(1.6)	24(3.9)	260(3.0)	2(1.5)	249(26.8)
GRAMMAR OR SKILL-BASED INSTRUCTION						
Nation	49(2.0)	262(1.6)	47(2.0)	266(1.4)	4(0.8)	259(6.6)
High Ability	46(4.9)	279(3.6)	50(4.9)	282(3.0)	4(1.9)	294(10.7)
Average Ability	50(3.6)	265(2.3)	47(3.5)	268(2.3)	3(1.3)	258(6.0)
Low Ability	49(4.4)	244(2.4)	45(4.3)	250(2.2)	6(1.9)	227(8.6)
Mixed Ability	48(3.8)	264(2.3)	47(3.8)	265(2.0)	4(1.5)	272(9.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 8.3

Teachers' Reports on Using Integrated Instructional Approaches for the Top-Performing and Bottom-Performing One-Third of the Schools, Grade 8

Do you use any of the following instructional approaches?	YES, AS A CENTRAL PART OF INSTRUCTION		YES, AS A SUPPLEMENT TO INSTRUCTION		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
WRITING ABOUT LITERATURE						
Top One-Third	47(4.5)	284(2.4)	41(4.5)	281(2.9)	11(3.3)	275(3.1)
Bottom One-Third	39(4.2)	249(2.3)	48(4.7)	248(2.4)	14(2.5)	242(4.8)
INTEGRATED READING AND WRITING						
Top One-Third	51(4.6)	283(2.6)	48(4.7)	280(2.3)	1(0.6)	281(5.7)
Bottom One-Third	55(3.4)	247(2.2)	37(3.5)	248(2.5)	8(2.2)	245(8.0)
WRITING ACROSS OTHER SUBJECT AREAS						
Top One-Third	11(3.0)	283(6.0)	54(4.4)	281(2.5)	34(4.0)	283(3.1)
Bottom One-Third	10(2.6)	248(3.3)	42(3.2)	246(2.9)	48(3.0)	248(2.0)

Number of Integrated Approaches Central to Instruction	AT LEAST TWO OF THE THREE CENTRAL		ONE OF THE THREE CENTRAL		NONE OF THE THREE CENTRAL	
Nation	35(2.2)	267(3.2)	25(2.0)	263(2.4)	40(2.6)	262(1.9)
Top One-Third	39(3.7)	284(3.5)	22(2.9)	281(4.4)	39(4.7)	280(2.9)
Bottom One-Third	35(3.6)	249(3.3)	27(4.1)	244(3.9)	38(4.1)	248(2.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Emphasis on Process-Oriented Instructional Activities

Process-oriented instruction can take many forms and often differs considerably from one classroom to another.[37] To better understand the instruction students are receiving, teachers and students were asked about the extent to which instruction emphasized particular activities that might be part of process-oriented writing instruction. The teachers' responses at grade 8 are summarized in Table 8.4. In general, teachers placed most emphasis on planning (always emphasized by the teachers of 76 percent of the students), and writing more than one draft (61 percent). Defining audience and purpose was emphasized for just under half the students (45 percent). Using sources or resources beyond the textbook (23 percent), choosing their own topic (17 percent), and writing a formal outline (10 percent) were encouraged much less regularly. Reports from teachers in the top-performing and bottom-performing schools indicated little difference in their approaches to the writing process, except that those in the top-performing schools were somewhat more likely to always ask students to define their audience and purpose.

[37] Freedman, S. W., *Response to Student Writing* (Urbana, IL: National Council of Teachers of English, 1987.)

Table 8.4

Teachers' Reports on Their Encouragement of a Structured Approach to the Writing Process, Grade 8

How often do you ask students to do the following:	ALWAYS		SOMETIMES		NEVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Plan their writing						
Nation	76(2.5)	264(1.4)	23(2.5)	262(2.0)	1(0.4)	246(10.9)
Top One-Third	76(5.4)	283(2.3)	24(5.4)	277(2.4)	0(0.1)	—
Bottom One-Third	74(3.1)	247(1.8)	24(2.8)	249(3.9)	2(1.2)	242(15.3)
Make a formal outline before they write						
Nation	10(1.2)	264(2.9)	64(2.3)	263(1.4)	26(2.2)	264(2.2)
Top One-Third	9(2.2)	284(5.7)	64(4.6)	281(2.2)	27(4.6)	283(3.3)
Bottom One-Third	12(2.8)	246(2.6)	61(4.2)	247(2.0)	26(4.0)	247(2.9)
Define their purpose and audience						
Nation	45(2.9)	266(1.5)	47(2.7)	262(1.6)	7(1.4)	254(4.7)
Top One-Third	51(6.3)	283(2.1)	43(6.0)	281(2.5)	6(2.3)	281(4.0)
Bottom One-Third	37(4.0)	249(2.1)	52(3.7)	247(2.1)	10(2.6)	239(5.2)
Use sources or resources other than their textbook						
Nation	23(1.5)	264(1.9)	74(1.6)	264(1.3)	3(0.9)	262(5.3)
Top One-Third	21(2.7)	284(2.7)	75(3.1)	281(2.3)	4(1.8)	279(8.3)
Bottom One-Third	24(3.0)	246(2.9)	72(3.3)	248(1.7)	3(1.4)	242(5.0)
Write more than one draft of a paper						
Nation	61(2.8)	265(1.4)	37(2.8)	262(2.1)	1(0.3)	240(6.5)
Top One-Third	62(4.4)	282(2.3)	38(4.4)	282(2.6)	0(0.0)	—
Bottom One-Third	59(5.4)	250(1.9)	39(5.4)	244(2.7)	2(0.4)	230(5.4)
Choose or make up the topic they write about						
Nation	17(2.4)	266(2.3)	80(2.3)	264(1.3)	3(0.6)	251(4.6)
Top One-Third	19(5.6)	280(3.0)	80(5.5)	282(2.3)	1(0.6)	276(8.7)
Bottom One-Third	15(2.7)	249(3.5)	79(2.6)	247(1.8)	6(2.0)	241(3:7)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Students at grades 8 and 12 were also asked about the extent to which these activities were emphasized by their English teachers. Their responses, summarized in Table 8.5, reflect a similar emphasis on planning and on writing multiple drafts, though at somewhat lower levels (55 percent reporting always being asked to plan, versus 76 percent according to teachers' reports at grade 8, and 49 percent reporting always being asked for multiple drafts, versus 61 percent in teachers' reports). Encouragement of planning and of writing multiple drafts do not always occur together, however, as additional analyses included in Table 8.5 also indicate. Only 32 percent of eighth grade students and 39 percent of twelfth graders reported that their teachers always asked them both to plan and to write multiple drafts. An emphasis on both of these activities was, however, strongly related to higher average writing proficiency.

Requests for outlining and using outside resources were reported more frequently by the students than by their teachers. About one-third of the eighth and twelfth graders reported always being asked to prepare an outline before writing (compared to 10 percent in teachers' reports), and 37 to 45 percent reported always being asked to use resources (compared to 23 percent in teachers' reports).

Students' reports also indicated some differences between grade levels, with more emphasis on some of these approaches at grade 12 than at grade 8. The difference was particularly large for defining audience and purpose: the percentage reporting always being asked to define audience and purpose increased from 27 percent at grade 8 to 43 percent at grade 12. More twelfth graders than eighth graders also reported always being asked to plan their writing (63 versus 55 percent) and to use resources other than their textbooks (45 versus 37 percent).

Table 8.5

Students' Reports on the Extent to Which Their Teachers Encouraged a Structured Approach to the Writing Process, Grades 8 and 12

How often does your English teacher ask you to do the following:	ALWAYS		SOMETIMES		NEVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Plan your writing						
Grade 8	55(1.1)	270(1.1)	38(0.8)	253(1.3)	8(0.5)	248(2.7)
Grade 12	63(0.9)	292(1.1)	30(0.7)	278(1.6)	7(0.4)	269(2.1)
Make a formal outline before you write						
Grade 8	32(0.9)	264(1.2)	46(0.6)	262(1.1)	22(0.6)	258(1.5)
Grade 12	33(0.9)	285(1.2)	49(0.6)	288(1.1)	19(0.8)	285(2.0)
Define your purpose and audience						
Grade 8	27(0.9)	268(1.5)	45(0.7)	261(1.4)	28(0.7)	257(1.0)
Grade 12	43(0.8)	293(1.2)	39(0.6)	284(1.2)	19(0.7)	278(1.6)
Use sources or resources other than your textbook						
Grade 8	37(0.9)	265(1.3)	51(0.7)	262(1.2)	12(0.5)	254(1.8)
Grade 12	45(0.9)	288(1.2)	46(0.8)	288(1.0)	9(0.4)	272(2.5)
Write more than one draft						
Grade 8	49(1.1)	269(0.9)	40(0.8)	257(1.6)	12(0.5)	248(1.9)
Grade 12	52(0.9)	293(1.2)	37(0.7)	281(1.3)	11(0.5)	272(1.8)
Always Plan and draft	ALWAYS BOTH		ONE OR THE OTHER		NEITHER	
Grade 8	32(1.0)	274(1.1)	38(0.6)	262(1.5)	29(1.1)	248(1.5)
Grade 12	39(1.0)	296(1.5)	37(0.6)	286(1.1)	24(0.8)	272(1.6)

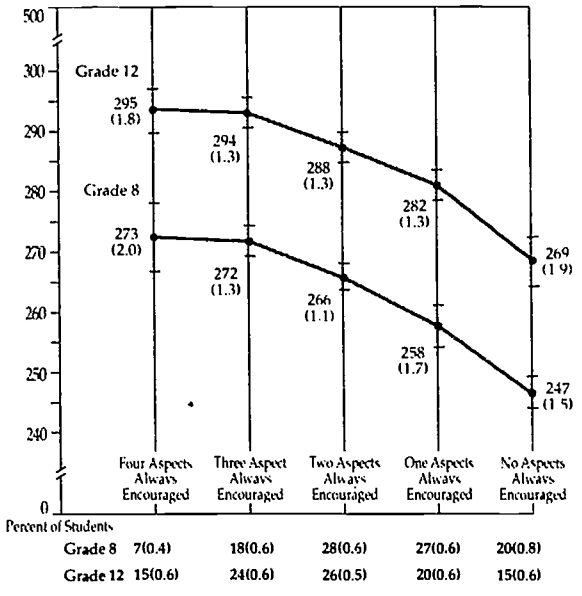
The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Teachers' encouragement of these various process-related activities was strongly related to average writing proficiency. These relationships are depicted in Figure 8.1 for eighth and twelfth graders' reports on how many aspects of the writing process were encouraged by their teachers. The figure shows the average performance level of students whose teachers never encouraged them to use process strategies, and those whose teachers regularly encouraged the use of one, two, three, or four aspects of process writing. For both eighth and twelfth graders, the more aspects of process writing their teachers encouraged them to use, the higher their performance on the NAEP writing assessment.

Figure 8.1

Students' Reports that Their Teachers' Always Encourage Aspects of the Writing Process: Plan, Define Audience/Purpose, Use Resources, and Write More Than One Draft



• 95 percent confidence interval.

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Differences in emphases on process-oriented activities between top- and bottom-performing schools are summarized in Table 8.6. Across grades 8 and 12, compared to students in the bottom-performing third of the schools, students in the top-performing third of the schools reported that their teachers were more likely to emphasize planning before writing, defining an audience and purpose, and writing more than one draft. Teachers in the bottom-performing third of schools were somewhat more likely to emphasize making a formal outline before beginning to write. These findings were reinforced by the grade 8 regression analyses where student reports of more frequent planning and production of multiple drafts and less frequent use of formal outlines all differentiated between top- and bottom-performing schools.

Compared to teachers in the bottom-performing third of the schools, students reported that those in the top-performing third were particularly likely to always emphasize both planning and multiple drafts. At grade 8, the difference was 38 versus 27 percent, and at grade 12, it was 46 compared to 31 percent.

Students' Use of Prewriting Strategies

Given the importance of prewriting activities as part of process-oriented writing instruction, it is interesting to examine the extent to which students actually drew upon such strategies when confronted with the assessment writing tasks. In the 1992 assessment, each of the writing tasks was preceded by a blank page, which students were encouraged to use for prewriting.

Students' prewriting was categorized into five different types: notes or drawings that were unrelated to the task; lists or outlines of the writing; diagrams used to organize ideas; completely different responses to the task than the ones on the response page; and first drafts of the final response.

As Table 8.7 shows, students in higher grades were more likely than those in lower grades to do some prewriting in responding to the assessment tasks. Roughly one quarter (29 percent) of the fourth graders used the prewriting page, a proportion that rose to 35 and 46 percent for the eighth and twelfth grades, respectively. Of the various strategies for prewriting, a list or outline was clearly the most popular across all three grades, with 14 percent of the fourth graders, 25 percent of the eighth graders, and 38 percent of the twelfth graders using this method. The other four methods across all three grades were only used by 0 to 8 percent of the students.

As in student and teacher reports of the encouragement of planning, reported earlier in this chapter, visible use of prewriting strategies as part of

Table 8.6

Students' Reports on Teachers Encouraging the Writing Process for the Top-Performing and Bottom-Performing One-Third of the Schools, Grades 8 and 12

	ALWAYS		SOMETIMES		NEVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Plan your writing						
Grade 8						
Top One-Third	60(2.7)	286(2.4)	34(2.1)	272(2.6)	6(0.9)	272(4.7)
Bottom One-Third	46(1.4)	253(2.0)	43(1.0)	240(1.7)	10(0.9)	236(3.1)
Grade 12						
Top One-Third	68(1.4)	308(2.0)	26(1.1)	295(2.2)	6(0.6)	291(3.2)
Bottom One-Third	58(1.3)	275(1.3)	34(1.2)	262(2.1)	8(0.6)	256(3.7)
Make a formal outline before you write						
Grade 8						
Top One-Third	29(1.7)	280(3.1)	49(1.3)	282(1.9)	22(1.4)	278(2.5)
Bottom One-Third	33(1.4)	248(1.9)	44(0.9)	245(1.7)	24(1.3)	242(1.8)
Grade 12						
Top One-Third	31(1.7)	303(2.1)	50(1.2)	303(2.1)	19(1.4)	304(2.2)
Bottom One-Third	36(1.6)	270(1.5)	46(1.2)	270(1.7)	18(1.1)	267(2.3)
Define your purpose and audience						
Grade 8						
Top One-Third	30(2.2)	285(2.5)	45(1.3)	280(2.2)	26(1.4)	277(2.6)
Bottom One-Third	24(0.8)	250(1.8)	45(1.1)	245(2.0)	31(1.1)	244(1.8)
Grade 12						
Top One-Third	47(1.2)	308(1.8)	37(1.3)	300(2.4)	16(1.2)	296(2.8)
Bottom One-Third	40(1.1)	276(1.8)	40(0.8)	266(1.4)	20(1.0)	262(2.6)
Use sources or resources						
Grade 8						
Top One-Third	39(1.8)	282(2.0)	52(1.2)	280(2.5)	10(1.2)	277(3.8)
Bottom One-Third	35(1.1)	249(1.6)	51(1.0)	245(1.8)	13(0.9)	238(2.3)
Grade 12						
Top One-Third	48(1.9)	304(2.2)	45(1.5)	304(1.8)	7(0.7)	292(3.3)
Bottom One-Third	45(1.4)	270(1.6)	46(1.0)	271(1.7)	9(0.8)	255(3.7)
Write more than one draft						
Grade 8						
Top One-Third	55(2.0)	284(2.1)	38(1.8)	278(2.5)	8(0.7)	269(3.3)
Bottom One-Third	40(1.4)	253(1.8)	45(1.0)	242(1.8)	15(1.1)	235(2.1)
Grade 12						
Top One-Third	58(1.9)	308(2.2)	33(1.5)	298(1.9)	9(0.7)	293(2.9)
Bottom One-Third	44(1.4)	276(1.8)	41(1.1)	266(1.5)	15(0.8)	260(2.4)
Always Plan and Write Multiple Drafts	**ALWAYS BOTH**		**ONE OR THE OTHER**		**NEITHER**	
Grade 8						
Top One-Third	38(2.5)	287(2.6)	38(1.6)	280(2.2)	24(1.9)	270(3.4)
Bottom One-Third	23(1.1)	257(2.3)	39(1.2)	248(2.0)	37(1.5)	235(1.7)
Grade 12						
Top One-Third	46(1.7)	310(2.2)	35(1.0)	302(2.4)	20(1.3)	290(2.3)
Bottom One-Third	31(1.2)	278(1 7)	39(0.9)	271(1.6)	30(1.3)	258(1.9)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 8.7

Visible Planning on Students' Responses to Assessment Writing Tasks, Grades 4, 8, and 12

	GRADE 4		GRADE 8		GRADE 12	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
NO PREWRITING	71(1.3)	221(1.2)	65(1.1)	258(1.1)	54(1.0)	278(1.2)
PREWRITING EVIDENT	29(1.3)	230(1.8)	35(1.1)	273(1.1)	46(1.0)	295(1.1)
TYPES OF PREWRITING						
Unrelated Notes or Drawings	3(0.5)	218(4.3)	2(0.3)	258(3.6)	3(0.3)	283(3.0)
Lists or Outlines	14(0.8)	237(2.3)	25(0.9)	277(1.1)	38(0.9)	299(1.1)
Diagrams	4(0.4)	231(2.6)	3(0.4)	274(2.4)	2(0.2)	294(3.5)
Different Versions	1(0.1)	218(4.8)	1(0.1)	259(6.4)	0(0.0)	—
First Drafts	8(0.6)	224(2.4)	5(0.4)	262(1.8)	4(0.3)	279(2.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). When the proportion of students is either 0 percent or 100 percent, the standard error is inestimable. However, percentages 99.5 percent and greater were rounded to 100 percent and percentages 0.5 percent or less were rounded to 0 percent. Percentages may not total 100 percent due to rounding error.

— Sample size insufficient to permit a reliable estimate.

Source: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

the writing assessment was clearly associated with higher performance. At all three grades, students for whom some form of prewriting was evident had noticeably higher average writing proficiency than those who did not use the prewriting page. Not all forms of prewriting activity were equally successful, however. At grade 4, students who used lists or outlines performed significantly higher than those who wrote unrelated notes or who employed drawings or different versions. At grade 8, students who made lists or who used outlines or diagrams outperformed those who used the planning page to prepare unrelated notes or drawings or first drafts. Twelfth graders who wrote lists or outlines performed significantly higher than those who wrote unrelated notes, different versions or drafts. Also, students at grade 12 who drew diagrams on the planning page outperformed those who wrote first drafts.

Other Instructional Activities

Teachers at grade 8 and students at grades 8 and 12 were also asked about the frequency of two other activities that may reflect two quite different philosophies of writing instruction: doing spelling, punctuation, and grammar exercises, and working in pairs or small groups to discuss one another's writing. The results are summarized in Table 8.8.

At grade 8, 32 percent of the students had teachers who reported asking students to do spelling, punctuation, and grammar exercises almost every day, and only 21 percent had teachers who reported using them monthly or less. Students' reports were quite similar to those from the teachers: at grade 8, 40 percent reported such exercises almost every day, and 21 percent reported them monthly or less. Reports for grade 4 paralleled those for grade 8; by grade 12, use of such exercises dropped off considerably, with 58 percent of the students reporting they occurred monthly or less.

Across grades, spelling, punctuation, and grammar exercises were emphasized more by bottom-performing than by top-performing schools. This was particularly so for grade 12, where such exercises were reported at least weekly by 54 percent of the students in the bottom-performing schools, but only by 36 percent of those in top-performing schools. In grade 12, attention to such exercises was also negatively related to writing proficiency.

Table 8.8

Teachers' and Students' Reports on the Frequency of Doing Spelling, Punctuation, or Grammar Exercises, Grades 4, 8, and 12

Do spelling, punctuation, or grammar exercises	ALMOST EVERY DAY		ONCE OR TWICE A WEEK		ONCE OR TWICE A MONTH OR LESS	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Teachers						
Grade 8	32(2.4)	261(1.8)	47(2.2)	265(1.5)	21(1.8)	264(2.1)
Top One-Third	28(4.8)	281(2.5)	52(5.2)	282(2.3)	19(4.0)	283(4.3)
Bottom One-Third	38(4.0)	245(2.3)	45(3.8)	249(2.5)	18(2.5)	248(3.5)
Students						
Grade 4	41(1.0)	223(1.9)	35(0.8)	224(1.4)	24(0.7)	220(1.4)
Top One-Third	39(1.6)	243(2.3)	40(1.7)	240(3.4)	21(1.1)	238(3.5)
Bottom One-Third	43(1.2)	202(2.6)	33(1.1)	200(2.1)	24(1.0)	199(3.5)
Grade 8	40(1.1)	262(1.3)	39(0.8)	263(1.6)	21(1.0)	260(2.1)
Top One-Third	40(2.4)	280(3.2)	41(1.7)	281(2.0)	19(1.9)	281(3.5)
Bottom One-Third	42(1.6)	247(1.9)	38(1.3)	247(2.3)	21(1.6)	242(2.0)
Grade 12	14(0.7)	276(1.5)	28(0.8)	280(1.1)	58(1.2)	292(1.2)
Top One-Third	11(1.1)	298(3.0)	25(1.7)	297(1.7)	64(2.4)	307(1.9)
Bottom One-Third	21(1.5)	264(2.3)	32(1.6)	264(1.6)	46(2.4)	276(1.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Working in pairs or small groups was reported less frequently than was doing grammar exercises. At grade 8, only 6 percent of the students had teachers who reported such activities took place on a daily basis, and 59 percent reported such activities monthly or less (Table 8.9). Students' reports at grade 8 were similar to those from their teachers, with 58 percent reporting working in pairs or small groups monthly or less. Such activities were somewhat more likely in grade 4 (15 percent reporting such activities almost every day) and somewhat less likely in grade 12 (9 percent almost every day).

Teachers in top-performing schools were more likely than those in bottom-performing schools to report working in pairs or small groups at grade 8 (44 versus 32 percent), but student reports indicated little difference in practices in either group of schools at any of the grade levels assessed.

Table 8.9

Teachers' and Students' Reports on the Frequency of Working in Pairs or Groups to Discuss Writing, Grades 4, 8, and 12

Work in pairs or small groups to discuss each others' writing	ALMOST EVERY DAY		ONCE OR TWICE A WEEK		ONCE OR TWICE A MONTH OR LESS	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Teachers						
Grade 8	6(1.0)	265(3.9)	36(2.4)	265(1.6)	59(2.5)	263(1.7)
Top One-Third	5(2.1)	279(5.5)	44(6.5)	281(2.3)	51(6.4)	282(2.8)
Bottom One-Third	4(1.6)	246(5.4)	32(2.6)	247(2.4)	64(2.5)	247(2.0)
Students						
Grade 4	15(0.7)	217(2.3)	30(0.9)	224(1.7)	55(1.2)	224(1.3)
Top One-Third	13(1.4)	240(4.0)	31(1.6)	244(3.1)	57(2.3)	240(1.7)
Bottom One-Third	19(1.2)	196(3.4)	31(1.5)	201(1.8)	50(1.7)	202(2.6)
Grade 8	12(0.6)	259(2.0)	31(1.0)	263(1.6)	58(1.3)	262(1.1)
Top One-Third	9(1.0)	280(3.4)	31(1.9)	280(1.9)	60(2.5)	281(2.7)
Bottom One-Third	13(0.9)	245(3.3)	30(1.5)	247(2.4)	57(1.7)	246(1.3)
Grade 12	9(0.4)	287(1.9)	30(0.8)	287(1.2)	62(0.9)	286(1.2)
Top One-Third	8(0.7)	305(3.5)	32(1.3)	304(2.1)	60(1.5)	303(2.1)
Bottom One-Third	10(0.8)	270(2.9)	30(1.1)	270(2.1)	60(1.2)	269(1.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Teacher and Peer Response to Writing

Recent reforms in writing instruction have emphasized the importance of providing students with responsive audiences for their work in progress, as well as opportunities to share their completed work with others. To gauge the extent to which such activities have become a regular part of the instructional environment, eighth-grade teachers were asked how often they encouraged their students to discuss their works with their teachers as well as with others. Their responses are summarized in Table 8.10.

Not surprisingly, the teacher is the most frequent audience for student work: 97 percent of the students had teachers who sometimes asked them to talk about work in progress. Peer response was also encouraged by the eighth graders' teachers, who asked more than 90 percent of their students both to discuss what they had written with others and to comment on what others had written. Both versions of peer response were associated with higher average writing proficiency.

Discussion of writing with family members was also encouraged at least some of the time by the teachers of three-quarters of the students. Approximately the same percentage of the students had teachers who asked them to contribute their writing to a collection of student writing. Thus, taken together, students generally had teachers who reported encouraging feedback on student writing, from a variety of readers, at various points in the writing process.

Teachers in top- and bottom-performing schools differed somewhat in the kinds of feedback they emphasized. In particular, eighth graders in the top-performing schools were less likely to have teachers who always talked with them while they were working on a writing assignment (38 percent versus 54 percent in bottom-performing schools). This factor also differentiated between top- and bottom-performing schools in the regression analyses.

Table 8.10

Teachers' Reports on Writing Feedback: Discussion of Work in Progress, Grade 8

How often do you ask students to do the following?	ALWAYS		SOMETIMES		NEVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Discuss what they wrote with other students	33(2.6)	267(1.7)	62(2.7)	262(1.5)	5(0.8)	259(4.1)
Top One-Third	33(5.0)	284(2.9)	62(5.0)	281(2.3)	5(1.8)	285(5.4)
Bottom One-Third	27(4.0)	249(2.6)	68(4.4)	247(2.1)	5(2.2)	242(6.8)
Discuss what they wrote with family members	10(1.7)	258(4.2)	64(2.0)	265(1.2)	26(1.5)	261(2.2)
Top One-Third	9(4.0)	281(4.9)	64(4.8)	282(2.4)	27(3.5)	281(3.0)
Bottom One-Third	15(3.2)	244(4.3)	56(4.3)	249(2.0)	29(2.9)	245(1.9)
Comment on what other students wrote	23(2.3)	268(1.7)	70(2.3)	263(1.5)	7(1.1)	257(4.0)
Top One-Third	27(6.0)	282(3.1)	65(5.3)	281(2.2)	8(2.6)	281(4.2)
Bottom One-Third	17(2.2)	250(3.3)	75(2.3)	247(1.8)	8(2.2)	242(5.2)
Talk to you about their writing while they are working on it	47(2.0)	263(1.6)	50(2.1)	265(1.4)	3(0.9)	260(4.6)
Top One-Third	38(4.7)	280(2.8)	56(4.6)	283(2.3)	5(3.7)	274(3.7)
Bottom One-Third	54(3.4)	248(2.4)	44(3.5)	247(2.1)	2(0.8)	230(6.8)
Contribute their writing to a collection of student writing	10(1.3)	263(3.4)	66(2.3)	266(1.3)	24(2.1)	257(2.1)
Top One-Third	9(2.5)	283(5.3)	71(4.7)	282(2.0)	20(3.9)	279(4.2)
Bottom One-Third	10(2.1)	250(4.1)	57(4.2)	248(1.9)	33(4.2)	244(2.8)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Students at grades 4, 8, and 12 were asked two questions that paralleled teacher reports on writing feedback. As Table 8.11 indicates, the students reported increasing use of in-process feedback across the grades, with the percentage who reported always receiving such feedback rising from 8 percent at grade 4 to 29 percent by grade 12. At the same time, however, substantial minorities of students (22 to 31 percent) reported that their teacher *never* talked to them about a paper while they were working on it.

Students' reports on contributing their written work to a collection of student writing showed a decline across the grades. Thirty-two percent at grade 4, 36 percent at grade 8, and 45 percent at grade 12 reported *never* being asked to contribute their work to a collection.

At grade 8, the students reported less experience with both types of response than their teachers indicated. For example, some 31 percent said their teacher never talked about their work-in-progress (compared to 3 percent based on teachers' reports), and 36 percent reported never being asked to contribute to a collection of writing (compared to 24 percent based on teachers' reports).

Overall, however, the student responses confirmed that most were receiving ongoing response to their work. Between 70 and 79 percent of the students at all three grade levels reported at least sometimes being asked to discuss their work-in-progress with their teacher, and between 55 and 69 percent of them reported at least sometimes being asked to contribute to a collection of student work.

Table 8.11

Students' Reports on Writing Feedback, Grades 4, 8, and 12

	ALWAYS		SOMETIMES		NEVER	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
How often does your teacher talk to you about a paper while you are working on it?						
Grade 4	8(0.4)	217(2.7)	65(0.8)	222(1.1)	27(0.9)	223(1.6)
Grade 8	22(0.6)	262(1.3)	48(0.6)	263(1.4)	31(0.8)	259(1.5)
Grade 12	29(0.6)	289(1.4)	50(0.5)	288(1.1)	22(0.6)	281(1.6)
How often does your teacher ask you to contribute your writing to a collection of student writing?						
Grade 4	17(0.6)	219(1.7)	52(0.7)	225(1.9)	32(0.6)	219(1.3)
Grade 8	15(0.5)	263(1.4)	48(0.6)	264(1.0)	36(0.8)	259(1.4)
Grade 12	11(0.5)	286(1.7)	44(0.8)	288(1.1)	45(0.9)	285(1.2)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Portfolios

Because portfolios are being recommended with increasing frequency as a way for teachers and students to reflect on and assess students' progress in writing,[38] this assessment included a question about whether either the student or teacher kept student writing in a folder or portfolio. Table 8.12 indicates that 73 percent of the eighth-grade students and 68 percent of the twelfth-grade students answered in the affirmative. At grade 8, 64 percent of the students had teachers who also responded in the affirmative.

Table 8.12

Teachers' and Students' Reports on Whether Student Writing is Kept in Portfolios, Grades 8 and 12

	YES		NO	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Teachers				
Grade 8	64(3.3)	264(1.3)	36(3.3)	263(2.0)
Students				
Grade 8	73(1.4)	264(1.0)	27(1.4)	259(1.9)
Grade 12	68(1.1)	288(1.1)	32(1.1)	283(1.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details).

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

[38] Murphy S., and Smith, M. A., *Writing Portfolios: A Bridge from Teaching to Assessment* (Markham, Ontario: Pippin Publishing Limited, 1991).

Simmons, J., "Large-Scale Portfolio Evaluation of Writing," *Dissertation Abstracts International*, 52, 1724-A. (University Microfilms No. 92-31, 297, 1991).

What Teachers Emphasize in Grading Writing

Grades are important in American schooling. Students, their parents, and society at large look to grades as indicators of how well students are learning and where teaching can be improved. It is important, therefore, to be aware of the kinds of skills and knowledge that underlie grading since grades are the yardsticks by which students learn to judge themselves. To examine the criteria that underlie classroom grading, students at all three grade levels, and teachers at grade 8, were asked to identify how important the following factors were in grading students' writing: mechanics, organization, ideas, and length. Teachers were also asked about the importance of accomplishing the purpose of the writing task.

Table 8.13 summarizes the teachers' reports. Overall, the teachers placed most emphasis on whether the writing accomplished its purpose (91 percent of the students had teachers rating this as very important), followed by organization and coherence (86 percent), and by quality and creativity of the ideas (74 percent). Spelling, punctuation, and grammar were rated as very important in grading by only 35 percent of the teachers, and length by only 3 percent.

Teachers' reports on their emphases in grading at grade 8 paralleled a series of questions asked as part of the 1988 writing assessment. As shown in Table 8.13, the data indicate that over the past four years teachers have shifted their criteria to place more emphasis on quality and organization of ideas and less on writing mechanics. These changes are consistent with the increasing emphasis on process-oriented instruction noted earlier in this chapter.

Table 8.13

Teachers' Reports on Emphases in Grading Students' Papers, Grade 8, 1988 and 1992

How important are the following in determining how you grade students' papers?	VERY IMPORTANT		MODERATELY IMPORTANT		NOT VERY IMPORTANT	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Their spelling, punctuation, and grammar						
1992	35(2.7)	264(1.9)	59(2.6)	264(1.5)	7(1.1)	262(3.5)
1988	46(2.6)	—	47(2.6)	—	7(1.5)	—
Their organization and coherence						
1992	86(1.8)	265(1.2)	14(1.8)	257(2.6)	0(0.1)	203(9.0)
1988	78(2.3)	—	22(2.4)	—	0(0.1)	—
The quality and creativity of the ideas						
1992	74(1.9)	264(1.3)	25(1.7)	262(2.5)	1(0.5)	256(11.5)
1988	65(2.4)	—	34(2.4)	—	1(0.4)	—
Length						
1992	3(0.7)	265(4.3)	44(2.4)	263(1.3)	53(2.5)	264(1.6)
1988	4(0.9)	—	37(2.6)	—	59(2.7)	—
Whether they accomplished the purpose of the writing						
1992	91(1.4)	264(1.2)	9(1.3)	263(2.8)	1(0.4)	260(32.2)
1988	88(2.0)	—	12(1.9)	—	1(0.4)	—

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). When the proportion of students is either 0 percent or 100 percent, the standard error is inestimable. However, percentages 99.5 percent and greater were rounded to 100 percent and percentages 0.5 percent or less were rounded to 0 percent. Percentages may not total 100 percent due to rounding error.

— Comparable proficiency data are not available for 1988.

SOURCE: National Assessment of Educational Progress (NAEP), 1988 and 1992 Writing Assessments.

Student reports on grading are summarized in Table 8.14. At grade 4, students attributed the greatest importance to spelling, punctuation, and grammar (64 percent rating these as very important), the quality and creativity of ideas (57 percent), and organization (48 percent). In the upper grades, students attributed increasing importance to organization (75 percent rating it as very important by grade 12) and quality of ideas (71 percent by grade 12). Length of paper was rated of least importance at all grade levels.

Grade 8 students differed somewhat from their teachers in the emphases they reported. On the common criteria, the teachers in general gave more importance to organization and quality of ideas, and less importance to mechanics and length. Only 35 percent of the eighth-grade students had teachers who reported spelling, punctuation, and grammar as very important, while 67 percent of the students reported their teachers emphasized such mechanical features in their grading. Conversely, 86 percent of the eighth-grade students had teachers who reported that organization and coherence was very important, compared with only 60 percent based on the students' reports. Such differences in student and teacher perceptions may result from the difference between frequency of particular types of comments (many teachers make frequent corrections of minor mechanical errors in student writing) and the significance teachers attribute to those errors, which may in fact be slight.[39]

In general, a concern with organization and quality of ideas was associated with higher writing proficiency, though a moderate emphasis on mechanics was also associated with higher proficiency. There were also some differences in emphases in grading between the top-performing and bottom-performing thirds of the schools. Table 8.15 summarizes the differences for two aspects of grading that reflect different philosophies of writing instruction: attention to spelling, punctuation, and grammar versus emphasis on the quality and creativity of ideas. At all three grades, students in the top-performing schools reported that their teachers placed less emphasis in grading on spelling, punctuation, and grammar, and more emphasis on quality and creativity of ideas. In both instances, these also were significant factors in the regression analyses differentiating between top- and bottom-performing schools at grade 8.

[39]Applebee, A. N., *Writing in the Secondary School: English and the Content Areas*, Research Monograph Series (Urbana, IL: National Council of Teachers of English, 1981).

Table 8.14

Students' Reports on Teachers' Emphases in Grading Writing, Grades 4, 8, and 12

When your teacher grades your writing how important are the following?	VERY IMPORTANT		MODERATELY IMPORTANT		NOT VERY IMPORTANT	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Your spelling, punctuation, and grammar						
Grade 4	64(0.7)	223(1.3)	31(0.6)	226(1.5)	5(0.4)	207(3.5)
Grade 8	67(0.8)	263(1.2)	30(0.7)	265(1.3)	3(0.2)	244(3.8)
Grade 12	63(0.8)	285(0.9)	33(0.8)	291(1.2)	4(0.3)	274(4.0)
The way that your paper is organized						
Grade 4	48(1.0)	224(1.4)	38(0.6)	224(1.8)	13(0.6)	216(1.8)
Grade 8	60(0.8)	264(1.2)	35(0.8)	263(1.2)	5(0.3)	243(3.1)
Grade 12	75(0.7)	291(1.0)	23(0.6)	277(1.3)	2(0.2)	256(4.2)
The quality and creativity of your ideas						
Grade 4	57(0.9)	226(1.3)	35(0.8)	223(1.8)	8(0.4)	203(2.9)
Grade 8	62(0.5)	267(1.0)	33(0.5)	259(1.5)	5(0.2)	238(2.6)
Grade 12	71(0.6)	291(1.1)	26(0.6)	279(1.5)	3(0.2)	258(3.7)
The length of your paper						
Grade 4	14(0.5)	213(2.5)	28(0.9)	226(1.5)	58(0.9)	225(1.5)
Grade 8	19(0.6)	256(1.4)	53(0.7)	266(1.4)	28(0.6)	261(1.1)
Grade 12	18(0.6)	276(1.7)	60(0.6)	289(1.0)	23(0.7)	290(1.4)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Table 8.15

Students' Reports on Teachers' Emphases in Grading Writing for the Top-Performing and Bottom-Performing One-Third of the Schools, Grades 4, 8, and 12

When your teacher grades your writing how important are the following?	VERY IMPORTANT		MODERATELY IMPORTANT		NOT VERY IMPORTANT	
	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency	Percent of Students	Average Proficiency
Your spelling, punctuation, and grammar						
Grade 4						
Top One-Third	61(1.6)	242(1.9)	36(1.4)	241(1.9)	3(0.5)	234(4.8)
Bottom One-Third	70(1.4)	202(2.3)	24(1.2)	201(2.8)	6(0.6)	186(5.0)
Grade 8						
Top One-Third	65(1.8)	280(2.5)	34(1.8)	283(2.4)	2(0.2)	272(8.3)
Bottom One-Third	70(1.0)	248(2.0)	27(0.8)	246(1.8)	4(0.4)	231(5.1)
Grade 12						
Top One-Third	56(1.7)	302(2.0)	40(1.5)	306(1.9)	4(0.5)	292(4.9)
Bottom One-Third	70(1.2)	269(1.3)	26(1.3)	273(2.2)	4(0.5)	252(5.4)
The quality and creativity of your ideas						
Grade 4						
Top One-Third	59(1.2)	243(2.0)	35(1.0)	241(1.7)	6(0.6)	231(5.2)
Bottom One-Third	57(1.4)	205(2.3)	32(1.5)	201(2.9)	11(0.8)	184(4.0)
Grade 8						
Top One-Third	68(1.3)	283(2.0)	29(1.2)	278(2.8)	3(0.4)	259(3.5)
Bottom One-Third	58(1.0)	250(1.7)	36(0.9)	245(1.8)	6(0.5)	227(3.3)
Grade 12						
Top One-Third	74(1.0)	307(1.7)	24(1.0)	296(2.4)	2(0.4)	272(7.9)
Bottom One-Third	68(1.2)	273(1.4)	30(1.1)	264(2.2)	3(0.3)	248(6.3)

The standard errors of the estimated percentages and proficiencies appear in parentheses. It can be said with 95 percent confidence for each population of interest, the value for the whole population is within plus or minus two standard errors of the estimate for the sample. In comparing two estimates, one must use the standard error of the difference (see Appendix for details). Percentages may not total 100 percent due to rounding error.

SOURCE: National Assessment of Educational Progress (NAEP), 1992 Writing Assessment.

Summary

Results in this chapter indicate that as teachers planned and implemented their approaches with particular classes, they were quite eclectic in their overall strategies for writing instruction, drawing upon such diverse approaches as process-oriented writing instruction, grammar or skill-based instruction, and integrated reading and writing activities. In eighth grade, 71 percent of the students had teachers who reported a central emphasis on process-oriented instruction, with sizeable percentages also reporting central emphasis on grammar or skill-based instruction (49 percent), integrated reading and writing (54 percent), or writing about literature (40 percent). In comparison to grammar or skill-based instruction, attention to process-oriented writing instruction increased over the four years since the last writing assessment, when teachers reported about equal emphasis for these two approaches. In general, more emphasis on writing process instruction and writing about literature was associated with higher average writing proficiency.

Teachers also varied in their emphases on particular activities as part of process-oriented instruction. At grade 8, teachers reported placing the most emphasis on planning, writing more than one draft, and defining audience and purpose, and less emphasis on using sources and resources beyond the textbook, allowing students to choose their own topics, and making formal outlines before writing. Students at grades 8 and 12 similarly reported their teachers emphasized planning and writing more than one draft, but they reported less emphasis on defining audience and purpose, particularly at grade 8. In both students' and teachers' reports, more emphasis on process-oriented activities was associated with higher average writing proficiency. Top-performing and bottom-performing schools also differed in their emphases. Teachers in top-performing schools were more likely to emphasize planning, writing more than one draft, and defining audience and purpose, while those in bottom-performing schools were somewhat more likely to emphasize making a formal outline before beginning to write.

On the assessment tasks themselves, older students were more likely than younger students to carry out overt prewriting activities — and those who did some overt prewriting tended to have higher writing achievement than those who did not. Lists and outlines were clearly the most popular prewriting strategy, used by 14 percent at grade 4, 25 percent at grade 8, and 38 percent at grade 12 (versus 0 to 5 percent across the grades for other strategies); this was also the prewriting strategy that was associated with the best performance on the writing tasks.

The results in this chapter also indicate that students were being provided with an array of opportunities to reflect on and gain feedback about their writing, from a variety of readers, at various stages of the writing process. For example, teachers reported that over 90 percent of the eighth graders were at least sometimes asked to discuss what they wrote with other students as well as to comment on what other students wrote. Both of these practices were associated with higher average writing proficiency and also tended to be used more frequently in top-performing than in bottom-performing schools. In addition, approximately two-thirds of the eighth and twelfth graders were collecting their writing in folders or portfolios that could be used for a variety of purposes that support reflection and learning.

Teachers at grade 8 reported that the most important criteria in grading student work were accomplishing the purpose of the writing task, organization and coherence, and quality and creativity of ideas. Students, however, felt their teachers placed as much emphasis on mechanics as they did on ideas or organization. In general, a concern with organization and quality of ideas was associated with higher writing proficiency, though a moderate emphasis on mechanics was also associated with higher proficiency. At all three grades, students in top-performing schools were more likely than those in bottom-performing schools to report that their teachers stressed quality and creativity of ideas, and less likely to report an emphasis on mechanics.

Procedural Appendix

Overview of Procedures and Methods Used in NAEP's 1992 Writing Assessment

Introduction

This appendix provides further information about the methods and procedures used in NAEP's 1992 writing assessment. The forthcoming *NAEP 1992 Technical Report* provides more extensive information about procedures.

NAEP's Writing Assessment Framework

Developed by a committee of writing researchers, teachers, curriculum specialists, and business representatives, under the direction of the National Assessment Governing Board, the *Writing Framework for the 1992 National Assessment of Educational Progress* builds upon two decades of NAEP

experience in large-scale direct writing assessment.[40] The *1992 Writing Framework* includes six major objectives, as follows:

- Students should write for a variety of purposes: informative, persuasive, and narrative.
- Students should write on a variety of tasks and for many different audiences.
- Students should write from a variety of stimulus materials, and within different time constraints.
- Students should generate, draft, evaluate, revise, and edit ideas and forms of expression in their writing.
- Students should display effective choices in the organization of their writing, including detail to illustrate and elaborate their ideas and using appropriate conventions of written English.
- Students should value writing as a communicative activity.

In developing the framework, input was received from writing educators, policymakers, scholars, and major education organizations. Care was taken to incorporate important changes from past assessments that reflected findings and recommendations from recent research on writing instruction and assessment, as well as the experience of many state writing programs. Therefore, highlights of the 1992 writing assessment include: assessment of informative, persuasive, and narrative writing; a set of writing topics that incorporates a variety of stimulus materials, audiences, and forms of writing; expanded assessment time (25 minutes per prompt at grades 4, 8, and 12, with some eighth and twelfth graders receiving a 50-minute task); a special page accompanying each topic for students to plan and organize their writing; enhanced 6-point primary-trait scoring criteria; and a special writing portfolio study at grades 4 and 8.

The Assessment Design

Design and development of the 1992 writing assessment was managed by Educational Testing Service, whose staff worked with the 1992 Writing Task Development Committee composed of distinguished experts in writing

[40] *Writing Framework for the 1992 National Assessment of Educational Progress* (Washington, DC: National Assessment Governing Board, U.S. Department of Education).

education and assessment. To ensure continuity with the *1992 NAEP Writing Framework*, the 10-member Development Committee included consultants who had worked on the Framework Committee. In developing the new writing tasks for the 1992 assessment, every effort was made to create tasks responsive to the Framework. Extensive field testing was conducted in diverse sites across the nation. The Development Committee reviewed all the field test materials to assemble NAEP's 1992 writing assessment. These materials were subsequently reviewed and revised by NAGB, NCES, and OMB.

Each student received an assessment booklet containing a set of general background questions, either one or two writing tasks, a set of subject-specific background questions, and a set of questions about his or her motivation and familiarity with the assessment materials. Each writing task was a section, or block, of assessment time. Students were given either two 25-minute blocks or one 50-minute block, with the longer blocks used for some tasks given at grades 8 and 12. These writing response times represented an increase from 1988 assessment, where fourth graders were given either 10 or 20 minutes for their responses, and eighth and twelfth graders were given either 15 or 30 minutes. Also, as part of the 1992 assessment, a special page was provided preceding each task for students to plan and organize their writing.

At grade 4, the assessment consisted of nine 25-minute blocks, with each block containing a single writing task. Three of the blocks contained informative tasks, three persuasive tasks, and three narrative tasks. In addition, eighth and twelfth graders were given several 50-minute tasks. At grade 8, students responded to one 50-minute task assessing informative writing and another assessing narrative writing. At grade 12, there were three 50-minute writing tasks, one for each writing purpose — informative, persuasive, and narrative. Topics were given 25 or 50 minutes, based on field testing a variety of prompts in an effort to determine topics that provided students with ample information and motivation. In total, at grade 4 there were nine different writing tasks, at grade 8 there were 11, and at grade 12 there were 12. Please see Figure A.2 for a display of the writing tasks given at each grade.

The 1992 writing assessment also involved "The Nation's Writing Portfolio," an enhanced study of students' classroom-based writing, first piloted in 1990.[41] For this portion of the assessment, a subsample of the

[41]Gentile, C., *Exploring New Methods for Collecting Students' School-based Writing: NAEP's 1990 Portfolio Study* (Washington, DC: National Center for Education Statistics, U.S. Government Printing Office, 1992.)

fourth and eighth graders who participated in the timed portion of the assessment were asked to work with their teachers to complete questionnaires and submit three pieces of their best writing to NAEP for subsequent analysis. The 1992 portfolio component was expanded from the 1990 pilot effort to include: 1) a concerted effort to provide advance warning to teachers, 2) production of actual portfolio folders to collect students' written work, 3) student sclection of their three best pieces for the portfolio rather than one, 4) student letters explaining their selections, and 5) teacher questionnaires about the instruction associated with each of the student papers. The portfolio component of the 1992 writing assessment will be the topic of a forthcoming NAEP report.

The 1992 writing assessment also had a long-term trend component, replicating materials and procedures used periodically across the past decade to monitor changes in students' writing performance. That effort involved multiple evaluations of students' responses, using both primary-trait and holistic scoring as well as detailed analysis of mechanics and syntax for subsamples of papers. The results from the long-term trend analysis can be found in the report, *NAEP 1992 Trends in Academic Progress*.

Students received different blocks of content questions in their booklets according to a specific design. The 1992 assessment was based on an adaptation of matrix sampling called balanced incomplete block (BIB) spiraling — a design that enabled coverage of the purposes for writing while minimizing the burden for any one student. The balanced incomplete block part of the design assigns the blocks of questions to booklets in a way that provides for position effect, complete balancing within each writing purpose, and partial balancing across writing purposes. The spiraling part of the method cycles the booklets for administration, so that typically only a few students in any assessment session receive the same booklet.

Teacher and School Questionnaires

As part of the 1992 writing assessment, questionnaires about instruction were given to the teachers responsible for teaching writing to the eighth-grade students participating in the assessment. Also, a questionnaire about school policies, priorities, and resources, among other topics, was completed by the principal or another administrator in each participating school. An expert panel developed guidelines for the teacher and school questionnaires focusing on five educational areas: instructional content, instructional practices and experiences, teacher characteristics, school conditions and

contexts, and conditions outside the school (i.e., home support, out-of-school activities, and attitudes).[42]

The questionnaire for students' language arts/English teachers consisted of two parts. The first requested information about the teacher, such as race/ethnicity and gender as well as academic degrees held, teaching certification, training in writing, and ability to get instructional resources. In the second part, teachers were asked to provide information on each class they taught that included one or more students who participated in the assessment. The information included, among other things, the amount of time spent on writing instruction and homework, the extent to which various writing assignments were given, the instructional and grading emphases placed on different aspects of writing, and the use of various instructional approaches (e.g., peer response and computers).

Because the sampling for the teacher questionnaires was based on participating students, the teachers' questionnaire responses do not necessarily represent all eighth-grade teachers of writing in the nation. Rather, they represent teachers of the representative sample of students assessed. It is important to note that in this report, as in all NAEP reports, the student is always the unit of analysis, even when information from the teacher or school questionnaire is being reported. Using the student as the unit of analysis makes it possible to describe the instruction received by representative samples of students. Although this approach may provide a different perspective from other studies which simply report information about teachers or schools, it is consistent with NAEP's goal of providing information about the educational context and performance of students.

National Sampling and Data Collection

Sampling and data collection activities for the 1992 NAEP assessment were conducted by a well-trained field staff from Westat, Inc. In 1992, the assessment was conducted from January through March, with some make-up sessions in early April.

As with all NAEP national assessments, the results for the national samples were based on a stratified, three-stage sampling plan. The first stage included defining geographic primary sampling units (PSUs), which

[42]National Assessment of Educational Progress, *1992 Policy Information Framework* (Princeton, NJ: National Assessment of Educational Progress, Educational Testing Service, 1992).

are typically groups of contiguous counties, but sometimes a single county; classifying the PSUs into strata defined by region and community type; and randomly selecting PSUs. For each grade, the second stage included listing, classifying, and randomly selecting schools, both public and private, within each PSU selected at the first stage. The third stage involved randomly selecting students within a school for participation. Some students who were selected (about 7 to 8 percent) were excluded because of limited English proficiency or severe disability.

Table A.1 presents the student and school sample sizes and the cooperation and response rates for the national assessment. Approximately 7,000 fourth graders, 11,000 eighth graders, and 11,500 twelfth graders attending public and private schools across the nation participated in the 1992 writing assessment. About 1,500 students responded to each of the different writing tasks at each grade in which they were administered.

Table A.1

1992 Student and School Sample Sizes

Grade	NUMBER OF PARTICIPATING SCHOOLS	PERCENT OF SCHOOLS PARTICIPATING	NUMBER OF STUDENTS	PERCENT OF STUDENT COMPLETION
4	527	86	7,166	93
8	587	84	11,112	89
12	468	81	11,532	81
Total	1,582		29,810	

Although sampled schools that refused to participate were occasionally replaced, school cooperation rates were computed based on the schools originally selected for participation in the assessments. The rates, which are based on schools sampled for all subjects assessed in 1992 (reading, writing, and mathematics) are also the best estimates for the writing assessment. The student completion rates represent the percentage of students assessed of those invited to be assessed in writing, including those assessed in follow-up sessions, when necessary. Of the participating schools, 944 were public schools and 638 were Catholic and other private schools.

LEP and IEP Students

It is NAEP's intent to assess all selected students. Therefore, all selected students who are capable of participating in the assessment should be assessed. However, some students sampled for participation in NAEP can be excused from the sample according to carefully defined criteria. Specifically, some of the students identified as having Limited English Proficiency (LEP) or having an Individualized Education Plan (IEP) may be incapable of participating meaningfully in the assessment. These students are identified as follows:

LEP students may be excluded if:

- The student is a native speaker of a language other than English; AND
- He or she has been enrolled in an English-speaking school for less than two years; AND
- The student is judged to be incapable of taking part in the assessment.

IEP students may be excluded if:

- The student is mainstreamed less than 50 percent of the time in academic subjects and is judged to be incapable of taking part in the assessment, OR
- The IEP team has determined that the student is incapable of taking part meaningfully in the assessment.

When there is doubt, the student is included in the assessment.

For each student excused from the assessment, school personnel completed a questionnaire about the characteristics of that student and the reason for exclusion. Although these data, like all NAEP information, do not identify individuals, they do permit profiles of the excluded students as a group. Approximately 7 to 8 percent of the students nationally were excluded from the assessment.

Scoring

Materials from the 1992 assessment were shipped to National Computer Systems in Iowa City, Iowa, for processing. Receipt and quality control were managed through a sophisticated bar-coding and tracking system. After all appropriate materials were received from a school, they were forwarded to the professional scoring area, where the responses to the writing tasks were evaluated by trained staff using guidelines prepared by NAEP. Each writing task had a unique scoring guide that defined the criteria to be used in evaluating student responses. As explained in the introduction and exemplified in Chapters 1 through 3, the students' written responses were evaluated on a scale of 1 to 6, permitting degrees of partial credit to be given.

Essentially a rating of "1" indicated a **response to the topic** with little information pertinent to the task. Papers rated "2" were **undeveloped responses to the task**, in which students began to respond, but did so in a very abbreviated, confusing, or disjointed manner. The "3" rating indicated a **minimally developed** paper, in which students provided a response to the task that was brief, vague, or somewhat confusing. **Developed** papers, designated by a "4" rating, provided a response to the task that contained the necessary elements, but may have been unevenly developed or unelaborated. Papers rated "5" were **elaborated**, consisting of a well developed and detailed response that may have gone beyond the essential requirements of the task. Responses given the top rating of "6" were **extensively elaborated**, showing a high degree of control over the various elements of writing. Compared with papers given a rating of "5," those rated "6" may have been similar in content, but they were better organized, more clearly written, and less flawed.

The 6-point rating scale, based on a modified primary-trait approach, represented a change from previous NAEP writing assessments, where a 4-point scale was used that focused primarily upon the content required to accomplish each task (defined by the primary trait). This involved isolating particular features of the writing essential to accomplishing the task and developing criteria for various levels of performance based on those features. With the modified system used in 1992, papers were still rated against performance criteria, rather than in terms of relative quality within the population sampled. Theoretically, on a simple task, it is possible that all papers might be rated in the highest categories; on a difficult task, none might move out of the lowest categories. The 1992 guides were still designed to focus raters' attention on how successfully each writing response accomplished the rhetorical task specified by the writing prompt.

However, at their upper reaches, depending on each particular prompt, the 6-point evaluation guides also considered aspects of organization, elaboration, coherence, tone, style, and mechanics.

Because the response time had been increased in 1992 compared to previous assessments, NAEP's 1992 Writing Task Development Committee felt that evaluating the lengthier written responses required an expansion of previous scoring criteria. Still, the constraints of the assessment situation were taken into account in developing the scoring guides for the specific prompts. Students' responses represent their ability to produce first-draft writing on demand within a relatively short time under less than ideal conditions, and the guides reflect these limitations.

The guides were adjusted to be somewhat more or less demanding, depending on the grade being assessed and the length of time provided for the responses; however, each began by providing for the barest and most rudimentary types of responses. Each task was preceded by a space for students to engage in prewriting activities, and they were encouraged to do so. However, the assessment situation provided little opportunity for review and revision, and no access to external resources or review. Thus, it was quite difficult to produce a well organized, balanced, and relatively flawless response as required by the **extensively elaborated** category. For most individuals, the type of response categorized as **extensively elaborated** would take at least a second draft. However, some students did manage to produce exceedingly well developed and polished pieces under the NAEP assessment conditions and the rating scales were designed to accommodate these rare cases. Thus, for each prompt, the scoring guides were designed to accommodate the full range of possible responses, from the briefest of beginnings to responses that were fully developed and nearly flawless.

For all aspects of the 1992 writing assessment, nearly 1 million student responses were scored, including a 25 percent reliability sample. The modified primary-trait evaluation summarized in this report involved approximately 800,000 student responses (remaining components included the long-term trend assessment and the portfolio study). With such large numbers of written responses, NAEP employed strict quality-control measures to ensure the accuracy of the scoring sessions. After being trained by ETS content-area experts, scorers had to complete qualifying sets before being allowed to score. Once the scoring session began, NAEP reviewed inter-rater reliability statistics and "backread" samples of every scorer's work on a daily basis to make sure that each scorer was performing at an acceptable level.

The percentages of exact agreement between readers for the national reliability samples were 84 percent at grade 4, 80 percent at grade 8, and 79 percent at grade 12. Table A.2 contains the reliability results for each writing task at each grade.

Table A.2

Percentages of Exact Agreement for Scoring Reliability Samples for Writing Tasks*

GRADE 4	PERCENTAGE OF EXACT AGREEMENT	GRADE 8	PERCENTAGE OF EXACT AGREEMENT	GRADE 12	PERCENTAGE OF EXACT AGREEMENT
Informative		Informative		Informative	
Lunch Time	85	Invention	76	Invention	83
Special Object	85	Special Object	81	Performance Review	83
Favorite Story	86	Performance Review	85	Time Capsule	92
		School Problem†	79	School Problem†	80
Persuasive		Persuasive		Persuasive	
Space Travelers	83	Rating Labels	92	Community Service	81
Watch TV	87	Longer School Year	89	Drug Search	83
Longer School Year	83	Drug Search	88	Rating Labels	83
				No Pass/No Drive†	78
Narrative		Narrative		Narrative	
Pet Dinosaur	84	Another Planet	74	Embarrassing Incident	70
Magic Balloon	82	Embarrassing Incident	72	Package	67
Another Planet	96	Grandchildren	72	Grandchildren	73
		Dream Car†	77	History Person†	70

* Scoring was based on seven categories as shown in the Introduction to this report: Extensively Elaborated, Elaborated, Developed, Minimally Developed, Undeveloped, Response to Topic, and No Response.

†50-minute writing tasks; others were 25-minute writing tasks

Subsequent to the professional scoring, the booklets were scanned and all information was transcribed to the NAEP database at ETS. Each processing activity was conducted with rigorous quality control.

Data Analysis and IRT Scaling

After the assessment information had been compiled in the database, the data were weighted according to the population structure. The weighting for the national and state samples reflected the probability of selection for each student as a result of the sampling design, adjusted for nonresponse. Through poststratification, the weighting ensured that the representation of certain subpopulations corresponded to figures from the U.S. Census and the Current Population Survey.[43]

It is standard practice at ETS to treat all nonrespondents to the last item as if they had not reached the item. For multiple-choice and standard constructed-response items, the use of such a convention most often produces a reasonable pattern of results in that the proportion reaching the last item is not dramatically smaller than the proportion reaching the next-to-last item. However, because each block containing a writing task contained only one prompt, blank papers were considered intentional omissions. These students, together with those who wrote papers classified as off task, form the No Response category in reporting the percentages of responses to each writing task (as in Chapters 1 through 3).

For purposes of scaling, a separate analysis was done to determine if students who omitted a writing prompt or were classified as off task should either be given the lowest score or treated as never receiving the prompt. For those students who received two 25-minute blocks, each containing one item, a cross tabulation was computed, with the score on the first item as the row entry and the score on the second item as the column entry. The cross-tabulation showed that an omitted or off-task response to one prompt did not necessarily indicate a similar response or a poor score on the second prompt. Therefore, because the omit or off-task scores appeared to provide no consistently meaningful information about the students' writing achievement, these responses were excluded from the scaling.

Item response theory (IRT) was used to estimate average scale-score proficiency for the nation and various subgroups of interest within the nation. The development of the scale involved three stages.

First the generalized partial-credit (GPC) IRT model[44] was used to scale the items (prompts) within each grade. The result was that the items for the

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[43]For additional information about the use of weighing procedures in NAEP, see Johnson, E. G., "Considerations and Techniques for the Analysis of NAEP Data," *Journal of Educational Statistics* (December 1989).

[44]Muraki, E., "A Generalized Partial Credit Model: Application of an EM Algorithm," *Applied Psychological Measurement*, 16(2), 159-176, 1992.

three grades defined three separate (within-grade) scales having arbitrary means and standard deviations. It must be emphasized that, although there were several prompts in common between adjacent grade levels, the within-grade scaling does not incorporate this information. It allows the same prompt to have different item parameters in the different grades.

In the second stage the generalized Stocking-Lord procedure[45] was used to link the three within-grade scales. As a result of the linking the item parameters were linearly transformed such that, although the items maintained the same relative scale positions within grades, the items from the different grades were placed on a common scale. This linking makes cross-grade comparisons possible while keeping the different item parameters for prompts administered in different grades.

After the second stage the items have been scaled but there are, as yet, no estimates of student proficiency. The third stage yields the proficiency estimates. Because of the BIB-spiraling design used by NAEP, each student did not receive enough writing tasks to provide reliable information about individual performance. Traditional test scores for individual students, even those based on IRT, would lead to misleading estimates of population characteristics, such as subgroup means and percentages of students at or above a certain proficiency level. Instead, NAEP constructs sets of plausible values designed to represent the distribution of proficiency in the population. A plausible value for an individual is not a scale score for that individual but may be regarded as a representative value from the distribution of potential scale scores for all students in the population with similar characteristics and identical patterns of item response. Statistics describing performance on the NAEP proficiency scale are based on these plausible values. They estimate values that would have been obtained had individual proficiencies been observed — that is, had each student responded to a sufficient number of writing tasks so that proficiency could be precisely estimated.[46]

The plausible value estimation incorporates the transformed within-grade item parameters from the second stage, the polytomously scored

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[45]Muraki, E., and Grima, A. M., "Extension of TBLT Procedure to the Generalized Partial Credit Model." Paper presented at the NAEP Design and Analysis Committee Meeting, Washington, DC, May, 1993.

Stocking, M. L., and Lord, F. M., "Developing a Common Metric in Item Response Theory," *Applied Psychological Measurement*, 7(2), 201-210, 1983.

[46]For theoretical justification of the procedures employed, see Mislevy, R. J., "Randomization-Based Inferences About Latent Variables from Complex Samples," *Psychometrika*, 56(2), 177-196, 1988.

For computational details, see *Focusing the New Design: NAEP 1988 Technical Report* (Princeton, NJ: Educational Testing Service, National Assessment of Education Progress, 1990) and the *1990 NAEP Technical Report*.

responses of the examinees to the prompts, and background information about the examinees. Once the proficiency estimates were derived they were linearly transformed to have an overall mean of 250 and standard deviation of 50 in the combined dataset for all three grades.[47] For the 1992 main writing assessment, the individual grade means, displayed in Table 5.1, are 222, 262, and 286, respectively, for the fourth, eighth, and twelfth grades.

As described earlier, the NAEP proficiency scales make it possible to examine relationships between students' performance and a variety of background factors measured by NAEP. The fact that a relationship exists between achievement and another variable, however, does not reveal the underlying cause of the relationship, which may be influenced by a number of other variables. Similarly, the assessments do not capture the influence of unmeasured variables. The results are most useful when they are considered in combination with other knowledge about the student population and the educational system, such as trends in instruction, changes in the school-age population, and societal demands and expectations.

Item Mapping

The purpose and use of item mapping is described in Chapter 4 and in *Interpreting NAEP Scales*.[48] Because the NAEP writing assessment tasks are scored polytomously, students' response scores are on a 6-point scale. The result of item mapping is the identification, for each writing task, of the points on the NAEP writing scale at which it is estimated that 65 percent of students would write a response scored one or better (response to topic or better), two or better (undeveloped response to task or better), . . . , five or better (elaborated or better), and six (extensively elaborated). For some writing tasks, only five points were scaled with the IRT model because the frequency of extensively elaborated responses was extremely small.

In Figures 4.1, 4.2, and 4.3, it must be emphasized that the "or above" part of the description of response levels to each prompt refers to the scores assigned to the students' writing, not the proficiency scale point. For example, "minimally developed or better" responses to the eighth-grade prompt, "Debate allowing school drug searches," maps onto the NAEP writing scale at 266. This means that beginning at point 266 on the NAEP

[47]For additional information see Johnson, E. G., Carlson, J. L., and Kline, D. L., *The NAEP 1992 Technical Report* (Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress, 1994).

[48]Phillips, G. W. et al., *Interpreting NAEP Scales* (Washington, DC: Office of Educational Research and Improvement, U.S. Department of Education, National Center for Education Statistics, 1993).

scale, students were likely (65 percent) to provide at least minimally developed responses to that writing task. Also, please observe that a "can do" versus "cannot do" interpretation should not be ascribed to these scale points. Above point 266 even greater percentages of students than 65 percent were likely to write minimally developed or better responses to the task on "Debate allowing school drug searches." Below point 266 fewer than 65 percent would be expected to provide minimally developed responses, but some students did. Relatively substantial proportions (fewer than 65 percent) did provide such responses just below 266, tailing off to lower and lower percentages at the lower regions of the scale.

For each writing task, the analysis proceeded as follows. Using the IRT parameter estimates, we first derived the function relating the probability of a student attaining an item score of k or better (for k=1, 2, 3, 4, 5, and 6) to the proficiency scale. Using that function we then determined the point in the proficiency scale at which the probability is .65. These points are the levels of task performance reported in Figures 4.1, 4.2, and 4.3.

Although the percentage of 65 may seem somewhat arbitrary, it was selected after careful consideration of the purpose: describing students' levels of performance. If a larger percentage (such as 80) were to be selected, the mapping points on the NAEP scale would all be elevated and a much smaller percentage of students would be expected to produce writing reaching these points, especially for the higher score categories (5 or above and 6) in the lower grades. Note in Figures 4.1, 4.2, and 4.3 that very few writing tasks resulted in the highest score category (6, extensively elaborated) mapping onto the scale in the ranges of proficiency shown. If 80 percent had been used, this would likely be true for both of the highest two score categories (elaborated or better, extensively elaborated). In contrast, a smaller percentage (such as 50 percent) would lower the mapping criterion to only a 50/50 chance that students at the scale point actually provided written responses of the quality described on the map. It was decided that an intermediate percentage, such as 65 percent, representing a probability of nearly two-thirds, would best serve the purpose of describing students' levels of performance.

Note that because the item parameters are estimated independently for each of the three grade levels, it would not be expected that there would be any particular relationship between the mapped levels for an item administered to two grade levels. Hence direct cross-grade comparisons of the mappings of such an item are not appropriate. The general trends of relative performance across grades for such items, however, tend to be consistent and are of interest.

Regression Analyses for the Top-Performing One-Third of the Schools and the Bottom-Performing One-Third of the Schools

A series of regression analyses was performed at the school level to investigate relationships of various sets of background variables to whether schools were in the top third versus the bottom third of all schools in the writing assessment at the eighth grade. Schools in the middle third with respect to mean proficiency score were not used in this analysis since the purpose was to determine which background variables were related to the high-scoring versus low-scoring dichotomy.

The dependent variable for these regressions was the dichotomy indicating whether the school was in the top third or in the bottom third in writing proficiency. Four different sets of independent variables, based on the teacher and student background questionnaires, were used in four separate regression analyses. The four sets comprised: curricular priority and emphasis in writing instruction, resources for writing instruction, education and training of teachers, and writing instructional process variables.

For each regression analysis the overall test of significance of the linear relationship between the dichotomy and the independent variables was first tested using a F test. In those cases having a significant overall F test the individual t tests of the significance of the relationship of the dichotomy to the independent variables were examined. All significance tests were performed at the .05 level.

It should be pointed out that with a dependent variable comprised of a classification into independent groups of subjects, the usual statistical analysis would be a discriminant analysis. As pointed out by Michael and Perry[49] and Tatsuoka[50], however, in the case of two groups, a regression analysis using a dichotomous variable indicating group membership as the dependent variable is exactly equivalent to performing a discriminant analysis. Either technique may be used to determine which of the independent variables significantly predicts membership in the two groups.

The results of the regression analyses are presented below. Caution should be taken in interpreting these results because of the strong interrelationship among the variables representing certain factors. For example, many of the questions about computer access are related.

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[49]Michael, W. B., and Perry, N. C., "The comparability of the simple discriminant function and multiple regression techniques," *Journal of Experimental Education*, 1956, 24, pp. 288-301.

[50]Tatsuoka, M. M. *Multivariate analysis* (second edition) (New York: Macmillan Publishing Company, 1988).

Therefore, in a regression analysis that did not include the computer access variable noted as statistically significant below, another related variable would most likely have taken its place. It is best to consider the regression results as merely a tool in helping to explore areas of potential interest because other variables related to those designated as statistically significant also can be important. This approach was taken in Chapters 6 through 8, as the regression analyses were used to identify broad areas of significance such as curricular emphasis and resources, and some particulars within those areas, such as more challenging writing content (assignments and assessments based on longer writing) and more access to computers. Based on the regression results, the questionnaire data were further examined to provide a more complete picture of the factors that appeared to distinguish between the top-performing one-third of the schools and the bottom-performing one-third of the schools based on NAEP data.

As reported in Chapter 6, the cluster of variables related to *Curricular Priority and Emphasis in Writing Instruction* was found to be significant as a whole. The multiple correlation was .59 and the proportion of explained variance was 35 percent. In particular, the significant priority and emphasis variables differentiating English classes in the top-performing one-third of the schools from those in the bottom-performing one-third of the schools at grade 8 were:

- Teachers reported more frequent writing assignments of three or more pages.
- Teachers reported more frequent use of long essays to assess student progress in writing.
- Students reported more frequent writing assignments requiring an essay or theme involving analysis and interpretation.
- Students reported less frequent writing assignments requiring a report or summary of something read or known about.
- Students reported less frequent writing assignments requiring an essay or letter to persuade others.

In addition to the above significant variables, the following variables were included in the regression for this cluster.

- School – Writing identified as school-wide priority
- Teacher – Time spent on writing outside of class
- Teacher – Time spent on writing instruction per week

- Teacher – How often assess short answer
- Teacher – How often assess projects/portfolios
- Teacher – How often assess multiple-choice
- Teacher – How often assign 1-2 paragraphs
- Teacher – How often assign 1-2 pages
- Teacher – How often assign report or summary
- Teacher – How often assign analytical essay
- Teacher – How often assign persuasive essay
- Teacher – How often assign story or narrative
- Teacher – How often assign writing in journal/log
- Student – How often write story or narrative
- Student – How often 1-2 paragraphs assigned
- Student – How often 1-2 pages assigned
- Student – How often 3-plus pages assigned

Chapter 7 contains the data for variables included in two different regression analyses. The first cluster concerned *Resources for Writing Instruction,* and this cluster was significant as a whole. The multiple correlation was .44 and the proportion of explained variance was 19 percent.

The two significant resource variables differentiating English classes in the top-performing one-third of the schools from the bottom-performing one-third of the schools at grade 8 were:

- Schools reported computers were available to English classes in a separate computer laboratory.
- Students reported using the computer *less* frequently for doing spelling, punctuation, or grammar exercises.

Additional variables included in the regression were:

- School – computers always available in English classes
- School – computers available to bring to English classes
- Teacher – class size
- Teacher – computers available in writing classes
- Teacher – how often spelling exercises on computer
- Teacher – how often write drafts on computer
- Teacher – how well school provides resources
- Students – how often use computer to write stories/reports

The second regression related to variables in Chapter 7 included *Teacher Education and Training* variables, but it was not significant as a whole. However, the following variable in this cluster was significant in differentiating between top and bottom one-third schools:

- Teachers reported English as their undergraduate major field of study.

All the information in this regression was obtained from the teachers. Additional variables in the regression included:

- Undergraduate major education
- Undergraduate major English education
- Undergraduate major, other
- Highest academic degrees
- How many writing courses taken
- Specialized training to teach writing — inservice
- Specialized training to teach writing — undergraduate
- Specialized training to teach writing — graduate
- Specialized training to teach writing — continuing education
- No specialized training to teach writing

As described in Chapter 8, the cluster of variables related to *Writing Process Instruction* was found to be significant as a whole. The multiple correlation was .67 and the proportion of explained variance was 45 percent. This was the largest cluster, and 12 classroom instructional variables were found to be significant in differentiating English classes in the top-performing one-third of the schools from those in the bottom-performing one-third of the schools at Grade 8. They were:

- Teachers reported writing about literature as more central to their instructional approach.
- Teachers reported more frequently asking students to choose or make up the topic they write about.
- Teachers reported more frequently asking students to work in pairs or small groups to discuss their writing.
- Teachers reported less frequently asking students to talk to them about their writing while students were working on it.
- Teachers reported less frequently asking students to discuss what they wrote with members of their families.
- Students reported more frequently being asked to plan their writing.

- Students reported more frequently being asked to write more than one draft of a paper.
- Students reported more frequently doing spelling, punctuation, or grammar exercises.
- Students reported less frequently working in pairs or small groups to discuss their writing.
- Students reported less frequently being asked to make a formal outline before writing.
- Students reported more importance attached to the quality and creativity of ideas when teachers graded their writing.
- Students reported less importance attached to spelling, punctuation, and grammar when teachers graded their writing.

Additional variables included in the regression were:

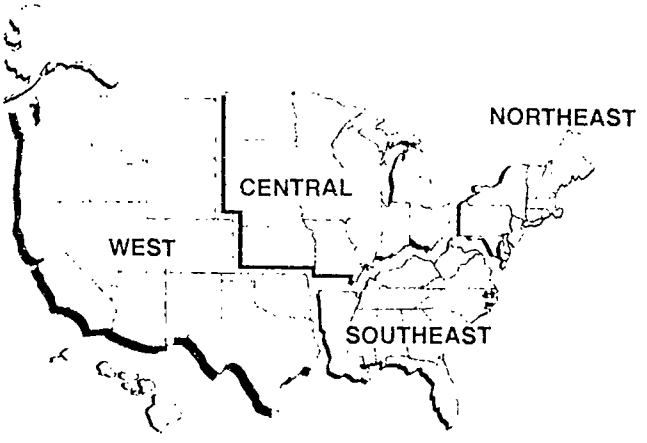
- Teacher – Central instructional approach grammar, punctuation, and spelling
- Teacher – Central instructional approach writing process
- Teacher – Central instructional approach integrating reading/writing
- Teacher – Central instructional approach writing across subjects
- Teacher – How often use worksheet/workbook
- Teacher – How often use textbook
- Teacher – How often ask students to plan writing
- Teacher – How often ask students to make outline
- Teacher – How often ask students to define purpose/audience
- Teacher – How often ask students to discuss writing with other students
- Teacher – How often ask students to write more than one draft
- Teacher – How often ask students to comment on each other's writing
- Teacher – How often ask student to use resources/sources
- Teacher – How often ask students to contribute to writing collection
- Teacher – How often ask students to do exercises in grammar, punctuation, and spelling
- Teacher – How often ask students to write in journal or learning log
- Teacher – How important in grading is grammar, punctuation, and spelling
- Teacher – How important in grading is organization
- Teacher – How important in grading is quality and creativity of ideas

- Teacher – How important in grading is length
- Teacher – How important in grading is accomplishing the purpose of the writing
- Teacher – Do you keep students' writing in portfolios
- Student – Is writing kept in portfolio
- Student – When teacher grades, how important is organization
- Student – When teacher grades, how important is length
- Student – How often does your teacher ask you to define purpose and audience
- Student – How often does your teacher talk with you while you are writing
- Student – How often does your teacher ask you to use sources or resources besides your textbook
- Student – How often does your teacher ask you to contribute to a collection of writing
- Student – How often does your teacher ask you to write in a journal or learning log

NAEP Reporting Groups

This report contains results for the nation and groups of students within the nation defined by shared characteristics. The definitions for subgroups as defined by region, race/ethnicity, gender, size and type of community, and type of school follow.

Region. The United States has been divided into four regions: Northeast, Southeast, Central, and West. States in each region are shown on the following map.



Race/Ethnicity. Results are presented for students of different racial/ethnic groups based on the students' self-identification of race/ethnicity according to the following mutually exclusive categories: White, Black, Hispanic, Asian/Pacific Islander, and American Indian (including Alaskan Native).

Gender. Results are reported separately for males and females. Gender was reported by the student.

Type of Community. Results are provided for four mutually exclusive community types—advantaged urban, disadvantaged urban, extreme rural, and other—as described below. According to information about parents' occupation obtained from the Principal's Questionnaire completed by each sampled school, indices are developed such that for each assessment approximately the 10 percent of the most extreme advantaged urban, disadvantaged urban, and rural schools are classified into the first three categories. The remaining approximately 70 percent of the schools are classified into the "other" category.

Advantaged Urban: Students in this group reside in metropolitan statistical areas and attend schools where a high proportion of the students' parents are in professional or managerial positions.

Disadvantaged Urban: Students in this group reside in metropolitan statistical areas and attend schools where a high proportion of the students' parents are on welfare or are not regularly employed.

Extreme Rural: Students in this group do not reside in metropolitan statistical areas. They attend schools in areas with a population below 10,000 where many of the students' parents are farmers or farm workers.

Other: Students in the "Other" category attend schools in areas other than those defined as advantaged urban, disadvantaged urban, or extreme rural.

Type of School. For the nation, results are presented separately for public school students and for private school students, both those attending Catholic schools and other types of private schools.

Estimating Variability

Because the statistics presented in this report are estimates of group and subgroup performance based on samples of students, rather than the values that could be calculated if every student in the nation answered every question, it is important to have measures of the degree of uncertainty of the estimates. Two components of uncertainty are accounted for in the variability of statistics based on proficiency: the uncertainty due to sampling only a relatively small number of students and the uncertainty due to sampling only a relatively small number of writing tasks. The variability of estimates of percentages of students having certain background characteristics or answering a certain cognitive question correctly is accounted for by the first component alone.

In addition to providing estimates of percentages of students and their average proficiency, this report also provides information about the uncertainty of each statistic. Because NAEP uses complex sampling procedures, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate, so NAEP uses a jackknife replication procedure to estimate standard errors. The jackknife standard error provides a reasonable measure of uncertainty for any information about students that can be observed without error. Since each student typically responds to so few items within any content area, the proficiency measurement for any single student would be imprecise. In this case, using plausible values technology makes it possible to describe the performance of groups and subgroups of students, but the underlying imprecision that makes this step necessary adds an additional component of variability to statistics based on NAEP proficiencies.[51]

The reader is reminded that, like those from all surveys, NAEP results are also subject to other kinds of errors, including the effects of necessarily imperfect adjustment for student and school nonresponse and other largely unknowable effects associated with the particular instrumentation and data collection methods used. Nonsampling errors can be attributed to a number of sources: inability to obtain complete information about all selected students in all selected schools in the sample (some students or schools refused to participate, or students participated but answered only certain items); ambiguous definitions; differences in interpreting questions;

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[51]For further details, see Johnson, E. G., "Considerations and Techniques for the Analysis of NAEP Data," *Journal of Educational Statistics* (Winter 1989).

inability or unwillingness to give correct information; mistakes in recording, coding, or scoring data; and other errors of collecting, processing, sampling, and estimating missing data. The extent of nonsampling errors is difficult to estimate. By their nature, the impacts of such error cannot be reflected in the data-based estimates of uncertainty provided in NAEP reports.

Drawing Inferences from the Results

The use of *confidence intervals*, based on the standard errors, provides a way to make inferences about the population means and proportions in a manner that reflects the uncertainty associated with the sample estimates. An estimated sample mean proficiency $\pm$ 2 standard errors represents a 95 percent confidence interval for the corresponding population quantity. This means that with approximately 95 percent certainty, the average performance of the entire population of interest is within $\pm$ 2 standard errors of the sample mean.

As an example, suppose that the average writing proficiency of students in a particular group was 256, with a standard error of 1.2. A 95 percent confidence interval for the population quantity would be as follows:

Mean $\pm$ 2 standard errors = $256 \pm 2 \bullet (1.2) = 256 \pm 2.4 =$
$256 - 2.4$ and $256 + 2.4 = 253.6, 258.4$

Thus, one can conclude with 95 percent certainty that the average proficiency for the entire population of students in that group is between 253.6 and 258.4.

Similar confidence intervals can be constructed for percentages, provided that the percentages are not extremely large (greater than 90) or extremely small (less than 10). For extreme percentages, confidence intervals constructed in the above manner may not be appropriate. However, procedures for obtaining accurate confidence intervals are quite complicated. Thus, comparisons involving extreme percentages should be interpreted with this in mind.

To determine whether there is a real difference between the mean proficiency (or proportion of a certain attribute) for two groups in the population, one needs to obtain an estimate of the degree of uncertainty associated with the difference between the proficiency means or proportions of these groups for the sample. This estimate of the degree of uncertainty — called the standard error of the difference between the groups — is obtained by taking the square of each group's standard error, summing these squared standard errors, and then taking the square root of this sum.

Similar to the manner in which the standard error for an individual group mean or proportion is used, the standard error of the difference can be used to help determine whether differences between groups in the population are real. The difference between the mean proficiency or proportion of the two groups ± 2 standard errors of the difference represents an approximate 95 percent confidence interval. If the resulting interval includes zero, there is insufficient evidence to claim a real difference between groups in the population. If the interval does not contain zero, the difference between groups is statistically significant (different) at the .05 level.

The procedures described in this section, and the certainty ascribed to intervals (e.g., a 95 percent confidence interval) are based on statistical theory that assumes that only one confidence interval or test of statistical significance is being performed. When one considers sets of confidence intervals, such as those for the average proficiency of different racial/ethnic groups, statistical theory indicates that the certainty associated with the entire set of intervals is less than that attributable to each individual comparison from the set. If one wants to hold the certainty level for a specific set of comparisons at a particular level (e.g., .95), adjustments (called multiple-comparisons procedures) need to be made.

The standard errors for means and proportions reported by NAEP are statistics and subject to a certain degree of uncertainty. In certain cases, typically when the standard error is based on a small number of students or when the group of students is enrolled in a small number of schools, the amount of uncertainty associated with the standard errors may be quite large. Throughout this report, estimates of standard errors subject to a large degree of uncertainty are designated by the symbol "!". In such cases, the standard errors — and any confidence intervals or significance tests involving these standard errors — should be interpreted cautiously.

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