## Reading and writing habits of students

> Research has shown that reading ability is positively correlated with the extent to which students read recreationally. Educators are increasingly encouraging their students to read and write on their own, outside of school. Changes in the frequency with which students read and write independently, as well as in the types of materials students read and write, indicate the degree to which recreation activities related to education are supported outside of the classroom.

- Independent reading and writing habits of students have remained relatively stable across all age groups since 1984, with a few exceptions. For example, although the percentage of students writing letters, notes, or messages has remained nearly constant over the years, more $8^{\text {th }}$-graders in 1994 reported writing stories outside of school at least once a week than in 1984. Also, between 1984 and 1994, the percentage of $8^{\text {th }}$ - and $11^{\text {th }}$-grade students who reported keeping a diary or journal increased.
- Between 1984 and 1994, a greater percentage of 9-year-olds than 13- and 17-year-olds reported reading for fun almost every day. In addition, $4^{\text {th }}$ grade students were more likely than $8^{\text {th }}$ - or $11^{\text {th }}$-grade students to report that they wrote stories outside of class at least once a week.
- In 1994, 9-, 13-, and 17-year-old students who reported reading for fun at least once a week had higher average reading proficiency scores than students who reported never or hardly ever reading for fun (see supplemental table 17-1).

In 1994, the types of materials students read both at home and at school varied. For all ages, students reported having most recently read a science, social studies, or mathematics book in school than at home, while they reported most recently reading magazines more at home than in school. Nine-year-olds and 13-year-olds reported having most recently read stories more at home, while 17-year-olds reported reading stories more at school (see supplemental tables 17-2 and 17-3).

Percentage of students who read forfun, by frequency and age: Selected years 1984-94

| Frequency | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Almost every day | 53.3 | 54.1 | 54.0 | 56.2 | 57.6 | 35.1 | 36.0 | 35.2 | 37.0 | 31.9 | 30.8 | 28.1 | 31.1 | 26.7 | 29.7 |
| 1-2 times a week | 27.7 | 26.1 | 25.2 | 28.0 | 25.1 | 35.1 | 31.3 | 31.9 | 32.4 | 32.4 | 33.5 | 32.1 | 31.4 | 32.9 | 31.4 |
| 1-2 times a month | 7.1 | 6.9 | 5.7 | 5.8 | 5.3 | 14.2 | 15.3 | 13.4 | 12.8 | 13.9 | 16.7 | 20.8 | 15.5 | 17.8 | 15.3 |
| Few times a year | 3.0 | 3.8 | 3.5 | 3.2 | 3.0 | 7.2 | 7.7 | 8.8 | 8.4 | 9.9 | 10.3 | 10.1 | 11.8 | 11.9 | 11.9 |
| Never/hardly ever | 8.9 | 9.1 | 11.6 | 6.8 | 9.0 | 8.5 | 9.7 | 10.8 | 9.5 | 11.8 | 8.7 | 8.9 | 10.2 | 10.7 | 11.7 |

Percentage of students who wrote outside of class at least once a week, by writing habit and grade: Selected years 1984-94

| Writing habit | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Keep a diary/joumal | - | - | - | - | - | 25.9 | 28.6 | 30.9 | 29.8 | 32.8 | 19.0 | 22.2 | 21.3 | 22.5 | 27.0 |
| Write forschool paper | - | - | - | - | - | 8.0 | 8.1 | 9.2 | 11.1 | 10.2 | 5.3 | 4.8 | 7.1 | 5.7 | 8.5 |
| Write letters to relatives | 32.5 | 32.3 | 36.5 | 33.6 | 34.9 | 37.3 | 41.9 | 47.2 | 45.8 | 45.1 | 36.2 | 43.9 | 38.5 | 38.0 | 38.1 |
| Write notes or messages | 43.7 | 44.7 | 45.9 | 45.4 | 43.9 | 67.9 | 70.8 | 73.5 | 72.5 | 71.5 | 73.7 | 81.5 | 78.2 | 78.9 | 77.2 |
| Write stories | 25.9 | 24.2 | 25.6 | 28.8 | 25.5 | 10.2 | 15.3 | 14.3 | 16.8 | 18.0 | 11.7 | 15.3 | 14.2 | 15.8 | 15.9 |

Reading and writing habits of students



${ }^{1}$ Defined as the most recent type of material read.
${ }^{2}$ In 1994, the percentages of students aged 13 and 17 who read mathematics books at home were less than 1.0, and therefore the percentages are not discemable in the graph.


SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, Almanac: Reading, 1984 to 1994, and Writing, 1984 to 1994, 1996.

Percentage of students who read for fun, by frequency and age: Selected years 1984-94

|  | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Almost every day | 53.3 | 54.1 | 54.0 | 56.2 | 57.6 | 35.1 | 36.0 | 35.2 | 37.0 | 31.9 | 30.8 | 28.1 | 31.1 | 26.7 | 29.7 |
| 1-2 times a week | 27.7 | 26.1 | 25.2 | 28.0 | 25.1 | 35.1 | 31.3 | 31.9 | 32.4 | 32.4 | 33.5 | 32.1 | 31.4 | 32.9 | 31.4 |
| 1-2 times a month | 7.1 | 6.9 | 5.7 | 5.8 | 5.3 | 14.2 | 15.3 | 13.4 | 12.8 | 13.9 | 16.7 | 20.8 | 15.5 | 17.8 | 15.3 |
| Few times a year | 3.0 | 3.8 | 3.5 | 3.2 | 3.0 | 7.2 | 7.7 | 8.8 | 8.4 | 9.9 | 10.3 | 10.1 | 11.8 | 11.9 | 11.9 |
| Never/hardly ever | 8.9 | 9.1 | 11.6 | 6.8 | 9.0 | 8.5 | 9.7 | 10.8 | 9.5 | 11.8 | 8.7 | 8.9 | 10.2 | 10.7 | 11.7 |

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progess, Almanac: Reading 1984 to 1994, and Writing 1984 to 1994, 1996.

Percentage of students who wrote outside of class at least once a week,
by writing habit and grade: Selected years 1984-94

|  | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Writing habit | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Keep a diary/journal | - | - | - | - | - | 25.9 | 28.6 | 30.9 | 29.8 | 32.8 | 19.0 | 22.2 | 21.3 | 22.5 | 27.0 |
| Write for school paper | - | - | - | - | - | 8.0 | 8.1 | 9.2 | 11.1 | 10.2 | 5.3 | 4.8 | 7.1 | 5.7 | 8.5 |
| Write letters to relatives | 32.5 | 32.3 | 36.5 | 33.6 | 34.9 | 37.3 | 41.9 | 47.2 | 45.8 | 45.1 | 36.2 | 43.9 | 38.5 | 38.0 | 38.1 |
| Write notes or messages | 43.7 | 44.7 | 45.9 | 45.4 | 43.9 | 67.9 | 70.8 | 73.5 | 72.5 | 71.5 | 73.7 | 81.5 | 78.2 | 78.9 | 77.2 |
| Write stories | 25.9 | 24.2 | 25.6 | 28.8 | 25.5 | 10.2 | 15.3 | 14.3 | 16.8 | 18.0 | 11.7 | 15.3 | 14.2 | 15.8 | 15.9 |

- Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of
Educational Progess, Almanac: Reading 1984 to 1994, and Writing 1984 to 1994, 1996.

Table 17-1 Average reading proficiency scores of students who read for fun, by frequency and age: Selected years 1984-94

|  | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Almost every day | 214 | 213 | 215 | 215 | 215 | 264 | 266 | 269 | 269 | 272 | 297 | 296 | 304 | 304 | 302 |
| 1-2 times a week | 212 | 212 | 211 | 212 | 214 | 255 | 260 | 255 | 260 | 255 | 290 | 284 | 294 | 291 | 286 |
| 1-2 times a month | 204 | 201 | 210 | 204 | 213 | 255 | 257 | 251 | 257 | 255 | 290 | 285 | 288 | 287 | 286 |
| Few times a year | 197 | 200 | 198 | 197 | 193 | 252 | 248 | 245 | 250 | 252 | 280 | 274 | 280 | 282 | 281 |
| Never/hardly ever | 198 | 198 | 192 | 189 | 193 | 239 | 241 | 247 | 246 | 237 | 269 | 277 | 266 | 268 | 258 |

गUUारह: U.S. Deparmment of EaUcaion, ivaाional center Tore

Table 17-2 Percentage of students assigned various types of writing during the previous week, by English class assignment and grade: Selected years 1984-94

| English class | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| assignment | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Story | 37.2 | 43.3 | 42.9 | 46.7 | 46.3 | 41.5 | 48.9 | 48.9 | 51.4 | 52.4 | 39.7 | 39.7 | 39.4 | 41.4 | 41.4 |
| Essay | 19.3 | 25.1 | 24.2 | 25.2 | 24.9 | 41.0 | 48.4 | 45.0 | 48.5 | 54.4 | 59.6 | 63.6 | 63.5 | 64.4 | 69.0 |
| Poem | 25.7 | 29.7 | 27.0 | 26.4 | 26.6 | 14.7 | 14.7 | 17.3 | 19.5 | 20.1 | 18.3 | 20.9 | 25.4 | 23.8 | 27.3 |
| Play | 13.9 | 15.6 | 14.1 | 15.1 | 14.2 | 10.4 | 12.2 | 11.7 | 11.8 | 13.8 | 12.6 | 11.3 | 14.1 | 11.5 | 12.9 |
| Letter | 38.5 | 38.7 | 42.5 | 38.8 | 39.3 | 20.8 | 25.3 | 24.4 | 26.9 | 29.3 | 15.9 | 19.6 | 18.2 | 19.3 | 21.6 |
| Book report | 36.1 | 40.5 | 38.2 | 37.8 | 38.1 | 35.4 | 34.8 | 33.9 | 33.7 | 35.0 | 30.4 | 30.7 | 28.2 | 28.4 | 28.1 |
| Other reports | 28.3 | 32.0 | 30.6 | 33.0 | 33.3 | 26.5 | 29.4 | 29.5 | 30.8 | 36.1 | 37.7 | 38.4 | 38.7 | 42.2 | 42.7 |

JUUारEE: U.S. Department or Eaucation, Ivational center Tor Eaucation statistics, ivational Assessment of
taucationai rrogess, Almanac: vvriting, Iy84 TO 14Y4, 1צY0.

Table 17-3 Percentage of students who reported most recently having read various types of materials at school and at home, by type of material and age: Selected years 1984-94

| Type of material | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
|  | At school |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Newspaper |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| or magazine | 4.3 | 4.5 | 4.4 | 5.3 | 5.5 | 4.8 | 4.0 | 5.6 | 5.2 | 5.2 | 6.4 | 6.1 | 6.2 | 6.4 | 6.4 |
| Play | 1.9 | 1.8 | 2.5 | 1.8 | 1.5 | 1.9 | 2.7 | 2.4 | 2.4 | 2.4 | 5.9 | 8.8 | 6.3 | 6.7 | 6.8 |
| Poem | 2.9 | 2.6 | 2.9 | 3.5 | 3.7 | 1.2 | 1.4 | 1.2 | 1.6 | 1.1 | 4.1 | 4.7 | 4.4 | 4.6 | 5.4 |
| Story/novel | 16.9 | 18.1 | 19.6 | 23.7 | 27.5 | 22.5 | 27.9 | 26.6 | 28.7 | 32.2 | 39.7 | 40.1 | 41.1 | 42.6 | 41.1 |
| Science book | 17.3 | 18.8 | 16.3 | 16.8 | 16.5 | 21.3 | 20.2 | 22.3 | 18.4 | 18.7 | 11.5 | 12.1 | 12.3 | 12.6 | 12.6 |
| Social studies book | 20.5 | 22.8 | 20.3 | 18.1 | 14.8 | 25.6 | 24.2 | 22.1 | 22.3 | 18.8 | 15.7 | 13.1 | 14.5 | 14.0 | 13.4 |
| Mathematics book | 17.5 | 15.3 | 16.6 | 15.2 | 14.6 | 16.2 | 14.8 | 15.2 | 16.3 | 16.8 | 11.1 | 11.1 | 11.5 | 10.4 | 10.7 |
| Workbook | 18.8 | 16.2 | 17.5 | 15.6 | 16.0 | 6.5 | 4.9 | 4.7 | 5.0 | 4.7 | 5.6 | 4.0 | 3.8 | 2.8 | 3.5 |
| At home |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Newspaper | 8.9 | 7.0 | 5.7 | 6.1 | 5.5 | 16.3 | 12.7 | 11.8 | 12.3 | 11.5 | 25.7 | 23.5 | 23.1 | 24.9 | 20.7 |
| Magazine | 17.4 | 15.4 | 17.4 | 17.0 | 19.9 | 31.1 | 36.2 | 37.1 | 35.2 | 35.6 | 36.6 | 39.9 | 38.4 | 38.1 | 38.9 |
| Play | 3.2 | 2.8 | 2.6 | 2.4 | 1.6 | 0.8 | 0.9 | 0.9 | 1.2 | 0.8 | 0.8 | 0.7 | 0.6 | 0.8 | 0.8 |
| Poem | 5.8 | 4.3 | 5.5 | 6.4 | 5.1 | 1.3 | 1.8 | 2.0 | 2.0 | 1.5 | 1.7 | 2.2 | 2.3 | 2.7 | 2.5 |
| Story/novel | 36.5 | 37.6 | 37.2 | 42.9 | 39.4 | 39.0 | 36.9 | 36.9 | 40.8 | 40.5 | 29.3 | 27.3 | 28.4 | 26.7 | 30.3 |
| Science book | 3.8 | 4.8 | 3.8 | 3.7 | 3.3 | 1.6 | 1.2 | 1.3 | 1.3 | 1.4 | 1.1 | 0.8 | 1.0 | 1.0 | 0.9 |
| Social studies book | 3.3 | 3.1 | 3.2 | 2.8 | 2.2 | 1.5 | 1.5 | 1.4 | 1.0 | 1.1 | 0.5 | 0.5 | 0.4 | 0.8 | 0.3 |
| Mathematics book | 3.6 | 3.5 | 2.9 | 3.2 | 2.7 | 1.3 | 0.7 | 0.9 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.7 | 0.3 |
| Workbook | 4.4 | 3.4 | 2.8 | 2.9 | 3.4 | 0.7 | 0.5 | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 |
| Something else | 13.0 | 18.0 | 19.0 | 12.5 | 16.9 | 6.4 | 7.6 | 7.3 | 5.4 | 6.5 | 3.6 | 4.5 | 5.1 | 4.2 | 4.9 |

taucationaı rrogess, Aımanac: keaaing, 1y84 то ıyч4, ıyчo.

Table 17-4 Percentage of students who reported reading various amounts per day in school and for homework, by pages read and age: Selected years 1984-94

| Pages |  |  | e 9 |  |  |  |  | ge 13 |  |  |  |  | ge 17 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| read | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| More than 20 | 12.9 | 15.5 | 14.4 | 18.7 | 17.3 | 10.5 | 12.6 | 11.3 | 14.4 | 14.2 | 20.3 | 20.8 | 20.2 | 22.3 | 23.2 |
| 16-20 | 13.3 | 13.5 | 12.9 | 13.6 | 14.4 | 10.9 | 12.6 | 11.1 | 12.8 | 12.6 | 14.4 | 13.9 | 13.6 | 13.7 | 13.3 |
| 11-15 | 13.9 | 15.0 | 13.7 | 13.5 | 14.4 | 17.5 | 17.8 | 16.3 | 18.8 | 16.6 | 18.0 | 18.4 | 18.0 | 17.3 | 17.6 |
| 6-10 | 24.9 | 28.1 | 25.1 | 25.1 | 25.7 | 34.6 | 32.9 | 34.4 | 31.1 | 31.1 | 26.2 | 25.5 | 25.6 | 26.5 | 25.3 |
| 5 or fewer | 35.1 | 27.7 | 33.8 | 29.0 | 28.3 | 26.5 | 24.1 | 27.0 | 22.9 | 25.5 | 21.1 | 21.3 | 22.6 | 20.3 | 20.7 |

taucationai rrogess, AImanac: Keaaing, Iy४4 to 14y4, Iyyo.

Table 17-5 Percentage of students who wrote outside of class at least once a week, by writing habit and grade: Selected years 1984-94

|  | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Writing habit | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Keep a diary or journal | - | - | - | - | - | 25.9 | 28.6 | 30.9 | 29.8 | 32.8 | 19.0 | 22.2 | 21.3 | 22.5 | 27.0 |
| Do crossword puzzle | - | - | - | - | - | 38.0 | 39.1 | 42.3 | 40.7 | 39.3 | 29.5 | 21.1 | 22.6 | 21.7 | 23.7 |
| Write for school newspaper | - | - | - | - | - | 8.0 | 8.1 | 9.2 | 11.1 | 10.2 | 5.3 | 4.8 | 7.1 | 5.7 | 8.5 |
| Help others with writing | - | - | - | - | - | 29.3 | 30.7 | 31.5 | 31.7 | 32.0 | 28.3 | 24.4 | 25.7 | 27.3 | 27.3 |
| Write letters to relatives | 32.5 | 32.3 | 36.5 | 33.6 | 34.9 | 37.3 | 41.9 | 47.2 | 45.8 | 45.1 | 36.2 | 43.9 | 38.5 | 38.0 | 38.1 |
| Write notes or messages | 43.7 | 44.7 | 45.9 | 45.4 | 43.9 | 67.9 | 70.8 | 73.5 | 72.5 | 71.5 | 73.7 | 81.5 | 78.2 | 78.9 | 77.2 |
| Write stories | 25.9 | 24.2 | 25.6 | 28.8 | 25.5 | 10.2 | 15.3 | 14.3 | 16.8 | 18.0 | 11.7 | 15.3 | 14.2 | 15.8 | 15.9 |

- Not available.
sUUlrLE: U.১. עepartment ot taucation, inationaı Lenter tor taucation statistics, ivationaı Assessment ot taucationaı rrogess, Aımanac: vvriting, Iצ84 TO IצY4, IצYO.

Table 17-6 Average writing proficiency of students who wrote on their own away from school, by writing habit, frequency, and grade: Selected years 1984-94

| Writing habit and frequency | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Write stories |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At least once a week | 197 | 202 | 198 | 205 | 199 | 266 | 265 | 260 | 273 | 267 | 290 | 289 | 292 | 286 | 283 |
| Once or twice a month | 208 | 214 | 206 | 212 | 213 | 271 | 270 | 263 | 282 | 271 | 293 | 296 | 291 | 290 | 287 |
| Never or hardly ever | 206 | 207 | 205 | 208 | 204 | 266 | 263 | 255 | 274 | 264 | 292 | 291 | 286 | 287 | 284 |
| Keep a diary or journal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At least once a week | - | - | - | - | - | 270 | 266 | 260 | 279 | 269 | 291 | 297 | 293 | 295 | 289 |
| Once or twice a month | - | - | - | - | - | 270 | 270 | 262 | 282 | 268 | 287 | 298 | 290 | 293 | 293 |
| Never or hardly ever | - | - | - | - | - | 266 | 261 | 253 | 269 | 262 | 286 | 288 | 284 | 283 | 281 |

- Not available.
sטUוर८匕: U.১. עepartment ot taucation, ivationaı Center tor taucation statistics, ivationai Assessment ot taucational rrogess, Almanac: Vvriting, Iy84 TO 14Y4, IצY0.

Table 17-7 Percentage of students with various reading habits, by frequency, habit, and age: Selected years 1984-94

| Frequency | Age 9 |  | Age 13 |  | Age 17 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Takes books out of library | Spends own money on books | Takes books out of library | Spends own money on books | Takes books out of library | Spends own money on books |
| Almost every day |  |  |  |  |  |  |
| 1984 | 15.4 | 8.9 | 7.1 | 3.7 | 2.4 | 2.8 |
| 1988 | 18.8 | 10.2 | 3.1 | 2.7 | 1.3 | 2.0 |
| 1990 | 19.9 | 10.5 | 3.3 | 2.8 | 1.6 | 1.6 |
| 1992 | 21.3 | 10.8 | 2.3 | 4.1 | 1.1 | 1.5 |
| 1994 | 21.6 | 14.7 | 5.9 | 3.6 | 1.2 | 2.0 |
| 1-2 times a week |  |  |  |  |  |  |
| 1984 | 60.2 | 10.9 | 34.4 | 10.2 | 13.8 | 7.3 |
| 1988 | 55.1 | 12.8 | 32.8 | 9.3 | 13.5 | 6.3 |
| 1990 | 51.8 | 11.4 | 33.4 | 11.4 | 14.2 | 9.5 |
| 1992 | 53.8 | 11.5 | 33.3 | 10.8 | 11.9 | 5.5 |
| 1994 | 51.6 | 9.9 | 29.2 | 9.3 | 14.0 | 6.9 |
| 1-2 times a month |  |  |  |  |  |  |
| 1984 | 12.6 | 21.6 | 32.4 | 24.7 | 36.6 | 22.7 |
| 1988 | 12.3 | 17.3 | 37.0 | 23.9 | 36.2 | 22.6 |
| 1990 | 12.8 | 20.0 | 34.3 | 25.5 | 34.7 | 24.6 |
| 1992 | 12.5 | 20.6 | 35.7 | 25.9 | 36.1 | 21.1 |
| 1994 | 12.6 | 18.7 | 36.6 | 26.3 | 33.1 | 22.8 |
| Few times a year |  |  |  |  |  |  |
| 1984 | 4.5 | 17.0 | 12.7 | 25.3 | 27.9 | 29.7 |
| 1988 | 5.8 | 19.5 | 15.2 | 25.1 | 26.0 | 25.0 |
| 1990 | 5.3 | 16.3 | 15.9 | 21.6 | 26.9 | 24.8 |
| 1992 | 4.6 | 17.3 | 18.5 | 22.3 | 34.0 | 30.2 |
| 1994 | 5.4 | 18.3 | 15.7 | 20.5 | 32.9 | 31.0 |
| Never/hardly ever |  |  |  |  |  |  |
| 1984 | 7.2 | 41.6 | 13.3 | 36.2 | 19.3 | 37.5 |
| 1988 | 8.0 | 40.1 | 11.9 | 39.0 | 23.0 | 44.2 |
| 1990 | 10.2 | 41.9 | 13.1 | 38.6 | 22.5 | 39.6 |
| 1992 | 7.8 | 39.8 | 10.3 | 36.9 | 16.9 | 41.7 |
| 1994 | 8.8 | 38.4 | 12.6 | 40.2 | 18.8 | 37.3 |


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## Table S17(a) Standard errors for the first text table in Indicator 17

|  | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Almost every day | 1.0 | 1.8 | 1.8 | 1.2 | 1.6 | 1.0 | 2.4 | 1.7 | 2.4 | 1.8 | 0.8 | 1.9 | 2.1 | 1.5 | 2.6 |
| 1-2 times a week | 0.8 | 1.3 | 1.3 | 1.2 | 1.5 | 1.2 | 2.2 | 1.7 | 1.8 | 2.1 | 1.1 | 2.6 | 2.0 | 1.5 | 1.9 |
| 1-2 times a month | 0.6 | 0.8 | 0.6 | 0.5 | 0.6 | 0.8 | 1.6 | 1.3 | 1.5 | 1.7 | 0.5 | 2.2 | 1.3 | 1.4 | 1.5 |
| Few times a year | 0.3 | 0.6 | 0.6 | 0.4 | 0.6 | 0.5 | 1.3 | 1.1 | 1.1 | 1.2 | 0.5 | 1.1 | 1.4 | 1.2 | 1.5 |
| Never/hardly ever | 0.5 | 0.9 | 0.9 | 0.7 | 0.8 | 0.6 | 0.9 | 1.3 | 1.5 | 1.7 | 0.6 | 1.6 | 1.3 | 1.3 | 1.4 |

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## Table S17(b) Standard errors for the second text table in Indicator 17

| Writing habit | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Keep a diary/journal | - | - | - | - | - | 1.8 | 1.6 | 1.6 | 1.5 | 1.4 | 1.4 | 1.6 | 1.1 | 1.1 | 1.2 |
| Write for school paper | - | - | - | - | - | 1.1 | 1.0 | 1.0 | 1.3 | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 1.2 |
| Write letters to relatives | 2.1 | 1.4 | 1.5 | 1.5 | 1.1 | 2.0 | 1.4 | 1.6 | 1.7 | 1.9 | 1.8 | 2.0 | 1.6 | 1.4 | 2.0 |
| Write notes or messages | 2.4 | 1.9 | 1.8 | 1.5 | 1.7 | 2.0 | 1.3 | 1.4 | 1.6 | 1.3 | 1.9 | 1.6 | 1.1 | 1.1 | 1.4 |
| Write stories | 1.8 | 1.7 | 1.4 | 1.4 | 1.2 | 1.0 | 1.3 | 0.9 | 1.1 | 0.9 | 1.1 | 1.3 | 1.2 | 1.3 | 1.3 |

- Not available.
suuirct: u.s. עepartment ot taucation, ivationai center tor taucation statistics, ivationai Assessment ot



## Table S17-1 Standard errors for table 17-1

| Frequency | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Almost every day | 1.1 | 1.9 | 2.3 | 1.6 | 2.3 | 1.4 | 3.1 | 2.9 | 2.5 | 3.2 | 1.5 | 4.0 | 2.9 | 3.7 | 4.2 |
| 1-2 times a week | 1.7 | 2.8 | 3.0 | 2.2 | 3.1 | 1.4 | 3.5 | 3.6 | 3.8 | 3.1 | 1.7 | 3.5 | 3.7 | 3.7 | 4.1 |
| 1-2 times a month | 3.3 | 7.1 | 5.5 | 7.8 | 5.8 | 2.1 | 2.9 | 4.3 | 3.2 | 5.7 | 1.8 | 3.6 | 4.2 | 4.7 | 4.5 |
| Few times a year | 4.2 | 8.3 | 7.2 | 5.5 | 7.9 | 3.6 | 4.3 | 4.3 | 8.2 | 5.4 | 2.7 | 5.4 | 5.6 | 5.2 | 8.2 |
| Never/hardly ever | 2.7 | 3.1 | 3.5 | 3.7 | 3.9 | 2.5 | 4.8 | 5.0 | 6.4 | 5.1 | 2.4 | 7.2 | 6.8 | 5.5 | 5.2 | | Never/hardy ever | 2.7 | 3.1 | 3.5 | 3.7 | 3.9 | 2.5 | 4.8 | 5.0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0.4 | 0.4 | 5.1 | 2.4 |  |  |  |  |  |

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Table S17-2 Standard errors for table 17-2

| English class assignment | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Story | 2.1 | 2.0 | 1.8 | 1.8 | 1.7 | 1.6 | 2.3 | 1.9 | 2.2 | 1.6 | 1.6 | 1.5 | 1.1 | 1.1 | 1.2 |
| Essay | 1.7 | 1.9 | 1.3 | 1.0 | 1.1 | 1.9 | 2.2 | 1.7 | 1.5 | 1.7 | 1.3 | 1.4 | 1.5 | 1.6 | 1.4 |
| Poem | 1.7 | 2.2 | 1.4 | 1.4 | 1.9 | 1.3 | 1.3 | 1.1 | 1.5 | 1.6 | 0.9 | 1.2 | 1.1 | 1.2 | 1.4 |
| Play | 1.5 | 1.8 | 1.1 | 0.8 | 1.1 | 1.0 | 1.2 | 0.8 | 1.2 | 0.9 | 0.9 | 0.9 | 0.8 | 0.6 | 1.0 |
| Letter | 1.6 | 2.2 | 1.7 | 1.3 | 1.9 | 1.3 | 2.3 | 1.2 | 1.3 | 1.2 | 1.1 | 1.6 | 0.9 | 1.0 | 1.2 |
| Book report | 1.5 | 1.5 | 1.8 | 1.7 | 1.5 | 1.7 | 2.8 | 1.8 | 1.8 | 2.1 | 1.6 | 1.7 | 1.5 | 1.4 | 1.1 |
| Other reports | 1.8 | 1.5 | 1.2 | 1.1 | 1.1 | 1.5 | 1.5 | 1.2 | 1.3 | 1.2 | 1.0 | 1.4 | 1.4 | 1.3 | 1.0 |

[^0]Table S17-3 Standard errors for table 17-3

| Type of material | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
|  | At school |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Newspaper or magazine | 0.3 | 0.8 | 0.4 | 0.5 | 0.5 | 0.2 | 0.4 | 0.5 | 0.5 | 0.5 | 0.3 | 0.5 | 0.4 | 0.6 | 0.6 |
| Play | 0.1 | 0.5 | 0.4 | 0.3 | 0.2 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.9 | 0.5 | 0.4 | 0.5 |
| Poem | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.1 | 0.3 | 0.2 | 0.4 | 0.2 | 0.3 | 0.5 | 0.4 | 0.4 | 0.7 |
| Story/novel | 0.8 | 1.1 | 1.0 | 1.0 | 1.6 | 1.1 | 1.5 | 1.1 | 1.3 | 1.2 | 1.1 | 1.6 | 1.2 | 1.4 | 1.0 |
| Science book | 0.9 | 1.5 | 1.0 | 0.8 | 1.2 | 0.8 | 1.4 | 1.2 | 0.8 | 1.3 | 0.5 | 0.9 | 0.7 | 0.6 | 0.7 |
| Social studies book | 0.9 | 1.4 | 1.2 | 1.0 | 0.7 | 0.9 | 1.2 | 1.0 | 0.9 | 0.9 | 0.7 | 0.9 | 0.6 | 0.7 | 0.7 |
| Mathematics book | 0.7 | 1.2 | 0.8 | 0.8 | 0.9 | 0.5 | 0.8 | 0.8 | 1.0 | 0.7 | 0.4 | 0.7 | 0.6 | 0.5 | 0.6 |
| Workbook | 0.5 | 0.6 | 1.1 | 0.8 | 1.2 | 0.3 | 0.6 | 0.5 | 0.5 | 0.5 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 |
| At home |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Newspaper | 0.4 | 0.6 | 0.4 | 0.3 | 0.5 | 0.6 | 0.8 | 0.6 | 0.7 | 0.5 | 0.6 | 0.9 | 0.9 | 0.9 | 0.9 |
| Magazine | 0.5 | 0.7 | 0.7 | 0.6 | 0.9 | 0.8 | 0.8 | 1.0 | 1.0 | 1.2 | 0.6 | 1.3 | 0.8 | 1.3 | 1.2 |
| Play | 0.2 | 0.4 | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Poem | 0.3 | 0.4 | 0.4 | 0.5 | 0.4 | 0.1 | 0.3 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 |
| Story/novel | 0.9 | 1.1 | 1.0 | 1.1 | 1.2 | 0.8 | 0.9 | 1.0 | 1.4 | 1.1 | 0.6 | 0.9 | 0.8 | 1.1 | 1.0 |
| Science book | 0.2 | 0.5 | 0.4 | 0.3 | 0.3 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| Social studies book | 0.3 | 0.4 | 0.4 | 0.2 | 0.3 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Mathematics book | 0.2 | 0.4 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Workbook | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Something else | 0.4 | 0.7 | 0.7 | 0.5 | 0.6 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 |



Table S17-4 Standard errors for table 17-4

| Pages read | Age 9 |  |  |  |  | Age 13 |  |  |  |  | Age 17 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| More than 20 | 0.4 | 1.1 | 0.8 | 1.0 | 1.0 | 0.4 | 0.9 | 0.6 | 1.1 | 0.8 | 1.0 | 1.1 | 1.0 | 1.2 | 1.5 |
| 16-20 | 0.5 | 0.7 | 0.6 | 0.5 | 0.9 | 0.2 | 0.7 | 0.5 | 0.6 | 0.5 | 0.4 | 0.8 | 0.5 | 0.5 | 0.6 |
| 11-15 | 0.5 | 0.8 | 0.8 | 0.6 | 0.5 | 0.4 | 0.7 | 0.6 | 0.6 | 0.6 | 0.3 | 0.6 | 0.5 | 0.6 | 0.6 |
| 6-10 | 0.5 | 1.2 | 0.8 | 0.7 | 0.6 | 0.5 | 0.8 | 0.9 | 0.8 | 0.9 | 0.6 | 0.9 | 0.8 | 0.8 | 0.9 |
| 5 or fewer | 1.0 | 1.7 | 1.2 | 1.0 | 1.4 | 0.6 | 1.2 | 1.0 | 0.9 | 0.9 | 0.8 | 1.1 | 0.8 | 1.0 | 1.2 |




Table S17-5 Standard errors for table 17-5

| Writing habit | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Keep a diary or journal | - | - | - | - | - | 1.8 | 1.6 | 1.6 | 1.5 | 1.4 | 1.4 | 1.6 | 1.1 | 1.1 | 1.2 |
| Do crossword puzzle | - | - | - | - | - | 2.6 | 1.2 | 1.1 | 1.8 | 1.7 | 1.9 | 1.3 | 1.2 | 1.5 | 1.4 |
| Write for school newspaper | - | - | - | - | - | 1.1 | 1.0 | 1.0 | 1.3 | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 1.2 |
| Help others with writing | _ | _ | - | - | - | 1.9 | 1.4 | 1.3 | 1.4 | 1.5 | 2.2 | 1.2 | 1.3 | 1.0 | 1.6 |
| Write letters to relatives | 2.1 | 1.4 | 1.5 | 1.5 | 1.1 | 2.0 | 1.4 | 1.6 | 1.7 | 1.9 | 1.8 | 2.0 | 1.6 | 1.4 | 2.0 |
| Write notes or messages | 2.4 | 1.9 | 1.8 | 1.5 | 1.7 | 2.0 | 1.3 | 1.4 | 1.6 | 1.3 | 1.9 | 1.6 | 1.1 | 1.1 | 1.4 |
| Write stories | 1.8 | 1.7 | 1.4 | 1.4 | 1.2 | 1.0 | 1.3 | 0.9 | 1.1 | 0.9 | 1.1 | 1.3 | 1.2 | 1.3 | 1.3 |
| - Not available. suukle: u.o. ve <br>  | , AIm |  | ting, | 484 | yY4. |  | атіо | satis | s, INC |  | mer |  |  |  |  |

Table S17-6 Standard errors for table 17-6

| Writing habit and frequency | Grade 4 |  |  |  |  | Grade 8 |  |  |  |  | Grade 11 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 | 1984 | 1988 | 1990 | 1992 | 1994 |
| Write stories |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At least once a week | 4.5 | 2.1 | 2.8 | 3.0 | 2.7 | 5.7 | 3.0 | 3.9 | 3.6 | 2.8 | 3.8 | 3.0 | 3.2 | 3.8 | 3.2 |
| Once or twice a month | 5.1 | 5.0 | 2.6 | 2.1 | 2.7 | 3.8 | 2.8 | 3.2 | 3.3 | 3.0 | 3.6 | 2.2 | 3.5 | 2.1 | 4.1 |
| Never or hardly ever | 2.6 | 2.2 | 2.1 | 2.1 | 2.6 | 2.6 | 1.7 | 1.7 | 1.8 | 1.9 | 2.0 | 2.4 | 1.6 | 1.4 | 1.5 |
| Keep a diary or journal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| At least once a week | - | - | - | - | - | 3.0 | 2.2 | 2.2 | 2.3 | 3.6 | 4.3 | 1.9 | 2.6 | 2.0 | 2.6 |
| Once or twice a month | - | - | - | - | - | 3.7 | 2.7 | 5.1 | 3.5 | 3.5 | 3.9 | 3.5 | 3.9 | 4.8 | 2.8 |
| Never or hardly ever | - | - | - | - | - | 2.8 | 2.2 | 2.1 | 2.2 | 2.1 | 2.4 | 1.7 | 1.6 | 2.1 | 1.7 |

## - Not available.

sUUIRCL: U.S. Leparrment ot taucation, ivational Lenter tor taucation statistics, ivational Assessment or taucational rrogess, Almanac: vvriting, 1484 то 14Y4, 1490.

Table S17-7 Standard errors for table 17-7

| Frequency | Age 9 |  | Age 13 |  | Age 17 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Takes books out of library | Spends own money on books | Takes books out of library | Spends own money on books | Takes books out of library | Spends own money on books |
| Almost every day |  |  |  |  |  |  |
| 1984 | 0.7 | 0.6 | 0.7 | 0.3 | 0.3 | 0.3 |
| 1988 | 1.5 | 0.8 | 0.7 | 0.7 | 0.4 | 0.6 |
| 1990 | 1.3 | 0.8 | 0.8 | 0.6 | 0.5 | 0.5 |
| 1992 | 1.2 | 0.7 | 0.6 | 1.1 | 0.4 | 0.5 |
| 1994 | 1.1 | 1.1 | 1.0 | 0.9 | 0.5 | 0.6 |
| 1-2 times a week |  |  |  |  |  |  |
| 1984 | 1.2 | 0.6 | 1.2 | 0.6 | 0.7 | 0.6 |
| 1988 | 1.9 | 0.9 | 2.2 | 1.3 | 1.9 | 1.1 |
| 1990 | 1.9 | 1.0 | 2.1 | 1.4 | 1.4 | 1.4 |
| 1992 | 1.4 | 0.8 | 2.3 | 1.3 | 1.3 | 0.9 |
| 1994 | 1.4 | 0.8 | 2.3 | 1.3 | 1.6 | 1.2 |
| 1-2 times a month |  |  |  |  |  |  |
| 1984 | 0.8 | 0.6 | 1.0 | 0.9 | 1.2 | 1.0 |
| 1988 | 1.1 | 1.0 | 2.0 | 1.6 | 2.3 | 1.8 |
| 1990 | 1.0 | 1.2 | 1.9 | 1.7 | 1.9 | 2.0 |
| 1992 | 0.9 | 1.2 | 2.5 | 2.2 | 1.7 | 1.9 |
| 1994 | 0.9 | 1.2 | 2.3 | 2.0 | 2.3 | 1.8 |
| Few times a year |  |  |  |  |  |  |
| 1984 | 0.4 | 0.6 | 0.8 | 0.8 | 1.0 | 0.8 |
| 1988 | 0.7 | 1.3 | 1.5 | 2.0 | 2.2 | 1.8 |
| 1990 | 0.6 | 1.0 | 1.4 | 1.5 | 1.7 | 2.0 |
| 1992 | 0.5 | 1.0 | 1.6 | 2.1 | 2.0 | 2.1 |
| 1994 | 0.7 | 1.3 | 1.6 | 1.5 | 2.2 | 2.0 |
| Never/hardly ever |  |  |  |  |  |  |
| 1984 | 0.6 | 1.2 | 0.8 | 1.2 | 1.0 | 1.0 |
| 1988 | 1.2 | 1.8 | 1.5 | 2.0 | 2.5 | 3.5 |
| 1990 | 1.1 | 1.4 | 1.3 | 2.2 | 1.9 | 2.0 |
| 1992 | 0.7 | 1.7 | 1.4 | 2.4 | 1.7 | 2.3 |
| 1994 | 0.9 | 1.3 | 1.4 | 1.9 | 2.2 | 2.2 |


taucatıonaı rrogess, Aımanac: keaaıng, Iצ84 то 1494, 1צч0.


[^0]:    taucationaı rrogess, Almanac: vvriting, Iצ४4 TO IYY4, IYYO.

