## T heA nnual Condition of Education R eport




Grimes State Office Building in Des Moines - Home of the lowa Department of Education

A Report on

# Prekindergarten, Elementary, and Secondary Education 

in Iowa

Iowa Department of Education

1999


Printed on Recycled Paper

## State Board of Education...

State of Iowa<br>Department of Education<br>Grimes State Office Building<br>Des Moines, Iowa<br>State Board of Education

Corine A. Hadley, President, Newton
Sally J. Frudden, Vice President, Charles City
C.W. Callison, Burlington

Gregory A. Forristall, Macedonia
Gregory D. McClain, Cedar Falls
Mary Jean Montgomery, Spencer
Gene E. Vincent, Carroll
Kay E. Wagner, Bettendorf
John C. White, Iowa City

## Administration

Ted Stilwill, Director and Executive Officer of the State Board of Education
Dwight R. Carlson, Assistant to the Director
Gail Sullivan, Chief of Policy and Planning

[^0]
# Prekindergarten, Elementary and Secondary Education 

in Iowa<br>Iowa Department of Education

Division of Financial and Information Services

Leland Tack, Administrator

Bureau of Planning, Research \& Evaluation<br>David J. Alvord, Chief<br>Steve Boal, Consultant<br>Xiaoping Wang, Consultant<br>Sharon K. Willis, Graphic Artist

## To the Citizens of Iowa...

We are pleased to present our 10th annual Condition of Education Report. In the past decade, the Report has become an increasingly significant resource for state policymakers and community leaders. Iowa's longstanding success in education depends upon community responsibility, to insure that our students achieve to their highest potential. The annual Condition of Education Report provides the critical data that allows us to understand the needs of our students and make the best decisions on behalf of all of Iowa's young people.

The Condition of Education Report includes important state-level information about education in Iowa, including data that highlights change over time. As we move into an era of greater accountability for student achievement, I urge local policymakers to analyze this state-level information in the context of local data.

This year we have again offered expanded information for consideration and analysis in such areas as student achievement, other states and the nation comparisons, and teacher compensation and experience. The needs of our students continue to change, and we must continue to stay in touch with those we serve, by analyzing the relative success and challenges facing different groups in our schools and colleges.

We encourage your suggestions, as always, for improvement in this important document.


Ted Stilwill, Director
Iowa Department of Education

## Acknowledgments...

The authors of the Annual Condition of Education Report wish to thank the staff of the Iowa Department of Education who contributed to the production of this report. A special acknowledgment is extended to individuals outside the department who made important contributions in sharing their data and thoughts with us. They included: Dr. David Frisbie, Dr. Robert Forsyth, and Dr. Timothy Ansley, Iowa Testing Programs; and Dr. Robert Ziomek, American College Testing Program.

## Contents.

Background Demographics
Introduction to Background Demographics ..... ix
Population and Demographics
U.S. Population Change ..... 1
Population Change by Iowa Counties ..... 2
Iowa Population Age Group Trends .....  3
Iowa and Selected States Non-White and Hispanic Population Subgroups ..... 4
Iowa Estimated and Projected Non-White and Hispanic Population Change ..... 5
Iowa and the U.S. Births and Birth Rates ..... 7
U.S. Marriages vs. Divorces ..... 8
International Migration ..... 9
Higher Education Enrollment ..... 10
Economics
Relative Cost of Doing Business ..... 11
U.S. and Iowa Workforce Unemployment Trends ..... 12
Iowa Workforce Unemployment Rate ..... 13
Iowa Workforce Occupational Trends ..... 14
Wage Growth ..... 15
Social
Poverty ..... 16
Reports of Neglect and Abuse ..... 17
Out-of-Wedlock Births ..... 18
Teen Births ..... 19
Most Livable States ..... 20
Households on the Internet ..... 21
Juvenile Homicide Victimization Rates ..... 22
Juvenile Arrest Rates ..... 23
Working Parent(s) ..... 24
Adult Population Literacy Level ..... 25
Grades PK-12
Enrollment
Enrollment ..... 27
Enrollment Trends ..... 28
Projected Enrollment ..... 30
Distribution of Public School Students and Districts ..... 33
Racial/Ethnic Distribution of Students ..... 33
Weighted Non-English Speaking Students \& Limited English Proficient Students ..... 36
Weighted Non-English Speaking Students ..... 36
Limited English Proficient Students ..... 37
Open Enrollment ..... 39
Special Education Enrollments ..... 40

## Contents

## Staff

Characteristics of Teachers ..... 41
Minority Teacher Characteristics ..... 42
Teacher Salaries ..... 42
Teacher Assignments ..... 45
Characteristics of Principals ..... 46
Principal Salaries ..... 47
Characteristics of Superintendents ..... 47
Superintendent Salaries ..... 48
Gender Comparisons for Teachers and Principals ..... 50
Characteristics of Area Education Agency (AEA) Staff ..... 51
Instructional Aides ..... 54
Pupil-Teacher Ratio ..... 55
Program
School District Organizational Structure ..... 57
Curriculum Unit Offerings ..... 59
Foreign Language Enrollments ..... 60
Higher Level Mathematics Enrollments ..... 61
Calculus ..... 61
Trigonometry ..... 62
Higher Level Science Enrollments ..... 63
Chemistry ..... 63
Physics ..... 64
Graduation Requirements for Mathematics and Science ..... 65
Class Size ..... 66
Technology ..... 73
Computer-Related Course Enrollments ..... 73
Expenditures for Computer Hardware and Software ..... 74
Availability of Computers ..... 76
Electronic Data Interchange ..... 78
Early Childhood Education ..... 80
Student Performance
Iowa Testing Programs ..... 83
Iowa Tests of Basic Skills (ITBS) ..... 83
Iowa Tests of Educational Development (ITED) ..... 86
ITBS and ITED Performance Level Distributions ..... 91
Achievement Levels for Reading Comprehension ..... 92
Achievement Levels for Mathematics ..... 96
ITBS and ITED Performance Levels by Gender ..... 99
American College Testing (ACT) Assessments ..... 101
ACT Composite Score Comparisons of Iowa and Midwest States ..... 103
ACT Composite Score Comparisons of Iowa and the Nation ..... 103
ACT Score Comparisons for English, Mathematics, Reading and Science Reasoning 104
ACT Scores for Core and Non-core Students ..... 107
ACT Score Distributions ..... 109
ACT Scores by Gender ..... 110
ACT Scores by Planned Educational Majors ..... 111
Average ACT Scores by Enrollment Category ..... 114
Iowa Student ACT Scores Compared to High School Performance ..... 116

## Contents...

Advanced Placement ..... 117
Scholastic Assessment Tests (SAT) ..... 123
Postsecondary Enrollment Options ..... 127
Pursuit of Postsecondary Education/Training ..... 130
Dropouts ..... 133
Function Category Expenditures ..... 139
Object Category Expenditures ..... 141
Revenues ..... 142
Expenditures Per Pupil ..... 144
State Aid ..... 147
Property Taxes ..... 148
Income Surtaxes ..... 149
Total Elementary and Secondary Education Budgets ..... 149
Finance

## Introduction to Background Demographics...

The Background Demographics section was added to the Annual Condition of Education Report beginning with the 1997 edition under the title of preface. The intent was to provide background information and to provide a context in terms of a demographic, economic, and social framework. The information within the background demographics relates to changes or trends over the past several years and, where possible, to project future trends.

Population and demographic characteristics describe population changes and trends, reflect population distributions for selected age groups, minority populations, vital statistics, immigration and education. Included in the economic characteristics are costs of doing business in Iowa, workforce statistics, and median household income. Social factors presented include poverty indicators, incidence of reported child abuse and neglect, out-of wedlock births, rankings of most livable states, estimates of the number of households on the Internet, juvenile arrest rates for violent crimes and homicide victimization rates, schoolage children with parent(s) working, and adult literacy.

## Population and Demographics...

## U.S. Population Change

Figure 1B - U.S. by State Estimated Population Change


Source: U.S. Census Bureau, Population Estimates Program.
Notes: U.S. percent change for 1997-98 was estimated at 1.0\%.
Midwest percent change for 1997-98 was estimated at 0.4\%.

- The percent change in estimated U.S. population from 1997 to 1998 was 1.0 percent, or approximately equal to the estimated average annual change from 1990 to 1998.
- Only three states, North Dakota, West Virginia, and Pennsylvania, as well as the District of Columbia registered population losses from 1997 to 1998.
- Iowa experienced a 0.3 percent increase in estimated population from 1997 to 1998 and was one of 18 states to fall within the "low" category ( -1.3 to 0.4 percent). This change was slightly lower than the midwest average.


## Population and Demographics...

## Population Change by Iowa Counties

Figure 2B - lowa Population Change 1990-1998



Source: U.S. Census Bureau, 1999.

- From 1990 to 1998 the Iowa estimated population increased by nearly 86,000 or 3.1 percent.
- Areas of Iowa population loss tended to be concentrated in the less urban areas of the state, while moderate to more pronounced population increases tended to occur in more urban areas.
- Iowa counties experiencing the greatest increase in population from 1990 to 1998 were Dallas ( 24.0 percent), Benton (13.3 percent), Warren (11.6 percent), Madison (11.1 percent), and Polk (10.0 percent).
- Losses in population from 1990 to 1998 were reported for 48 of the 99 counties in Iowa. Counties with the greatest population loss over the period in terms of percentages included Adams ( -10.6 percent), Pocahontas ( -7.9 percent), and Audubon ( -6.4 percent).


## Population and Demographics...

Iowa Population Age Group Trends
Figure 3B - lowa Population for Selected Age Groups as a Percent of Total Population, 1920-1990


Source: U.S. Census Bureau, 1920-1990.

- The percent of Iowa population under 20 years of age decreased from 38.9 percent in 1920 to 29.0 percent in 1990, while the percent of the Iowa population age 65 and above increased from 6.0 percent to 15.3 percent over the same period of time. The increase for the 65 and above subgroup was incremental.
- Iowa's population age 20 to 44 decreased substantially during the 1960s and 1970s before returning to similar historical levels in the 1980s and 1990s.


## Population and Demographics...

Iowa \& Selected States Non-White and Hispanic Population Subgroups
Table 1B - Estimated and Projected Percentage of Non-white and Hispanic Populations for Iowa and Selected States

1990 and 2010

| Selected States | 1990Percent of Total Population |  | 2010Percent of Total Population |  | 1990 to 2010 <br> Change in Percentage Points |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Non-White | Hispanic | Non-White | Hispanic | Non-White | Hispanic |
| Iowa | 2.9\% | 1.2\% | 4.8\% | 2.4\% | 1.9 | 1.2 |
| U.S. | 16.4 | 9.0 | 19.5 | 13.8 | 3.1 | 4.8 |
| California | 18.6 | 25.8 | 23.9 | 37.8 | 5.3 | 12.0 |
| D.C. | 68.5 | 5.4 | 62.7 | 9.8 | -5.8 | 4.4 |
| Florida | 15.2 | 12.2 | 18.7 | 19.1 | 3.5 | 6.9 |
| Illinois | 17.7 | 7.9 | 20.4 | 13.1 | 2.7 | 5.2 |
| Kansas | 8.1 | 3.8 | 10.5 | 6.7 | 2.4 | 2.9 |
| Minnesota | 5.2 | 1.2 | 9.4 | 2.6 | 4.2 | 1.4 |
| Missouri | 12.0 | 1.2 | 13.7 | 2.1 | 1.7 | 0.9 |
| Nebraska | 5.3 | 2.3 | 7.6 | 4.4 | 2.3 | 2.1 |
| North Dakota | 5.2 | 0.7 | 8.0 | 1.4 | 2.8 | 0.7 |
| South Dakota | 8.2 | 0.8 | 10.5 | 1.2 | 2.3 | 0.4 |
| Wisconsin | 7.0 | 1.9 | 10.8 | 3.1 | 3.8 | 1.2 |

Source: U.S. Census Bureau, 1990 Population Estimates, Series A Population Projection, PPL-47.

- For the U.S. the projected percentage of non-white and Hispanic populations for the year 2010 are 19.5 and 13.8 percent, respectively. These percentages represented projected increases from 1990 of 3.1 percentage points for non-whites and 4.8 percentage points for Hispanics.
- The Iowa non-white population is projected to be 4.8 percent of Iowa's population in 2010, up by 1.9 percentage points from 1990. The Iowa Hispanic population for 2010 is projected to be 2.4 percent or 1.2 percentage points above that estimated for the year 1990 .
- Illinois is projected to have the highest non-white population percentage for 2010 ( 20.4 percent) of any state immediately surrounding Iowa. The percentage of Hispanic population for Illinois projected for 2010 is the highest for midwest states at 13.1.


## Population and Demographics...

Iowa Estimated and Projected Non-White and Hispanic Population Change
Figure 4BA - Iowa Estimated and Projected Non-White Population by County

1990 and 2010
1990 - Non-White


Source: Woods and Poole Economics, Inc., 1998.

2010 - Non-White


Source: Woods and Poole Economics, Inc., 1998.

- In more than half of all Iowa counties (56 out of 99), less than one percent of the total population was non-white in 1990. Counties with non-white population ranging from five to 8.4 percent of the total 1990 population were; Black Hawk, Johnson, Polk, Story, Tama, Scott, and Woodbury.
- There were only four of Iowa's 99 counties projected to have a non-white population of less than one percent in the year 2010.


## Population and Demographics...

## Figure 4BB - Iowa Estimated and Projected <br> Hispanic Population by County <br> 1990 And 2010

$$
1990 \text { - Hispanic }
$$



Source: Woods and Poole Economics, Inc., 1998.
2010 - Hispanic


Source: Woods and Poole Economics, Inc., 1998.

- There were 75 Iowa counties with less than one percent of the total population represented as Hispanic. Muscatine County, with a Hispanic population of 7.5 percent, was the only county to exceed five percent in 1990.
- The number of Iowa counties in 2010 projected to have a Hispanic population ranging from five to 15.9 percent is ten, compared to one in 1990.


## Population and Demographics...

lowa and the U.S. Births and Birth Rates


Source: Iowa Department of Public Health, Center for Health Statistics, Resident Live Births, 1955-1997.


Source: Iowa Department of Public Health, Center for Health Statistics, Birth rate per 1,000 population, 1955-1997. National Center for Health Statistics. nOTE: National birth rates prior to 1960 were not available because of exclusion of Alaska and Hawall.

- A comparison of Iowa resident live births and birth rates for 1955 to 1997 reflects three distinct trends; a downward trend after 1959 until 1973, an upswing from 1974 to 1980, and a downward trend from 1981 to 1997.
- The comparison of Iowa resident live births and birth rates, calculated on the basis of the number of live births per 1,000 population, suggests that these trends were unrelated to the population changes, increases or decreases over the same time period.
- Iowa resident live births have ranged in number from 63,624 in 1955 to 36,641 in 1997. The birth rates correspondingly have ranged from 23.7 to 12.8 births per 1,000 population in 1955 and 1997 respectively.
- Iowa resident live births per 1,000 population have consistently been lower than the U.S. resident live birth rates, except for the period of time from 1977 through 1980. Notably, the period of the largest differences in birth rates between the U.S. and Iowa began about 1987, with a difference of two per 1,000 and peaked in 1990 at a difference of 2.5 per 1,000 .


## Population and Demographics...

## U.S. Marriages vs. Divorces

Figure 7B - Marriages vs. Divorces for the U.S. by State 1997



Source: U.S. Department of Health and Human Services, National Center for Health Statistics, Provisional Data, 1998.
Notes: Provisional data may vary from final data due to elimination of some duplicate records.
California, Colorado, Indiana, Louisiana, Maine, and Texas were not reported.

- In 1997 there were almost 2.4 million marriages and nearly 1.2 million divorces or dissolutions of marriages reported in the U.S. The ratio of U.S. marriages to divorces was 2.0 to 1.0.
- There were 22,120 marriages and 9,807 divorces in Iowa during 1997. Iowa ranked $13^{\text {th }}$ out of the 45 reporting states and the District of Columbia in the marriage/divorce ratio. The Iowa rate of 2.3 marriages per divorce was above the national rate of 2.0.
- The Iowa Department of Public Health reported in Vital Statistics of Iowa, 1997, that the rate of divorces or dissolutions of marriage per 1,000 population for 1997 (3.4) was the lowest since 1974 (3.6). The 1997 Iowa rate of marriages per 1,000 population (7.7) was the lowest since 1966 (7.7).


## Population and Demographics...

## International Migration

Figure 8B - Immigration to the U.S. by State of Intended Residence Fiscal Year 1997


Source: U.S. Immigration and Naturalization Service, 1999.
Note: $\quad$ No immigrants for South Dakota were reported for Fiscal Year 1997.

- There were 798,378 immigrants admitted for legal residence in the U.S. in fiscal year 1997. This number accounts for 0.3 percent of the 1997 U.S. population.
- In fiscal year 1997 there were 2,766 immigrants intending to reside in Iowa. Iowa ranked $33^{\text {rd }}$ in the number of immigrants in fiscal year 1997.


## Population and Demographics...

## Higher Education Enrollment

Figure 9B - Higher Education Enrollment as a Percent of Total Population, 1996


Source: U.S. Department of Education, National Center for Education Statistics, Integrated Post-secondary Education Data System (IPEDS), "Fall Enrollment" survey; and U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-25, unpublished data.

- An estimated 5.4 percent of the U.S. population was enrolled in higher education in 1996.
- Iowa ranked $11^{\text {th }}$ out of all states and the District of Columbia with an estimated 6.2 percent of the state's population enrolled in higher education in 1996.
- Based on the percentage of the total population enrolled in higher education, the top six included the District of Columbia, Utah, Rhode Island, Nebraska, Massachusetts, and Kansas.


## Economics...

## Relative Cost of Doing Business

Figure 10B - Relative Cost of Doing Business in lowa and Selected Surrounding States, 1998


Source: Regional Financial Associates. http://www.rfa.com/lead/cdilstr. (1999, June 4).
Note: Rankings include all 50 states. The Relative Cost of Business Index, which compares business costs in each state to the national average, is composed of unit labor costs, effective tax burdens and energy costs.

- With 50 as the highest ranking, Iowa ranked $45^{\text {th }}$ in terms of the relative costs of doing business as measured by a cost of business index based on unit labor costs, effective tax burden, and energy costs.
- States with lower costs than Iowa included South Dakota, Wyoming, Oklahoma, Kentucky, and New Mexico.


## Economics..

## U.S. and lowa Workforce Unemployment Trends

Figure 11B - lowa vs. U.S.
Unemployment Rates
1990-1998


Source: Iowa Workforce Development, Labor Market Information Bureau, and U.S. Department of Labor, Bureau of Labor Statistics, 1999

- The Iowa unemployment rate has continued to fall for the second consecutive year since 1996 to 3.3 percent in 1997 and 2.8 percent in 1998. Iowa's unemployment rate has been in general decline for the period from 1992 to 1998, with the exception of 1996.
- Surrounding midwest states with lower unemployment rates for 1998 than Iowa included Nebraska ( 2.7 percent) and Minnesota ( 2.5 percent).


## Economics...

## Iowa Workforce Unemployment Rate

## Figure 12B - Iowa Unemployment Rate by County 1998



Source: Iowa Workforce Development, 1998 Annual Average, 1999.

- The unemployment rate for 1998 was below or equal to the state rate of 2.8 percent for 49 of 99 Iowa counties.
- Nine Iowa counties reflected unemployment rates less than 2.3 percent. The four counties with the lowest unemployment rates included Hancock (1.6 percent), Dallas (1.8 percent), and Linn and Warren (1.9 percent).


## Economics...

## Iowa Workforce Occupational Trends

Table 2B - Number ${ }^{1}$ of Workers by Occupation
1970 to 2020

| Occupational Areas | 1970 | 1980 | 1990 | Year 2000 | 2010 | 2020 | Percentage Change 1990-2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Farm | 171 | 162 | 131 | 116 | 105 | 95 | -27.5 |
| Agriculture Services \& Supplies | 11 | 10 | 20 | 26 | 28 | 30 | 50.0 |
| Mining | 4 | 3 | 3 | 3 | 4 | 4 | 33.3 |
| Construction | 64 | 74 | 71 | 98 | 112 | 125 | 76.1 |
| Manufacturing | 221 | 250 | 242 | 267 | 285 | 293 | 21.1 |
| Transportation | 62 | 69 | 69 | 79 | 84 | 88 | 27.5 |
| Wholesale Trade | 50 | 83 | 82 | 93 | 101 | 107 | 30.5 |
| Retail Trade | 218 | 255 | 280 | 334 | 376 | 423 | 51.1 |
| Finance/Insurance | 84 | 111 | 114 | 129 | 146 | 161 | 41.2 |
| Services | 219 | 305 | 402 | 520 | 612 | 716 | 78.1 |
| Federal Government - Civilian | 21 | 21 | 21 | 20 | 21 | 21 | 0.0 |
| Federal Government - Military | 16 | 12 | 17 | 13 | 13 | 13 | -23.5 |
| State \& Local Government | 153 | 197 | 213 | 229 | 236 | 244 | 14.6 |
| Total Employment | 1,295 | 1,544 | 1,648 | 1,912 | 2,114 | 2,321 | 40.8 |

Source: Woods and Poole Economics, Inc., 1998.
Note: ${ }^{1}$ Number of Workers Employed by Occupational Area are represented in thousands.

- Total Iowa employment is projected to grow by 40.8 percent, from 1,648,000 in 1990 to $2,321,000$ in the year 2020 .
- Among the occupational areas expected to realize the largest percentage increases from 1990 to 2020 are services ( 78.1 percent), construction ( 76.1 percent), retail trade ( 51.1 percent), and agriculture services and supplies ( 50.0 percent).
- Farm employment is projected to decline from 131,000 in 1990 to 95,000 in 2020, a decline of about 27.5 percent. In addition, Federal government military personnel is expected to decline by nearly 24 percent.


## Economics...

## Wage Growth

Figure 13B-Median Household Income and Income Change for Iowa and Selected States $1995-96$ vs. 1996-97


Source: U.S. Census Bureau, 1998.

- The two-year average median household income for Iowa for 1996 and 1997 was $\$ 33,877$ or about $\$ 2,800$ less than the $\$ 36,656$ reported for the nation.
- The two-year average Iowa median household income decreased by 5.1 percent from the previous two-year average for 1995 and 1996, while the U.S. average increased by 1.5 percent.
- All states surrounding Iowa exceeded Iowa's two-year average median household income for 1996-97, except for South Dakota.


## Social...

## Poverty

## Table 3B - Percent of lowa Public School Students Eligible for Free and Reduced Price Meals 1993-94 AND 1998-99

| Enrollment ${ }^{1}$ <br> Category | 1993-94 <br> Percent ${ }^{2}$ Free and <br> Reduced Eligible <br> Students | $1998-99$ <br> Percent of Free and <br> Reduced Eligible <br> Students |
| :--- | :---: | :---: |
| $<250$ | 35.8 | 39.1 |
| $250-399$ | 33.9 | 31.3 |
| $400-599$ | 25.3 | 25.4 |
| $600-999$ | 23.9 | 24.8 |
| $1,000-2,499$ | 23.6 | 24.9 |
| $2,500-7,499$ | 20.7 | 22.6 |
| $7,500+$ | 29.7 | 35.4 |
| State | 25.4 | 27.5 |

[^1]- Over the period 1993-94 to 1998-99, the statewide percentage of Iowa public school students eligible for free and reduced price meals increased by 2.1 percentage points. More than twenty-seven out of every 100 Iowa public school students were eligible for free and reduced price meals in 1998-99.
- Substantial increases in the percentage of students eligible for free and reduced price meals were reflected for districts in both the largest and smallest enrollment categories, while only one enrollment category showed a decrease from 1993-94 to 1998-99.


## Social...

Reports of Neglect and Abuse
Figure 14B - Number and Percentage of Reported Child Abuse and Neglect for Iowa and Selected Surrounding States 1996


Source: $\quad$ national Center for Health Statistics, 1999.
Note: All Numbers in States reflect the number of children neglected or abused, percentages reflect the population of neglected and abused children under the age of 18.

- Nationwide reports of neglect and abuse of over three million children were investigated in 1996. This represented 4.4 percent of the U.S. population under the age of 18 .
- Iowa exceeded the nation in the percent of the population under the age of 18 , reported as neglected or abused in 1996, with 4.6 percent reported as neglected or abused.
- Of the states surrounding Iowa, only Missouri reported a higher percentage of population under the age of 18 as neglected or abused in 1996.


## Social...

## Out-of-Wedlock Births

Figure 15B - Iowa, Out-of-Wedlock Births As a Percent of Total Resident Live Births

1980-1997


Source: lowa Department of Public Health, Center for Health Statistics, Resident Live Births, 1980-1997.

- There was a decline of one-tenth of a percentage point in the Iowa total resident live births that were out-of-wedlock from 1996 ( 26.3 percent) to 1997 (26.2 percent).
- 1997 marked the first year of recorded decline in Iowa out-of-wedlock births as a percent of total resident live births over the time period beginning in 1980.
- The percentage of out-of-wedlock births for 1997 was less for Iowa than for the U.S. ( 32.4 percent). Figures for other midwest states including Illinois ( 33.4 percent), Missouri (33.1 percent), South Dakota (31.1 percent), and Wisconsin (28.1 percent), exceeded the Iowa figure of 26.2 percent in 1997; while figures for Nebraska ( 25.8 percent), and Minnesota ( 25.0 percent), fell below the Iowa percentage (National Center for Health Statistics).


## Social...

Teen Births

Figure 16B- Iowa, Out-of-Wedlock Teen Births As a Percent of Total Out-of-Wedlock Births and Total Teen Births 1980-1997


Source: lowa Department of Public Health, Center for Health Statistics, Resident Live births, 1980-1997.

- The number of out-of-wedlock births to teens, as a percent of total teen births for Iowa declined slightly by 0.2 of a percentage point from 1996 (80.8) to 1997 (80.6). This change marks the second consecutive year of decline over the period from 1980 to 1997.
- Iowa out-of-wedlock teen births as a percentage of total out-of-wedlock births in 1997 continued a two-year decline and represented a 17 year low.
- The number of out-of-wedlock teen births as a percentage of total out-ofwedlock births for Iowa (33.0) surpassed the percent for the U.S. (30.7) by more than two percentage points. The number of Iowa out-of-wedlock teen births as a percentage of total out-of-wedlock births was nearly five percentage points higher than U.S. figures in 1995 (National Center for Health Statistics).


## Social...

## Most Livable States

## Figure 17B - Most Livable States by Rankings, 1998



## Table 4B - Ten Most Livable States, 1998

| State | 1998 <br> Rank | 1997 <br> Rank |
| :--- | ---: | ---: |
| Minnesota | 1 | 1 |
| Nebraska | 2 | 5 |
| Iowa | 3 | 8 |
| Vermont | 4 | 4 |
| Wisconsin | 5 | 3 |
| South Dakota | 6 | 10 |
| Massachusetts | 7 | 7 |
| Colorado | 8 | 14 |
| North Dakota | 9 | 15 |
| Kansas | 10 | 6 |

Source: State Rankings 1998, Morgan Quitro Press, <www.morganquitro.com/sr98m/rfule.htm>
Note:
Based on averaged rankings of the following 43 categories:

1. Percent Change in Number of Crimes, 2. Crime Rate, 3. State Prisoner Incarceration Rates, 4. PupilTeacher Ratio in Public Elementary and Secondary Schools, 5. Unemployment Rates, 6. Percent of Nonfarm Employees in Government, 7. Per Capita Energy Expenditures, 8. Hazardous Waste Sites on the National Priority List per 10,000 Square Miles, 9. State \& Local Taxes as a Percent of Personal Income, 10. Per Capita State and Local Government Data Outstanding, 11. Percent of Population Not Covered by Health Insurance, 12. Births of Low Birthweight as a Percent of All Births, 13. Percent of Births to Teenage Mothers, 14. Infant Mortality Rate, 15. Death Rate by Suicide, 16. Median Value of a House, 17. Population per Square Mile, 18. Divorce Rate, 19. Poverty Rate, 20. State and Local Government Spending for Welfare Programs as a Percent of All Spending, 21. Percent of Households Receiving Food Stamps, 22. Deficient Bridges as a Percent of Total Bridges, 23. Highway Fatality Rate, 24. Fatalities in Alcohol-Related Crashes as a Percent of All Highway Fatalities, 25. Per Capita Gross State Product, 26. Percent Change in Per Capita Gross, State Product, 27. Per Capita Personal Income, 28. Growth in Per Capita Personal Income, 29. Median Household Income, 30. Public High School Graduation Rate, 31. Percent of Population Graduated from High School, 32. Expenditures for Education as a Percent of All State and Local Government Expenditures, 33. Percent of Population Graduated from College, 34. Books in Public Libraries Per Capita, 35. State Arts’ Agencies Legislative Appropriations, 36. Annual Average Weekly Earnings of Workers on Manufacturing Payrolls, 37. Job Growth, 38. Normal Daily Mean Temperature, 39. Percentage of Days That Are Sunny, 40. Homeownership Rate, 41. Domestic Migration of Population, 42. Marriage Rate, 43. Percent of Eligible Population Reported Voting.

- Iowa ranked third in the most livable states in 1998, up from eighth in 1997.
- Other midwest states which were in the top ten most livable states in 1998 included Minnesota (1), Nebraska (2), Wisconsin (5), South Dakota (6), North Dakota (9), and Kansas (10).


## Social...

Households on the Internet

## Table 5B - Number and Percent of Households on the Internet for Iowa and Selected Area States, 1999

| Area | Number of Estimated <br> Households on Internet | Percent of All <br> Households |
| :--- | ---: | :---: |
| Iowa | 298,000 | 27 |
| Illinois | $1,392,000$ | 32 |
| Kansas | 324,000 | 33 |
| Minnesoa | 582,000 | 33 |
| Michigan | $1,037,000$ | 29 |
| Nebraska | 177,000 | 28 |
| South Dakota | 66,000 | 24 |
| Wisconsin | 563,000 | 29 |
| United States | $32,588,090$ | 33 |

Source: Forrester Research, Inc., [http://www.forrester.com.](http://www.forrester.com.) Copyright© 1999, Forrester Research, Inc.

- Nearly 33 million or 33 percent of all U.S. households were using the Internet according to a 1999 survey conducted by Forrester Research, Incorporated.
- About 27 percent, or an estimated 298,000 Iowa households reported Internet use. Six of the seven comparison states surpassed Iowa in the percentage of households using the Internet.


## Social...

## Juvenile Homicide Victimization Rates

Figure 18B - lowa vs. U.S. Juvenile Homicide Victimization Rates



Source: U.S. Department of Justice, Uniform Crime Report. Fox, James Allen, Ph.D., Trends in Juvenle Violence, Northwestern University.
Notes: Juvenile Victimization rates are based upon Age 14-17 cohort.
Comparable lowa data for the years 1991 and 1997 were unavailable.

- The national homicide rates for juvenile victims age 14-17 ranged from a low of 5.7 per 100,000 juvenile population in 1987 to a high of 12.1 per 100,000 juvenile population in 1993.
- Although the trend from 1987 to 1993 has been higher homicide rates for Iowa and for the nation, Iowa rates have been consistently lower than the nation. Since 1993, rates for both Iowa and the nation have generally declined.
- Juvenile homicide victimization rates for Minnesota ( 4.5 per 100,000), Wisconsin ( 5.4 per 100,000), South Dakota ( 3.1 per 100,000), Illinois ( 24.1 per 100,000 ), and Missouri $(10.2$ per 100,000$)$ surpassed the Iowa rate of 1.1 per 100,000 juvenile population in 1996.


## Social...

Juvenile Arrest Rates

Figure 19B - lowa vs. U.S. Juvenlle Arrest Rates, Violent Crimes



Source: Iowa Department of Public Safety, 1986-1997.

- Iowa's juvenile arrest rate for violent crimes such as murder, rape, robbery, and aggravated assault (non-misdemeanor) has been on the rise again since 1991.
- From 1986 to 1990 the Iowa juvenile arrest rate for violent crimes increased from 48.5 to 71.9 arrests per 100,000 population. After a one year decline in the arrest rate to 35.3 in 1991 rates have shown a general increase.
- The juvenile arrest rate for Iowa was substantially below the U.S. juvenile arrest rate across the time period from 1986 to 1997.


## Social...

## Working Parent(s)

## Figure 20B - Average Percentages of School-Age Chlldren with Parent(s) Working 1996 то 1998



Source: Bureau of Labor Statistics, Current Population Survey, April 1996 - March 1998, Special Tabulation.
Note: $\quad$ Parent(s) working are defined as both parents working or single parent working.

- In 1996-1998, Iowa ranked highest out of all 50 states in the average percentage of school-age children identified with parent(s) working ( 83.2 percent). Other midwest states ranked in the top ten included: North Dakota, South Dakota, Nebraska, Wisconsin, Missouri, Kansas, and Minnesota.
- Nationally, the average percentage of school-age children with working parent(s) was about 66 percent in 1996-1998.


## Social...

Adult Population Literacy Level

Figure 21B - Percent of Iowa Adult Population at Literacy Level 1 by County


Source: $\quad$ National Institute for Literacy, National Adult Literacy Survey (NALS), 1993. The State of Literacy in America, 1998.
Note: Denotes the lowest of the five literacy levels defined by the NALS study. At this level, all adults displayed difficulty using CERTAIN READING, WRITING, AND COMPUTATIONAL SKILLS CONSIDERED NECESSARY FOR FUNCTIONING IN EVERYDAY LIFE.

- The National Adult Literacy Study (NALS) reported a total of 13 percent of the Iowa adult population age 16 or older at the lowest level of literacy.
- There were 18 of Iowa's 99 counties with about 15 to 19 percent of the adult population at the lowest level of literacy.


## Introduction

Iowa has a total of 375 public school districts and 210 approved nonpublic schools serving more than 545,000 students in 99 counties.

Since the 1985-86 school year the number of public school districts in Iowa has decreased by 14 percent through school district reorganization, while the number of approved nonpublic schools has decreased by nearly 12 percent.

In 1998-99 Iowa had a total of 1,555 public school attendance centers. About 55 percent of attendance centers were elementary sites and nearly one in four were high schools. The total number of public school attendance centers in 1998-99 was down about eight percent from 1,691 attendance centers in 1985-86. In the 1998-99 school year there were 352 public school districts operating high schools. There were 369 high schools in the state with nine school districts operating more than one high school.

The number of approved nonpublic schools in Iowa in 1998-99 was unchanged from the previous school year at 210. Nonpublic enrollments in 1985-86 accounted for 9.2 percent of combined public and nonpublic enrollments and 7.8 percent in 199899. More than 86 percent of approved nonpublic schools in 1998-99 operated as elementary schools and 25 operated as high schools, down from 28 in 1985-86. In 1998-99 only three nonpublic schools operated a program encompassing grades K12 or grades PK-12.

During the 1998-99 school year, sixty school districts participated in whole-grade sharing arrangements with neighboring school districts. For example, two wholegrade sharing districts may have all students in grades five and six attend school in one district while all students in grades seven through twelve attend school in the other district.

Iowa also maintains 15 area education agencies that provide a broad range of services to schools within their boundaries. These services are grouped into three categories; educational services, media services, and special education services.

Iowa supports three state universities; the University of Northern Iowa, in Cedar Falls, Iowa State University, in Ames, and the University of Iowa, in Iowa City. Iowa also has 28 independent four-year colleges and universities and two independent two-year colleges. In addition, Iowa supports 15 community colleges.

## Enrollment

From the peak K-12 enrollment in the 1969-70 school year, nearly 740,000 public and nonpublic school students combined, enrollments declined by nearly 194,000 pupils or just over 26 percent. The makeup of Iowa's student population has also changed considerably over the past 13 years, with significant increases in the number of limited English proficient students as well as substantial increases in minority students.

The enrollment chapter of the Condition of Education Report presents comparisons of current year information with the 1985-86 school year and with the most current previous school year. Included in this section are public and nonpublic enrollments, five-year enrollment projections, district and student distributions by enrollment category, racial/ethnic student distributions, trends in limited English proficient and weighted non-English speaking student enrollments, and trends in special education enrollments.

## Enrollment Trends

Iowa public and nonpublic enrollments for the years 1985-86 through 1998-99 as well as projections for 1999-2000 through 2003-2004 are presented in Tables 1-4 and Figures 1 and 2. Since the 1985-86 school year, public school enrollment has increased by 17,202 students, an increase of just over 3.5 percent. The 1988-89 school year marked the low point in a twenty-year decline in enrollments. Public school enrollments then increased eight consecutive years to a recent high of 505,523 before registering declines over the past two years. Public school enrollments in 1998-99 declined by .51 percent from the previous school year.

Table 1
Iowa Public and Nonpublic School K-12 Enrollments 1985-86 то 1998-99

| Year | Public | Nonpublic |
| :---: | :---: | :---: |
| $1985-86$ | 485,332 | 49,026 |
| $1986-87$ | 481,205 | 48,520 |
| $1987-88$ | 478,859 | 47,228 |
| $1988-89$ | 476,771 | 47,373 |
| $1989-90$ | 478,210 | 46,033 |
| $1990-91$ | 483,399 | 45,562 |
| $1991-92$ | 491,451 | 45,865 |
| $1992-93$ | 495,342 | 45,229 |
| $1993-94$ | 497,009 | 45,328 |
| $1994-95$ | 500,592 | 44,752 |
| $1995-96$ | 504,505 | 44,563 |
| $1996-97$ | 505,523 | 44,302 |
| $1997-98$ | 505,130 | 43,417 |
| $1998-99$ | 502,534 | 42,758 |

Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files and Certified Enrollment Files.

Figure 1

## Iowa Public School K-12 Enrollments



Source: Iowa Department of Education, Certified Enrollment Files.

Figure 2

Iowa Nonpublic School K-12 Enrollments


Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files.

Grade level changes in public school enrollments for grades kindergarten through grade twelve are reflected in Table 2. A comparison of 1985-86 and 1998-99 enrollments reflects that only two grades experienced declines over the period, kindergarten and first grade. Kindergarten enrollments experienced a substantial decline of more than 12.5 percent, while first grade enrollment declined by 6.33 percent. Compared to the previous school year, 1998-99 enrollments decreased in grades K-2, 6-7, and in grades 9-10. Grades three, four and eight registered increases between about 2 and $23 / 4$ percent.

Table 2

|  | Iowa Public School Enrollment by Grade Level 1985-86, 1997-98, and 1998-99 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Grade |  |  |  | $\begin{gathered} 1997-98 \text { to } \\ 1998-99 \end{gathered}$ | $\begin{gathered} 1985-86 \text { to } \\ 1998-99 \end{gathered}$ |
| Level | 1985-86 | 1997-98 | 1998-99 | \% Change | \% Change |
| K | 40,925 | 36,486 | 35,772 | -1.96\% | -12.59\% |
| 1 | 38,110 | 35,982 | 35,699 | -0.79 | -6.33 |
| 2 | 35,387 | 36,314 | 35,866 | -1.23 | 1.35 |
| 3 | 34,508 | 35,521 | 36,500 | 2.76 | 5.77 |
| 4 | 32,977 | 34,950 | 35,776 | 2.36 | 8.49 |
| 5 | 33,327 | 34,921 | 35,106 | 0.53 | 5.34 |
| 6 | 32,038 | 36,680 | 35,429 | -3.41 | 10.58 |
| 7 | 32,653 | 38,136 | 37,529 | -1.59 | 14.93 |
| 8 | 35,136 | 37,631 | 38,374 | 1.97 | 9.22 |
| 9 | 39,688 | 40,806 | 40,741 | -0.16 | 2.65 |
| 10 | 39,337 | 39,679 | 39,652 | -0.07 | 0.80 |
| 11 | 37,203 | 38,235 | 38,275 | 0.10 | 2.88 |
| 12 | 35,906 | 36,808 | 37,166 | 0.97 | 3.51 |
| Other* | 18,137 | 22,981 | 20,649 | (NA) | (NA) |
| State | 485,332 | 505,130 | 502,534 | -0.51 | 3.54 |

Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files.
Note: *Other refers primarily to special education students not associated with a given grade level. This is not a count of the number of special education students in the state.

## Projected Enrollment

Five-year enrollment projections are made each year for individual public school districts as well as on a statewide basis. Five-year projections are made on a statewide basis for nonpublic schools. The projections are made using an average cohort survival methodology. Projected enrollments for kindergarten are made by comparing live births to enrollments (e.g. live births for 1993 are compared to kindergarten enrollments in the fall of 1998). A five-year average of the most current ratios is then applied.

Tables 3 and 4 reflect ten-year historical enrollments by grade level and a five-year projection of public and nonpublic enrollments. Enrollments for public schools are projected to decline over the next five-year period. Public school enrollments are projected to drop by 2,854 students for the 1999-2000 school year, falling below the

500,000 student level for the first time in the past five years. An examination of the relationship of public school kindergarten and twelfth grade enrollments reveals that kindergarten enrollments for 1997-98 were less than twelfth grade enrollments for the first time in a number of years. From 1989-90 through 1996-97 incoming kindergarten students exceeded outgoing twelfth graders by an average of nearly 4,000 students. In 1998-99 the number of incoming kindergarten students totaled nearly 1,400 fewer students than the number of outgoing twelfth graders. This recent trend in incoming kindergarten students parallels the decline in Iowa live births.

Table 3

## Iowa Public School K-12 Actual Enrollments for 1989-90 through 1998-99 and Projected Enrollments FOR 1999-2000 through 2003-2004

## ENROLLMENT

| Year | K | $1-3$ | $4-5$ | $6-8$ | $9-11$ | 12 | Total | Other* | Grand Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| $89-90$ | 38,136 | 112,959 | 72,896 | 102,540 | 99,002 | 33,795 | 459,328 | 18,882 | 478,210 |
| $90-91$ | 38,778 | 111,331 | 75,050 | 106,176 | 100,523 | 30,928 | 462,786 | 20,613 | 483,399 |
| $91-92$ | 37,841 | 111,535 | 75,031 | 110,022 | 104,096 | 31,648 | 470,173 | 21,278 | 491,451 |
| $92-93$ | 36,390 | 110,312 | 75,033 | 113,571 | 105,697 | 33,008 | 474,011 | 21,331 | 495,342 |
| $93-94$ | 36,311 | 108,244 | 73,808 | 115,010 | 109,857 | 32,545 | 475,775 | 21,234 | 497,009 |
| $94-95$ | 37,402 | 106,402 | 73,500 | 115,534 | 113,867 | 34,078 | 480,783 | 19,809 | 500,592 |
| $95-96$ | 37,629 | 106,020 | 73,635 | 114,665 | 117,926 | 34,565 | 484,440 | 20,065 | 504,505 |
| $96-97$ | 37,101 | 107,324 | 71,368 | 114,295 | 119,262 | 35,650 | 485,000 | 20,523 | 505,523 |
| $97-98$ | 36,486 | 107,817 | 69,871 | 112,447 | 118,720 | 36,808 | 482,149 | 22,981 | 505,130 |
| $98-99$ | 35,772 | 108,065 | 70,882 | 111,332 | 118,668 | 37,166 | 481,885 | 20,649 | 502,534 |

## PROJECTED ENROLLMENT

| $99-00$ | 35,386 | 106,201 | 72,488 | 109,231 | 118,634 | 37,140 | 479,080 | 20,600 | 499,680 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $00-01$ | 35,518 | 104,564 | 72,725 | 108,704 | 117,937 | 36,960 | 476,408 | 20,486 | 496,894 |
| $01-02$ | 35,314 | 103,454 | 71,724 | 110,437 | 115,793 | 36,932 | 473,654 | 20,367 | 494,021 |
| $02-03$ | 35,441 | 103,010 | 70,457 | 111,490 | 113,650 | 37,096 | 471,144 | 20,259 | 491,403 |
| $03-04$ | 35,491 | 103,064 | 69,213 | 111,328 | 113,201 | 36,331 | 468,628 | 20,151 | 488,779 |

[^2]*OTHER REFERS PRIMARILY TO SPECIAL EDUCATION STUDENTS NOT ASSOCIATED WITH A GIVEN GRADE LEVEL. THIS IS NOT A COUNT OF THE NUMBER OF SPECIAL EDUCATION STUDENTS IN THE STATE.

Table 4 reflects projected enrollments for nonpublic schools. Nonpublic enrollments are also expected to decrease again in 1999-2000 and further decreases are projected through the 2003-2004 school year.

Table 4

## Iowa Nonpublic School K-12 Actual Enrollments for 1989-90 through 1998-99 and Projected Enrollments FOR 1999-2000 through 2003-2004

## ENROLLMENT

| Year | K | $1-3$ | $4-5$ | $6-8$ | $9-11$ | 12 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| $89-90$ | 3,893 | 13,913 | 8,803 | 10,198 | 6,917 | 2,309 | 46,033 |
| $90-91$ | 3,994 | 13,442 | 8,698 | 10,282 | 6,985 | 2,161 | 45,562 |
| $91-92$ | 3,977 | 13,298 | 8,671 | 10,576 | 7,154 | 2,189 | 45,865 |
| $92-93$ | 3,843 | 12,942 | 8,440 | 10,588 | 7,162 | 2,254 | 45,229 |
| $93-94$ | 3,905 | 12,613 | 8,235 | 10,827 | 7,499 | 2,249 | 45,328 |
| $94-95$ | 3,976 | 12,301 | 8,152 | 10,397 | 7,526 | 2,390 | 44,742 |
| $95-96$ | 4,002 | 12,245 | 8,107 | 10,480 | 7,522 | 2,193 | 44,549 |
| $96-97$ | 4,096 | 12,216 | 7,791 | 10,362 | 7,534 | 2,303 | 44,302 |
| $97-98$ | 3,943 | 12,205 | 7,598 | 10,120 | 7,198 | 2,353 | 43,417 |
| $98-99$ | 3,935 | 11,919 | 7,721 | 9,816 | 7,066 | 2,301 | 42,758 |

## PROJECTED ENROLLMENT

| $99-00$ | 3,829 | 11,889 | 7,704 | 9,595 | 6,869 | 2,318 | 42,204 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $00-01$ | 3,844 | 11,755 | 7,539 | 9,593 | 6,785 | 2,161 | 41,677 |
| $01-02$ | 3,821 | 11,739 | 7,435 | 9,555 | 6,692 | 2,059 | 41,301 |
| $02-03$ | 3,835 | 11,626 | 7,411 | 9,537 | 6,535 | 2,126 | 41,070 |
| $03-04$ | 3,841 | 11,633 | 7,381 | 9,316 | 6,518 | 2,081 | 40,770 |

Source: Iowa Department of Education, Nonpublic School Enrollment Projections.
Notes: All enrollments are as of the third Friday in September. The nonpublic school enrollment projections are based upon trends observed in the number of students moving from grade to grade. The trend, calculated as an average cohort survival ratio, was used to estimate enrollments for first through twelfth grade. Kindergarten enrollments were estimated from an average ratio of kindergarten enrollments to cohorts BORN FIVE YEARS PRIOR.

## Distribution of Public School Students and Districts

The distribution of public school districts and students has changed markedly across the period from 1985-86 to 1998-99 (Table 5). In 1985-86 districts with enrollments under 400 represented more than 32 percent of all school districts and accounted for just over 8 percent of all public school students. In 1998-99 only about 19 percent of school districts enrolled less than 400 students and represented for only about four percent of the total number of students enrolled in public schools. In 1998-99 as well as in 1985-86 approximately 70 percent of Iowa public school students were enrolled in districts with enrollments of 1,000 and above.

In 1998-99 the average Iowa school district enrollment was 1,341 compared to an average of about 1,100 in 1985-86. The median enrollment increased to just over 700 in 1998-99 from 560 in the 1985-86 school year.

Table 5

## Distribution of Iowa Public School Districts and Students by Enrollment Category 1985-86 vs. 1998-99

| District | 1985-86 |  |  |  | 1998-99 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Enrollment | Districts |  | Students |  | Districts |  | Students |  |
| Category | N | \% | N | \% | N | \% | N | \% |
| <250 | 52 | 11.9\% | 10,124 | 2.1\% | 22 | 5.9\% | 4,154 | 0.83\% |
| 250-399 | 90 | 20.6 | 29,060 | 6.0 | 51 | 13.6 | 16,948 | 3.37 |
| 400-599 | 94 | 21.5 | 46,544 | 9.6 | 72 | 19.2 | 36,284 | 7.22 |
| 600-999 | 97 | 22.2 | 72,595 | 15.0 | 113 | 30.1 | 86,153 | 17.15 |
| 1,000-2,499 | 72 | 16.5 | 109,551 | 22.5 | 84 | 22.4 | 128,859 | 25.64 |
| 2,500-7,499 | 24 | 5.5 | 95,189 | 19.6 | 24 | 6.4 | 96,897 | 19.28 |
| 7,500+ | 8 | 1.8 | 122,269 | 25.2 | 9 | 2.4 | 133,239 | 26.51 |
| State | 437 |  | 485,332 |  | 375 |  | 502,534 |  |

Source: Iowa Department of Education, Certified Enrollment Files.

## Racial/Ethnic Distribution of Students

Minority student enrollments in Iowa public schools have nearly doubled since 198586 , rising from 22,777 to 42,878 in $1998-99$, an increase of 88.3 percent. On the other hand majority student enrollments have decreased by 1.6 percent over the same period.

As a percentage of total enrollments in the public schools, minority students now represent 8.6 percent of students compared to only 4.6 percent in 1985-86. The growth in Hispanic student population has been the most notable. Hispanic enrollment in 1998-99 more than tripled since the 1985-86 school year and increased by 9 percent over the previous school year (Table 6).

Table 6
Iowa Public School Enrollments by Racial/Ethnic Group 1985-86, 1997-98, and 1998-99

| Racial/ <br> Ethnic Group | 1985-86 |  | 1997-98 |  | 1998-99 |  | $\begin{gathered} \text { \%Change } \\ 1997-98 \end{gathered}$ | $\begin{gathered} \text { \%Change } \\ \text { 1985-86 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \text { to } \\ 1998-99 \end{gathered}$ | $\begin{gathered} \text { to } \\ 1998-99 \end{gathered}$ |  |  |
| American Indian | 1,090 | 0.2\% |  |  | 2,447 | 0.5\% | 2,372 | 0.5\% | -3.1\% | 117.6\% |
| Hispanic | 4,069 | 0.8 | 12,903 | 2.6 | 14,059 | 2.8 | 9.0 | 245.5 |
| Asian | 5,310 | 1.1 | 8,080 | 1.6 | 8,332 | 1.7 | 3.1 | 56.9 |
| African American | 12,308 | 2.5 | 17,821 | 3.5 | 18,115 | 3.6 | 1.6 | 47.2 |
| White | 462,555 | 95.4 | 459,803 | 91.8 | 455,336 | 91.4 | -1.0 | -1.6 |

Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files.
Note: Includes PK-grade 12 and ungraded special education students.

Minority enrollment in approved nonpublic schools has paralleled the pattern in the public schools, growing from 2.5 percent of nonpublic enrollments in 1985-86 to 4.2 percent in 1998-99. Majority enrollments in approved nonpublic schools have decreased by 9.7 percent since 1985-86 (Table 7).

Fall 1996 racial ethnic enrollment data for the nation reflected that, on average, 29.6 percent of enrollments were minority students. Four states reported a lower percentage of minority students than Iowa's 5.4 percent minority population.

Table 7

| Iowa Nonpublic School Enrollments by Racial/Ethnic Group1985-86, 1997-98, and 1998-99 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Racial/ <br> Ethnic Group | 1985-86 |  | 1997-98 |  | 1998-99 |  | $\begin{gathered} \text { \%Change } \\ \text { 1997-98 } \\ \text { to } \end{gathered}$ | $\begin{gathered} \text { \%Change } \\ \text { 1985-86 } \\ \text { to } \end{gathered}$ |
|  |  |  | N | \% | N | \% | 1998-99 | 1998-99 |
| American Indian | 42 | 0.1\% | 81 | 0.2\% | 92 | 0.2\% | 13.6\% | 119.0\% |
| Hispanic | 527 | 1.1 | 752 | 1.6 | 751 | 1.6 | -0.1 | 42.5 |
| Asian | 344 | 0.7 | 499 | 1.1 | 537 | 1.2 | 7.6 | 56.1 |
| African American | 273 | 0.6 | 524 | 1.1 | 541 | 1.2 | 3.2 | 98.2 |
| White | 48,372 | 97.5 | 44,545 | 96.0 | 43,681 | 95.8 | -1.9 | -9.7 |

[^3]Table 8
EnROLLMENT IN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, bY Race/ETHNICITY and State: Fall 1986 and Fall 1996

|  | Percent distribution, fall 1986 |  | Percent distribution, fall 1996 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State or other area | White ${ }^{1}$ | $\begin{gathered} \text { Total } \\ \text { Minority } \end{gathered}$ | White ${ }^{1}$ | $\begin{gathered} \text { Total } \\ \text { Minority } \end{gathered}$ | African American | Hispanic | Asian | $\begin{aligned} & \text { Ameri- } \\ & \text { can } \\ & \text { Indian } \end{aligned}$ | Minority Enrollment \% Change 1986 to 1996 |
|  | 70.4 | 29.6 | 64.2 | 35.8 | 16.9 | 14.0 | 3.8 | 1.1 | +6.2 |
| Alabama ........................... | 62.0 | 38.0 | 61.5 | 38.5 | 36.4 | 0.7 | 0.6 | 0.7 | +0.5 |
| Alaska ............................. | 65.7 | 34.3 | 63.1 | 36.9 | 4.7 | 2.9 | 4.5 | 24.8 | +2.6 |
| Arizona ........................... | 62.2 | 37.8 | 56.6 | 43.4 | 4.3 | 30.1 | 1.8 | 7.2 | +5.6 |
| Arkansas .......................... | 74.7 | 25.3 | 73.5 | 26.5 | 23.5 | 1.8 | 0.7 | 0.4 | +1.2 |
| California ......................... | 53.7 | 46.3 | 39.5 | 60.5 | 8.7 | 39.7 | 11.2 | 0.9 | +14.2 |
| Colorado .......................... | 78.7 | 21.3 | 72.0 | 28.0 | 5.5 | 18.8 | 2.6 | 1.1 | +6.7 |
| Connecticut ....................... | 77.2 | 22.8 | 71.7 | 28.3 | 13.6 | 11.9 | 2.5 | 0.3 | +5.5 |
| Delaware .......................... | 68.3 | 31.7 | 63.9 | 36.1 | 29.9 | 4.3 | 1.8 | 0.2 | +4.4 |
| District of Columbia .......... | 4.0 | 96.0 | 4.0 | 96.0 | 87.3 | 7.2 | 1.4 | 0.1 | 0.0 |
| Florida .............................. | 65.4 | 34.6 | 56.7 | 43.3 | 25.4 | 15.9 | 1.8 | 0.2 | +8.7 |
| Georgia ........................... | 60.7 | 39.3 | 57.9 | 42.1 | 37.6 | 2.6 | 1.7 | 0.1 | +2.8 |
| Hawaii ............................. | 23.5 | 76.5 | 25.0 | 75.0 | 3.3 | 4.9 | 66.4 | 0.4 | -1.5 |
| Idaho ................................ | 92.6 | 7.4 | 88.0 | 12.0 | 0.7 | 8.9 | 1.2 | 1.3 | +4.6 |
| Illinois ............................. | 69.8 | 30.2 | 62.8 | 37.2 | 21.2 | 12.8 | 3.1 | 0.1 | +7.0 |
| Indiana ............................. | 88.7 | 11.3 | 85.4 | 14.6 | 11.2 | 2.4 | 0.8 | 0.2 | +3.3 |
| Iowa ................................ | 94.6 | 5.4 | 92.2 | 7.8 | 3.4 | 2.4 | 1.6 | 0.5 | +2.4 |
| Kansas .............................. | 85.6 | 14.4 | 81.9 | 18.1 | 8.6 | 6.5 | 1.9 | 1.1 | +3.7 |
| Kentucky .......................... | 89.2 | 10.8 | 88.9 | 11.1 | 9.9 | 0.5 | 0.6 | 0.1 | +0.3 |
| Louisiana ......................... | 56.5 | 43.5 | 50.6 | 49.4 | 46.4 | 1.2 | 1.3 | 0.6 | +5.9 |
| Maine .............................. | 98.3 | 1.7 | 97.2 | 2.8 | 0.9 | 0.4 | 0.9 | 0.6 | +1.1 |
| Maryland .......................... | 59.7 | 40.3 | 56.7 | 43.3 | 35.6 | 3.5 | 3.9 | 0.3 | +3.0 |
| Massachusetts ................... | 83.7 | 16.3 | 77.9 | 22.1 | 8.4 | 9.6 | 4.0 | 0.2 | +5.8 |
| Michigan .......................... | 76.4 | 23.6 | 75.8 | 24.2 | 18.8 | 2.8 | 1.5 | 1.0 | +0.6 |
| Minnesota ........................ | 93.9 | 6.1 | 86.5 | 13.5 | 5.2 | 2.2 | 4.1 | 1.9 | +7.4 |
| Mississippi ....................... | 43.9 | 56.1 | 47.9 | 52.1 | 51.0 | 0.4 | 0.6 | 0.2 | -4.0 |
| Missouri ........................... | 83.4 | 16.6 | 81.1 | 18.9 | 16.5 | 1.1 | 1.0 | 0.3 | +2.3 |
| Montana .......................... | 92.7 | 7.3 | 87.2 | 12.8 | 0.6 | 1.5 | 0.8 | 9.9 | +5.5 |
| Nebraska .......................... | 91.4 | 8.6 | 86.4 | 13.6 | 6.0 | 4.9 | 1.3 | 1.4 | +5.0 |
| Nevada ............................. | 77.4 | 22.6 | 65.1 | 34.9 | 9.6 | 18.8 | 4.6 | 1.9 | +12.3 |
| New Hampshire ................ | 98.0 | 2.0 | 96.4 | 3.6 | 1.0 | 1.3 | 1.1 | 0.2 | +1.6 |
| New Jersey ....................... | 69.1 | 30.9 |  | - | - | - |  | - |  |
| New Mexico ..................... | 43.1 | 56.9 | 38.8 | 61.2 | 2.4 | 47.7 | 1.0 | 10.2 | +4.3 |
| New York ......................... | 68.4 | 31.6 | 56.3 | 43.7 | 20.3 | 17.6 | 5.2 | 0.5 | +12.1 |
| North Carolina .................. | 68.4 | 31.6 | 63.9 | 36.1 | 30.8 | 2.3 | 1.5 | 1.5 | +4.5 |
| North Dakota .................... | 92.4 | 7.6 | 89.1 | 10.9 | 0.9 | 1.1 | 0.7 | 8.1 | +3.3 |
| Ohio | 83.1 | 16.9 | 82.0 | 18.0 | 15.4 | 1.4 | 1.0 | 0.1 | +1.1 |
| Oklahoma ........................ | 79.0 | 21.0 | 68.8 | 31.2 | 10.5 | 4.3 | 1.3 | 15.1 | +10.2 |
| Oregon ............................. | 89.8 | 10.2 | 84.6 | 15.4 | 2.6 | 7.4 | 3.4 | 2.0 | +5.2 |
| Pennsylvania ..................... | 84.4 | 15.6 | 80.2 | 19.8 | 14.2 | 3.7 | 1.8 | 0.1 | +4.2 |
| Rhode Island ..................... | 87.9 | 12.1 | 78.3 | 21.7 | 7.3 | 10.7 | 3.3 | 0.5 | +9.6 |
| South Carolina .................. | 54.6 | 45.4 | 56.0 | 44.0 | 42.2 | 0.8 | 0.8 | 0.2 | -1.4 |
| South Dakota .................... | 90.6 | 9.4 | 83.7 | 16.3 | 1.0 | 0.8 | 0.8 | 13.8 | +6.9 |
| Tennessee ......................... | 76.5 | 23.5 | 74.6 | 25.4 | 23.4 | 0.9 | 1.0 | 0.1 | +1.9 |
| Texas ............................... | 51.0 | 49.0 | 45.6 | 54.4 | 14.3 | 37.4 | 2.4 | 0.3 | +5.4 |
| Utah ................................ | 93.7 | 6.3 | 89.5 | 10.5 | 0.7 | 6.0 | 2.4 | 1.5 | +4.2 |
| Vermont ............................ | 98.4 | 1.6 | 97.3 | 2.7 | 0.8 | 0.4 | 1.0 | 0.6 | +1.1 |
| Virginia ............................ | 72.6 | 27.4 | 67.7 | 32.3 | 25.5 | 3.3 | 3.4 | 0.2 | +4.9 |
| Washington ....................... | 84.5 | 15.5 | 77.5 | 22.5 | 4.8 | 8.3 | 6.7 | 2.7 | +7.0 |
| West Virginia .................... | 95.9 | 4.1 | 95.2 | 4.8 | 4.0 | 0.5 | 0.3 | 0.1 | +0.7 |
| Wisconsin ........................ | 86.6 | 13.4 | 82.6 | 17.4 | 9.6 | 3.5 | 2.9 | 1.3 | +4.0 |
| Wyoming .......................... | 90.7 | 9.3 | 89.0 | 11.0 | 1.2 | 6.2 | 0.8 | 2.8 | +1.7 |
| Other Areas <br> American Samoa | - | - | - | - | - | - | 100.0 | - | - |
| Guam .............................. | - | - | 5.3 | 94.7 | 1.2 | 0.9 | 92.6 | 0.1 | - |
| Northern Marianas ............. | - | - | 0.8 | 99.2 | - | 0.0 | 99.2 | - | - |
| Puerto Rico ....................... | - | - | - | - | - | 100.0 | - | - | - |
| Virgin Islands .................... | - | - | 1.1 | 98.9 | 84.6 | 14.0 | 0.2 | - | - |

1 Excludes persons of Hispanic origin.
2 U S totals for 1996 includes estimate
2 U.S. totals for 1996 includes estimate for New Jersey
Note: The 1986-87 data were derived from the 1986 Elementary and Secondary School Civil Rights sample survey of public school districts. Because of rounding,
Source: U.S. Department of Education, Digest of Education Statistics, 1998.

## Weighted Non-English Speaking Students and Limited English Proficient Students

Students whose primary language is a language other than English are classified as either weighted or unweighted non-English speaking students. Weighted non-English speaking students are eligible to generate additional money for school districts they attend to help defer added costs associated with their education. Limited English proficient students is a term used here to describe not only students who generate additional funds for their education, but any student whose primary language is not English and where proficiency is an issue. Limited English proficient enrollments include both public and nonpublic school students, while the weighted non-English student population includes only public school students.

## Weighted Non-English Speaking Students

Table 9

> Distribution of Iowa Weighted Non-English Speaking Grades K-12 Public School Students by Enrollment Category 1993-94, 1997-98, and 1998-99

| Enrollment Category | 1993-94 |  | 1997-98 |  | 1998-99 |  | Percent Change in Non-English Enrollment |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Basic } \\ \text { Enrollment } \\ \text { Total } \end{gathered}$ | NonEnglish Enrollment | $\begin{gathered} \text { Basic } \\ \text { Enrollment } \\ \text { Total } \end{gathered}$ | $\begin{aligned} & \text { Non- } \\ & \text { English } \\ & \text { Enrollment } \end{aligned}$ | $\begin{gathered} \text { Basic } \\ \text { Enrollment } \\ \text { Total } \end{gathered}$ | $\begin{gathered} \text { Non- } \\ \text { English } \\ \text { Enrollment } \end{gathered}$ | $\begin{gathered} 1997-98 \\ \text { to } \\ 1998-99 \end{gathered}$ | $\begin{gathered} 1993-94 \\ \text { to } \\ 1998-99 \end{gathered}$ |
| <250 | 6,956 | 17 | 4,521 | 12 | 4,154 | 2 | -83.3\% | -88.2\% |
| 250-399 | 17,794 | 21 | 17,108 | 56 | 16,948 | 50 | -10.7 | 138.1 |
| 400-599 | 47,617 | 72 | 35,757 | 101 | 36,284 | 87 | -13.9 | 20.8 |
| 600-999 | 79,260 | 229 | 84,801 | 502 | 86,153 | 592 | 17.9 | 158.5 |
| 1,000-2,499 | 119,988 | 706 | 130,208 | 1,243 | 128,859 | 1,318 | 6.0 | 86.7 |
| 2,500-7,499 | 94,422 | 488 | 99,314 | 835 | 96,897 | 988 | 18.3 | 102.5 |
| 7,500+ | 130,970 | 2,252 | 133,421 | 3,167 | 133,239 | 3,650 | 15.3 | 62.1 |
| State | 497,007 | 3,785 | 505,130 | 5,916 | 502,534 | 6,687 | 13.0 | 76.7 |

Source: Iowa Department of Education, Certified Enrollment Files.
Note: $\quad{ }^{1}$ Figures represent a count of non-English speaking students eligible for generating additional funds for their Education.

Table 9 displays information on Iowa public school K-12 weighted non-English speaking students. Since 1993-94 weighted non-English speaking student enrollment has increased by nearly 77 percent overall. Over the period from 1993-94 to 1998-99 increases occurred for all but the smallest enrollment category. The largest percentage increases occurred in
the 600-999 enrollment category. Statewide weighted non-English student enrollment increased 13 percent in 1998-99 over the previous school year. Compared to the previous school year, only districts with enrollments of 600 and above registered increases in weighted non-English speaking students in 1998-99.

## Limited English Proficient (LEP) Students

Limited English proficient student enrollments in grades PK-12 are presented for the last 14 years in Figure 3. Since the 1987-88 school year increases have occurred on an annual basis, at an average of 14.2 percent. Five Iowa public school districts accounted for nearly 60 percent of all Iowa limited English proficient students reported in the 1998-99 school year. In two Iowa school districts, LEP enrollments as a percentage of total enrollments exceeded 25 percent.

Figure 3

## Trends in Grades PK-12 Enrollments of Limited English Proficient Public and Nonpublic Students in Iowa 1985-86 то 1998-99



[^4]Table 10 reflects the most common primary languages of limited English proficient students in Iowa public and nonpublic schools. In 1985-86 as in 1998-99 Spanish was the most common primary language among limited English proficient students. The percentage of limited English proficient students whose primary languages were Vietnamese and Laotian decreased substantially from 1985-86 to 1998-99.

Table 10

|  | Most Common LEP Primary Languages for Iowa Public and Nonpublic Schools |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985-86 |  | 1997-98Number of LEP Students |  | 1998-99 |  |
| Spanish | 807 | (25.6\%) | 4,970 | (60.7\%) | 5,460 | (59.6\%) |
| Vietnamese | 439 | (13.9\%) | 777 | (9.5\%) | 815 | $(8.9 \%)$ |
| Laotian | 548 | (17.4\%) | 452 | (5.5\%) | $488$ | $(5.3 \%)$ |
| Bosnian All Other | $1 \overline{794}$ |  | 697 1,297 | $(8.5 \%)$ | 660 1,737 | $\begin{array}{r} (7.2 \%) \\ (19.0 \%) \end{array}$ |
|  | 1,794 | (43.1\%) | 1,297 | (15.8\%) | 1,737 | (19.0\%) |
| Total LEP | 3,150 |  | 8,193 |  | 9,160 |  |

Source: Iowa Department of Education, Basic Educational Data Survey, Limited English Proficient Student File.
The trend in the increases of limited English students in Iowa public and nonpublic enrollment is also reflected in the trend nationwide (Figure 4).

## Figure 4

## Trends in Enrollment of Limited English Proficient Public and Nonpublic Students in the Nation 1986-87 то 1996-97



Source: Donly, B., et al. (1995). Summary of Bilingual Education State Educational Agency Program Survey of States' LEP Persons and Available Educational Services 1993-94. Prepared under contract for the U.S. Department of Education by Development Associates, Inc., in Arlington, VA.

Macías, R.F., et al. (1998). Summary Report of the Survey of the States' Limited English Proficient Students and Available Educational Programs and Services, 1996-97. Washington, D.C.: National Clearinghouse for Bilingual Education.

Special Issues Analysis Center. (1995). Summary Report of the Survey of the States'Limited English Proficient Students and Avallable Educational Programs and Services, 1993-94. Washington, D.C.: Development Associates.

Compared to other mid-west states Iowa's percentage of limited English proficient enrollment is less than all other states in the region except for Missouri (Table 11).
Table 11

## K-12 Total and Limited English Proficient Enrollments by State Public and Nonpublic, 1996-97

| State | K-12 LEP <br> Enrollment | K-12 Total <br> Enrollment | Percent LEP <br> Enrollment |
| :--- | ---: | ---: | ---: |
| Nation | $3,452,073$ | $46,375,422$ |  |
| Iowa* | 7,376 | 549,825 | $7.4 \%$ |
|  |  |  | $1.3 \%$ |
| Illinois | 118,246 | $2,293,920$ | 5.2 |
| Kansas | 13,409 | 498,255 | 2.7 |
| Minnesota | 28,237 | 921,678 | 3.1 |
| Missouri | 6,748 | 996,800 | 0.7 |
| Nebraska | 6,318 | 333,663 | 1.9 |
| North Dakota | 7,595 | 128,178 | 5.9 |
| South Dakota | 10,815 | 142,812 | 7.6 |
| Wisconsin | 23,270 | $1,029,399$ | 2.3 |

Source: Macías, R.F., et al. (1998). Summary Report of the Survey of the States’ Limited English Proficient Students and Available Educational Programs and Services, 1996-97. Washington, D.C.: National Clearinghouse for Bilingual Education.

## Open Enrollment

A total of 16,130 Iowa students exercised the open enrollment option in 1998-99. Iowa's open enrollment law allows students to attend school in a district other than the district in which they reside. Since the 1990-91 school year, the number of Iowa students electing to open enroll has increased more than 34 percent. The number of open enrolled students in 1998-99 increased by about 6 percent from the previous school year.

In 1998-99 districts in three enrollment categories experienced a net enrollment loss from open enrollment. A net enrollment loss was experienced by districts with enrollments under 400 and by districts with enrollments of 7,500 or more. More than 88 percent of all open enrolled students were accounted for by districts with enrollments of 400 and above (Table 12).

Table 12

# Net Open Enrollment Change in Iowa Public Schools by Enrollment Category 1990-91, 1996-97 то 1998-99 

|  | Net Enrollment |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Change |  |  |  |  |\(\left.\quad \begin{array}{c}Open Enrollment <br>

Out\end{array}\right)\)

[^5]
## Special Education Enrollments

Special education enrollments since 1985-86 have increased in each successive school year, rising from 41,892 students in 1985-86 to just over 61,000 in 1998-99, an increase of just under 46 percent for the period. In 1985-86 special education enrollment constituted 8.63 percent of the total certified enrollment in Iowa public schools and increased to 12.15 percent in 1998-99. Percentage increases in special education for the period 1985-86 through 1998-99 substantially exceeded annual percentage increases in certified enrollment (Table 13).

Table 13

## Special Education Enrollment in Iowa Public Schools 1985-86 through 1998-99

| Year | Certified <br> Enrollment | Annual \% Change in Cert. Enrollment | Special <br> Education <br> Enrollment | Annual \% Change in <br> Spec. Ed. Enrollment | Special Ed. Enrollment as a \% of Cert. Enr. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1985-1986 | 485,332 | - | 41,892 | - | 8.63\% |
| 1986-1987 | 481,205 | -0.85\% | 42,360 | 1.12\% | 8.80 |
| 1987-1988 | 478,859 | -0.49 | 42,625 | 0.63 | 8.90 |
| 1988-1989 | 476,771 | -0.44 | 43,290 | 1.56 | 9.08 |
| 1989-1990 | 478,210 | 0.30 | 44,585 | 2.99 | 9.32 |
| 1990-1991 | 483,396 | 1.08 | 46,593 | 4.50 | 9.64 |
| 1991-1992 | 491,451 | 1.67 | 48,201 | 3.45 | 9.81 |
| 1992-1993 | 495,342 | 0.79 | 49,848 | 3.42 | 10.06 |
| 1993-1994 | 497,009 | 0.34 | 51,022 | 2.36 | 10.27 |
| 1994-1995 | 500,592 | 0.72 | 53,151 | 4.17 | 10.62 |
| 1995-1996 | 504,505 | 0.78 | 55,514 | 4.45 | 11.00 |
| 1996-1997 | 505,523 | 0.20 | 57,845 | 4.20 | 11.44 |
| 1997-1998 | 505,130 | -0.08 | 59,711 | 3.23 | 11.82 |
| 1998-1999 | 502,534 | -0.51 | 61,079 | 2.29 | 12.15 |

Source: Iowa Department of Education, Certified Enrollment Files and December 1 Special Education files.

## Staff

Characteristics of Iowa's 46,657 licensed staff are presented in this section. Also included is information on average salaries, instructional aides, and pupil-teacher ratios. Data are provided by enrollment categories as well as on a statewide level. Comparisons, where possible, are made with comparable regional and national data. Data from the most recent two years is compared to baseline data from the 1985-86 school year.

## Characteristics of Teachers

The number of full-time teachers in 1998-99 was up slightly over the previous school year in both public and nonpublic schools. Compared to 1985-86 the number of fulltime public school teachers was up by 5.9 percent, while the number of nonpublic full-time teachers increased 2.9 percent (Table 14). Table 14 also provides a comparison of public and nonpublic teachers by age, gender, minority percentage, degree status, and experience. Only slight changes occurred in each of the characteristics for both public and nonpublic teachers in 1998-99 compared to the previous school year.

Table 14

| Characteristics of Iowa Full-Tine Teachers 1985-86, 1997-98, and 1998-99 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Characteristics | 85-86 | Public 97-98 | 98-99 | 85-86 | Nonpublic 97-98 | 98-99 |
| Average Age | 39.9 | 42.3 | 42.3 | 36.6 | 39.4 | 39.8 |
| Percent Female | 63.5 | 68.9 | 69.2 | 77.5 | 78.6 | 79.4 |
| Percent Minority | 1.2 | 1.6 | 1.7 | 0.5 | 1.0 | 0.9 |
| Percent Advanced Degree | 29.0 | 28.2 | 28.2 | 16.0 | 12.9 | 13.0 |
| Average Total Experience | 13.9 | 15.6 | 15.5 | 11.0 | 12.2 | 12.3 |
| Average District Experience | 10.6 | 12.1 | 12.0 | 5.7 | 8.1 | 8.3 |
| Number of Full-Time Teachers | 30,499 | 31,954 | 32,307 | 2,419 | 2,355 | 2,424 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files. (Includes AEA Teachers).

Compared to 1985-86 the most substantial changes in public school teacher characteristics were the increases in the percentage of female teachers, which increased from 63.5 percent to 69.2 percent. A similar but less substantial increase in the percentage of female teachers occurred for nonpublic teachers. Other increases since 1985-86 were reflected for average age and experience. The percentage of minority public school teachers increased only slightly from 1985-86 baseline levels. The percentage of nonpublic teachers with advanced degrees in 1998-99 was down three percentage points from 1985-86 levels, while the percentage of public school teachers with advanced degrees remained relatively stable.

## Minority Teacher Characteristics

Characteristics of Iowa's full-time public school minority teachers in 1998-99 are presented in Table 15. Minority teachers in Iowa public schools represented 1.7 percent of the total number of public school teachers. Minority teachers when compared to majority public school teachers, on average, were slightly younger, and had approximately four years less experience, which most likely accounted for slightly lower average salaries. In terms of advanced degrees, 29.4 percent of minority teachers held advanced degrees compared to 28.3 percent of majority teachers.

Table 15

# Characteristics of Iowa Full-Time Minority Public School Teachers - 1998-99 

| Characteristics | White | Minority |
| :--- | ---: | ---: |
| Number | 31,753 | 554 |
| Percent | 98.3 | 1.7 |
| Average Age | 42.4 | 40.0 |
| Percent Female | 69.5 | 66.1 |
| Percent Advanced Degree | 28.3 | 29.4 |
| Average Total Experience | 15.6 | 11.2 |
| Average District Experience | 12.1 | 8.2 |
| Average Salaries | $\$ 35,021$ | $\$ 34,174$ |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff File.
Note: Figures include area education agency teachers.

## Teacher Salaries

Information on teacher salaries is provided to the Department of Education by schools and area education agencies through the annual Basic Educational Data Survey completed annually in the fall. Schools and area education agencies are asked to report the total contract salary amount for the school year. It should be noted that salary amounts may reflect payment for some non-teaching activities. Table 16 depicts average teacher salaries, advanced degree status and total experience of fulltime public school teachers. On a statewide basis average salaries for full-time public school teachers in 1998-99 were up 2.7 percent from the previous school year and up over 61 percent from the 1985-86 figures. A comparison of 1998-99 average teacher salaries by enrollment category reflects that average salaries for all enrollment categories under 2,500 fell below the state average

A comparison of average teacher salaries in 1985-86 with 1998-99 average salaries reflects that salaries increased 61.4 percent on a statewide basis. Percentage increases over the period ranged from 56.9 percent in the enrollment category $2,500-$ 7,499 to 61.6 percent in the 250-399 enrollment category. The range in average salaries for full-time public school teachers in 1998-99 across enrollment categories was $\$ 12,344$ compared to $\$ 12,565$ in 1997-98 and $\$ 7,694$ in 1985-86.

In 1998-99 average teacher salaries in the smallest enrollment category represented only 74 percent of average salaries in the largest enrollment category. By comparison, in 1985-86 teachers in the smallest enrollment category earned 68 percent as much as the average salary paid to teachers in the largest enrollment category. Variation

Table 16

| Average Salaries, Advanced Degree, and Total Experience Distribution of Iowa Full-Time Public School <br> Teachers by Enrollment Category |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | \% Salary | \% with | Average |
|  |  |  |  | Change | Advance | Years Total |
| Enrollment |  |  |  | 1985-86 to | Degree | Experience |
| Category | 1985-86 | 1997-98* | 1998-99* | 1998-99 | 1998-99 | 1998-99 |
| <250 | \$16,347 | \$24,641 | \$25,891 | 58.4\% | 7.8\% | 10.7 |
| 250-399 | 17,971 | 28,236 | 29,041 | 61.6 | 12.6 | 13.7 |
| 400-599 | 19,198 | 29,865 | 30,664 | 59.7 | 14.8 | 14.1 |
| 600-999 | 20,079 | 31,135 | 32,201 | 60.4 | 18.8 | 15.1 |
| 1,000-2,499 | 21,616 | 33,789 | 34,739 | 60.7 | 25.1 | 16.0 |
| 2,500-7,499 | 23,835 | 36,576 | 37,395 | 56.9 | 34.5 | 16.3 |
| 7,500+ | 24,041 | 37,206 | 38,235 | 59.0 | 40.9 | 15.7 |
| State** | 21,690 | 34,084 | 35,007 | 61.4 | 28.2 | 15.5 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.
Notes: * Does not include Phase III funds.
**State total includes AEA teachers.
in salary is greatly influenced by the factors of experience and degree status, and as reflected in Table 16 the percentage of teachers with advanced degrees increases for each successively larger enrollment category as, in general, does experience.

A comparison of public school classroom teacher salaries for Iowa and other midwest states is reported in Table 17. The nine state comparison reflects that Iowa ranked fifth, behind Illinois, Wisconsin, Minnesota, and Kansas in 1998-99. On a nationwide basis Iowa ranked 34 ${ }^{\text {th }}$ in 1998-99. In 1997-98 four midwest states ranked higher than Iowa on a national basis, Illinois, Wisconsin, Minnesota, and Kansas. In 1997-98 Iowa average teacher salaries represented 86.3 percent of the national average and 86.6 percent in 1998-99.

Table 17

# Average Salaries of Public School Teachers for Iowa and Midwest States for 1997-98 and 1998-99 

| Nation and | $1997-98$ |  | 1998-99 <br> State |  |
| :--- | ---: | ---: | ---: | ---: |
| Salary | National Rank | Salary | National Rank |  |
| Nation** |  |  | $\$ 40,437$ |  |
| Iowa* | $\mathbf{\$ 3 9 , 5 0 2}$ | $\mathbf{3 4}$ | $\mathbf{\$ 3 5 , 0 0 7}$ | $\mathbf{3 4}$ |
|  | $\mathbf{\$ 3 4 , 0 8 4}$ |  |  |  |
| Illinois | 43,690 | 11 | 45,569 | 9 |
| Kansas | 36,811 | 24 | 37,731 | 24 |
| Minnesota** | 39,103 | 17 | 39,975 | 19 |
| Missouri | 33,946 | 35 | 34,680 | 35 |
| Nebraska | 32,668 | 41 | $33,400 * *$ | 40 |
| North Dakota | 28,230 | 50 | 28,976 | 50 |
| South Dakota** | 27,341 | 51 | 27,775 | 51 |
| Wisconsin** | 39,899 | 15 | 40,775 | 15 |

[^6]Average salaries of Iowa full-time public school teachers are compared by experience and degree level in Tables 18-20. Comparisons are made on average salary for three experience categories, five or less years of experience, six to ten years of experience, and more than 10 years experience. These comparisons have been made to factor in experience as well as degree level when average salaries are compared across enrollment categories.

Comparisons for all experience categories reflect that average teacher salaries tended to increase with increases in enrollment categories for teachers with baccalaureate degrees as well as for teachers with advanced degrees. In 1985-86 and in 1998-99 average salaries for public school teachers, regardless of experience level or degree level, in general, were below the state average for enrollment categories below 2,500 students.

Table 18

## Average Salary Comparison for Iowa Public School Full-Time Teachers with Total Experience of Five Years or Less 1985-86 vs. 1998-99

|  | Baccalaureate Degree Level |  | Advanced Degree Level |  |
| :--- | :---: | :---: | :---: | ---: |
| Enrollment <br> Category | $1985-86$ | $1998-99$ | $1985-86$ | $1998-99$ |
| $<250$ | $\$ 14,659$ | $\$ 23,031$ | $\$ 15,782$ | $\$ 25,705$ |
| $250-399$ | 15,434 | 24,163 | 16,753 | 25,675 |
| $400-599$ | 15,775 | 24,610 | 17,226 | 26,440 |
| $600-999$ | 16,017 | 25,357 | 17,731 | 26,415 |
| $1,000-2,499$ | 16,403 | 25,854 | 19,500 | 28,721 |
| $2,500-7,499$ | 17,191 | 27,124 | 20,057 | 31,011 |
| $7,500+$ | 17,156 | 27,336 | 21,143 | 33,373 |
| State | 16,211 | 26,076 | 19,545 | 30,782 |
|  |  |  |  |  |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

Table 19

# Average Salary Comparison for Iowa Public School Full-Time Teachers with Total Experience of Six to Ten Years 1985-86 vs. 1998-99 

|  | Baccalaureate Degree Level |  | Advanced Degree Level |  |
| :--- | :---: | :---: | :---: | ---: |
| Enrollment <br> Category | $1985-86$ | $1998-99$ | $1985-86$ | $1998-99$ |
| $<250$ | $\$ 16,218$ | $\$ 25,306$ | $\$ 16,704$ | $\$ 23,000$ |
| $250-399$ | 17,423 | 27,328 | 18,537 | 28,257 |
| $400-599$ | 18,419 | 28,466 | 19,704 | 30,046 |
| $600-999$ | 18,874 | 29,447 | 20,026 | 31,739 |
| $1,000-2,499$ | 19,543 | 30,777 | 21,360 | 33,439 |
| $2,500-7,499$ | 20,570 | 32,433 | 23,174 | 36,488 |
| $7,500+$ | 20,686 | 33,411 | 23,104 | 38,893 |
| State | 19,335 | 30,957 | 21,919 | 35,726 |

[^7]Table 20

> Average Salary Comparison for Iowa Public School Full-Tine Teachers with Total Experience of More than Ten Years $1985-86$ vs. 1998-99

|  | Baccalaureate Degree Level |  | Advanced Degree Level |  |
| :--- | ---: | :--- | :--- | :--- |
| Enrollment <br> Category | $1985-86$ | $1998-99$ | $1985-86$ | $1998-99$ |
|  | $\$ 17,821$ | $\$ 28,342$ | $\$ 18,985$ | $\$ 30,692$ |
| $<250$ | 19,324 | 31,621 | 21,260 | 33,569 |
| $250-399$ | 20,559 | 33,310 | 22,583 | 36,483 |
| $400-599$ | 21,381 | 34,536 | 23,632 | 37,867 |
| $600-999$ | 22,495 | 36,752 | 25,440 | 41,016 |
| $1,000-2,499$ | 23,804 | 38,359 | 28,044 | 45,175 |
| $2,500-7,499$ | 23,594 | 38,831 | 28,110 | 46,057 |
| $7,500+$ | 22,196 | 36,289 | 26,528 | 43,055 |
| State |  |  |  |  |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

## Teacher Assignments

The average number of teaching assignments are calculated on the basis of the number of unique courses taught by teachers and not on the basis of the number of periods in a school day teachers are assigned to teach. For example a teacher assigned to teach algebra I, drivers education, and earth science, would have three assignments. The average number of teaching assignments for full-time public school teachers in Iowa high schools is reported in Table 21 by enrollment category. On a statewide basis the average number of assignments for teachers in grades 9-12 rose 16.6 percent from 1985-86 to 1998-99, and was up slightly in 1998-99 from the previous school year. On average, teachers in grades 9-12 in 1998-99 had 3.16 assignments. Differences in the average number of assignments for teachers in grades 9-12 were evident across enrollment categories for the three years shown in Table 21, with the average number of assignments decreasing with successive increases in enrollment.

Table 21

| Average Number of Teaching Assignments for Iowa Full-Time <br> Public School Teachers in <br> Grades $9-12$ <br> by <br> Enrollment Category |  |  |  |
| :---: | :---: | :---: | :---: |
| Enrollment Category | $1985-86$ | $1997-98$ | $1998-99$ |
|  |  |  |  |
| $<250$ | 3.76 | 5.02 | 5.07 |
| $250-399$ | 3.56 | 4.51 | 4.48 |
| $400-599$ | 3.33 | 4.23 | 4.17 |
| $600-999$ | 3.14 | 3.84 | 3.85 |
| $1,000-2,499$ | 2.61 | 3.05 | 3.02 |
| $2,500-7,499$ | 1.98 | 2.42 | 2.41 |
| $7,500+$ |  | 1.91 | 2.21 |
| State |  |  | 3.11 |

[^8]The disparity in the average number of teaching assignments for teachers in grades 9-12 in the smallest and largest enrollment categories increased from 1985-86 to 1998-99, with teachers in the smallest enrollment category having an average of more than two times as many teaching assignments in 1998-99.

## Characteristics of Principals

Selected characteristics of public school principals are presented in Table 22. The number of full-time Iowa public school principals has decreased by just over three percent since the 1985-86 school year paralleling the decrease in the number of school districts occurring through reorganization. The decrease in the number of nonpublic school principals also parallels the decrease in the number of approved nonpublic schools operating in Iowa.

Table 22

| Characteristics of Iowa Full-Time Principals 1985-86, 1997-98, and 1998-99 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Characteristics | 1985-86 | Public 1997-98 | 1998-99 | 1985-86 | Nonpublic 1997-98 | 1998-99 |
| Average Age | 46.6 | 47.5 | 47.5 | 46.0 | 47.7 | 47.6 |
| Percent Female | 8.7 | 27.1 | 28.7 | 49.5 | 46.2 | 48.9 |
| Percent Minority | 1.6 | 3.3 | 3.9 | 0 | 0.8 | 1.5 |
| Percent Advanced Degree | 98.9 | 98.1 | 98.6 | 97.7 | 90.9 | 92.7 |
| Average Total Experience | 21.9 | 22.8 | 22.7 | 21.5 | 22.2 | 22.4 |
| Average District Experience | 13.2 | 11.3 | 11.5 | 6.0 | 7.0 | 7.2 |
| Number of Principals | 1,223 | 1,189 | 1,182 | 177 | 132 | 137 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

The characteristics of Iowa full-time public school principals which has changed the most over the period from 1985-86 to 1998-99 is the percentage of female principals employed. In 1985-86 just under 9 percent of public school principals were females compared to nearly 29 percent in 1998-99. In general, a roughly equal balance of male and female principals existed for each of the three years shown in Table 22 for nonpublic schools. Only slight changes were evident for the characteristics of age, experience, and the percentage of principals with advanced degrees. The percentage of minority principals since 1985-86 reflected increases in 1998-99 for both public and approved nonpublic schools. Figures in 1998-99 were also up slightly over the previous school year.

## Principal Salaries

The average salary for full-time public school principals in Iowa was $\$ 58,851$, up 66.7 percent from 1985-86 compared to an increase over the same period of 61.4 percent for full-time public school teachers (Table 23). Average salaries for public school principals in 1998-99 represented an increase of 3.1 percent over the previous school year compared to an increase of 2.7 percent for teachers. Average salaries for full-time public school principals were 62.8 percent higher than average salaries of full-time public school teachers in 1985-86. In 1998-99 average salaries for principals in Iowa public schools were 68.1 percent higher than the average teacher salary.

Table 23

# Average Salary of Iowa Full-Time Public School Principals by Enrollment Category 1985-86, 1997-98, and 1998-99 

\(\left.$$
\begin{array}{lcccc}\hline & \text { Average Salary } & & \begin{array}{c}\text { \% Change } \\
\text { 1985-86 } \\
\text { to }\end{array}
$$ <br>
\begin{array}{c}Enrollment <br>

Category\end{array} \& 1985-86 \& 1997-98 \& 1998-99 \& 1998-99\end{array}\right]\)|  |  |  |  |
| :--- | :--- | :--- | :--- |
| $<250$ | $\$ 26,399$ | $\$ 40,564$ | $\$ 42,282$ |
| $250-399$ | 28,387 | 46,983 | 48,690 |
| $400-599$ | 31,095 | 48,522 | 50,496 |
| $600-999$ | 33,428 | 51,987 | 53,788 |
| $1,000-2,499$ | 36,427 | 57,742 | 59,775 |
| $2,500-7,499$ | 39,465 | 63,150 | 64,851 |
| $7,500+$ | 39,584 | 65,460 | 67,003 |
| State | 35,313 | 57,060 | 58,851 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

Average salaries for Iowa public school principals varied substantially across enrollment categories in 1998-99 with a range in average salary of $\$ 24,721$ compared to a range of only $\$ 13,185$ in 1985-86. Average salaries for public school principals, as with teachers, increased with successive increases in enrollment categories.

## Characteristics of Superintendents

In 1998-99 major differences in the public school superintendent population compared to public school teachers and principals were evident with respect to gender and district experience (Table 24). Only 3.2 percent of public school superintendents in 1998-99 were females compared to 28.7 percent of principals and 69.2 percent of teachers. Average district experience for public school superintendents was only 6.4 years compared to 12 years for full-time public school teachers and 11.5 years for full-time public school principals. In terms of average age, superintendents in 1998-99 were about four years older than principals and about nine years older than teachers.

Table 24

# Characteristics of Iowa Full-Time Public School Superintendents - 1985-86, 1997-98, and 1998-99 

| Characteristics | $1985-86$ | $1997-98$ | $1998-99$ |
| :--- | :---: | :---: | :---: |
| Average Age | 48.7 | 51.7 | 51.5 |
| Percent Female | 1.6 | 3.0 | 3.2 |
| Percent Minority | 0 | 1.2 | 1.2 |
| Percent Specialists/Doctorate Degree | 46.9 | 47.1 | 50.4 |
| Average Total Experience | 23.6 | 26.1 | 26.1 |
| Average District Experience | 8.8 | 6.7 | 6.4 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

## Superintendent Salaries

Salaries for public school superintendents are presented in Table 25. In 1998-99 the average full-time public school superintendent's salary was $\$ 73,191$. This was 24.4 percent higher than the average salary reported for principals and 109 percent higher than the average teacher salary. The average salary for full-time public school superintendents in 1998-99 increased by 4.1 percent over the previous school year compared to increases of 3.1 percent and 2.7 percent for public school principals and teachers respectively (Figure 5).

Table 25

## Average Salary of Iowa Full-Time Public School Superintendents by Enrollment Category 1985-86, 1997-98, and 1998-99



[^9]Compared to 1985-86 figures, average salaries for superintendents increased nearly 80 percent. In 1985-86 the range in average salaries for superintendents across enrollment categories was $\$ 26,638$ growing to $\$ 61,196$ in 1998-99 (Table 25). As was reported for public school principals and teachers, average salaries for superintendents increased with successive increases in enrollment categories.

Average salaries for superintendents in districts under 1,000 fell below the state average salary for superintendents in both 1997-98 and 1998-99. In 1985-86 average salaries for superintendents in districts under 600 fell below the state average.

Considerable differences are evident for the positions as well as across enrollment categories. Comparisons of annual salary increases for teachers, principals and superintendents are presented in Figure 5 for 1993 through 1999. Throughout the time period annual increases, with one exception, were the highest for superintendents, followed by principals and teachers (Figure 5). Considerable differences in average salaries were reflected in 1998-99 for teachers, principals, and superintendents as were differences across enrollment categories (Table 26).

Figure 5
Yearly Salary Percentage Increases for Iowa Full-time Public School Teachers, Principals, and Superintendents


[^10]Table 26

## Average Salary Comparison of Iowa Full-Time Public School Teachers, Principals and Superintendents by Enrollment Category 1998-99

| Enrollment Category | Teachers* | Principals | Superintendents |
| :---: | ---: | :---: | :---: |
| $<250$ | $\$ 25,891$ | $\$ 42,282$ | $\$ 52,817$ |
| $250-399$ | 29,041 | 48,690 | 62,016 |
| $400-599$ | 30,664 | 50,496 | 65,118 |
| $600-999$ | 32,201 | 53,788 | 70,248 |
| $1,000-2,499$ | 34,739 | 59,775 | 79,810 |
| $2,500-7,499$ | 37,395 | 64,851 | 96,841 |
| $7,500+$ | 38,235 | 67,003 | 114,013 |
|  |  |  |  |
| State | 35,007 | 58,851 | 73,191 |

[^11]
## Gender Comparisons for Teachers and Principals

Differences in age, minority status, degree level, experience, and average salary are reported by gender in Tables 27 and 28. Average salaries for both male teachers and principals were higher than females in 1998-99. Male teachers had more experience both in terms of longevity within a school district and in terms of total experience. In addition, a higher percentage of males held advanced degrees. Male principals also had more total years of experience and a greater average longevity within the district. A higher percentage of female principals held degrees beyond the baccalaureate than males.

Table 27

| Gender Comparison of Iowa Full-Time Public School Teachers - 1998-99 |  |  |
| :---: | :---: | :---: |
| Characteristics | Female | Male |
| Average Age | 42.3 | 42.5 |
| Percent Minority | 1.6 | 1.9 |
| Percent Advanced Degree | 26.3 | 32.8 |
| Average Total Experience | 14.8 | 17.1 |
| Average District Experience | 11.4 | 13.5 |
| Average Salary* | \$34,198 | \$36,844 |

[^12]Table 28

| Gender Comparison of Iowa Full-Time <br> Public School Principals <br> - 1998-99 |  |  |
| :--- | :---: | :---: |
| Characteristics | Female |  |
|  |  | Male |
| Average Age | 46.8 | 47.8 |
| Percent Minority | 5.0 | 3.4 |
| Percent Advanced Degree | 99.4 | 98.3 |
| Average Total Experience | 20.8 | 23.5 |
| Average District Experience | 10.0 | 12.1 |
| Average Salary | $\$ 57,605$ | $\$ 59,352$ |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff File.

## Characteristics of Area Education Agency (AEA) Staff

Iowa supports 15 regional service agencies called area education agencies. These AEAs provide services to public and to nonpublic Iowa schools in the areas of media, special education, and educational services. More than 2,200 licensed AEA staff served Iowa schools in 1998-99.

Characteristics of AEA staff are reported in Table 29. Nearly three-quarters of AEA staff in 1998-99 were females, up slightly from the previous year. Compared to public school teachers AEA staff had more years of total experience on average and nearly 80 percent held advanced degrees compared to 28.2 percent for full-time public school teachers. AEA staff in 1998-99 were an average of 2.5 years older than public school teachers and an average of just over 2.5 years younger than public school principals. The average number of contract days of service for AEA staff was 198.4 days compared to about 190 days for public school teachers. Average salaries for area education staff increased 2.8 percent in 1998-99 over the previous school year compared to an increase of 2.7 percent for public school teachers and 3.1 percent for principals.

Table 29
$\left.\begin{array}{ll}\hline \text { Characteristics of Iowa Full-Time Licensed AEA Staff } \\ \text { (1998-99 } & \text { SCHOOL YEAR }\end{array}\right]$

The distribution of AEA staff in 1998-99 in terms of position titles is reflected in Figure 6 and in Table 30. The largest single segment of AEA staff were designated as consultant/instructor, 21.2 percent. The second largest segment represented teachers which accounted for 18.6 percent. Most of these teachers were involved in providing special education services. Psychologists, clinicians, and speech language pathologists comprised nearly 35 percent of all AEA personnel.

Figure 6


[^13]Table 30

| Number of Iowa Full-Time AEA Licensed Staff by Position, 1998-99 |  |  |
| :---: | :---: | :---: |
| Position | Number | Percent |
| Administrative Assistant | 4 | 0.2\% |
| Administrator | 16 | 0.7 |
| Assistant Dean/Director | 9 | 0.4 |
| Clinician | 232 | 10.5 |
| Consultant | 225 | 10.1 |
| Coordinator | 91 | 4.1 |
| Department Head | 17 | 0.8 |
| Director | 41 | 1.9 |
| Educational Strategist | 8 | 0.4 |
| Home Intervention PK Teacher | 62 | 2.8 |
| Hospital/Home Teacher | 3 | 0.1 |
| Instructor/Consultant | 247 | 11.1 |
| Integration Teacher | 34 | 1.5 |
| Itinerant Teacher | 72 | 3.3 |
| Librarian | 8 | 0.4 |
| Manager | 1 | 0.0 |
| Pre School Teacher | 20 | 0.9 |
| Principal | 5 | 0.2 |
| Psychologist | 58 | 2.6 |
| Resource Teacher | 60 | 2.7 |
| School Audiologist Specialist/Consultant | 33 | 1.5 |
| School Social Worker | 192 | 8.7 |
| School Psychologist | 243 | 11.0 |
| Self-contained Special Education 2.2 Teacher | 54 | 2.4 |
| Self-contained Special Education 3.6 Teacher | 86 | 3.9 |
| Special Education Delivery System Personnel | 228 | 10.3 |
| Speech Language Pathologists | 12 | 0.5 |
| Specialist | 20 | 0.9 |
| Supervisor | 54 | 2.4 |
| Teacher | 21 | 0.9 |
| Therapist | 61 | 2.8 |
| Total | 2,217 | 100.0 |

For the 1998-99 school year the distribution of licensed school personnel and the number of students enrolled in districts served for each AEA is provided in Table 31. The largest percentage of school districts served as well as the highest enrollment, and the greatest number of licensed district staff were reported for AEA 11. Three AEAs, nine, ten, and eleven accounted for 45.7 percent of the total enrollment and 44.1 percent of licensed public school staff in 1998-99.
Table 31

## Distribution of Iowa Public School Districts, Enrollment and Total Full-Time Licensed Staff by AEAs, 1998-99

| AEA | Districts |  | Enrollment |  | Licensed Staff |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | N | \% | N | \% | N | \% |
| 1 | 25 | 6.7\% | 33,879 | 6.7\% | 2,537 | 6.6\% |
| 2 | 24 | 6.4 | 21,719 | 4.3 | 1,767 | 4.6 |
| 3 | 19 | 5.1 | 12,721 | 2.5 | 1,008 | 2.6 |
| 4 | 14 | 3.7 | 11,045 | 2.2 | 882 | 2.3 |
| 5 | 31 | 8.2 | 25,385 | 5.1 | 2,133 | 5.5 |
| 6 | 16 | 4.3 | 17,363 | 3.5 | 1,339 | 3.5 |
| 7 | 22 | 5.9 | 31,504 | 6.3 | 2,502 | 6.5 |
| 9 | 22 | 5.9 | 51,357 | 10.2 | 3,965 | 10.2 |
| 10 | 33 | 8.8 | 63,339 | 12.6 | 4,566 | 11.8 |
| 11 | 56 | 14.9 | 114,808 | 22.9 | 8,542 | 22.1 |
| 12 | 24 | 6.4 | 31,233 | 6.2 | 2,418 | 6.2 |
| 13 | 31 | 8.2 | 33,329 | 6.6 | 2,614 | 6.7 |
| 14 | 21 | 5.6 | 12,194 | 2.4 | 1,029 | 2.7 |
| 15 | 24 | 6.4 | 24,044 | 4.8 | 1,943 | 5.0 |
| 16 | 13 | 3.5 | 18,614 | 3.7 | 1,419 | 3.7 |
| State | 375 | 100.0 | 502,534 | 100.0 | 38,664 | 100.0 |

Source: Iowa Department of Education, Basic Educational Data Survey, Staff File, and Certified Enrollment File.

## Instructional Aides

In addition to the more than 32,000 full-time public school teachers employed in Iowa school districts, more than 7,200 full-time equivalent instructional aides also provide assistance in the public school classrooms. The number of instructional aides in Iowa public schools since 1985-86 has increased by more than 170 percent (Table 32). School districts in each enrollment category have experienced growth in the number of instructional aides since the 1985-86 school year with the greatest growth, in terms of percentage increases, realized by districts with enrollments of 600-999. In 1985-86 there was about one instructional aide for every 180 students compared to one aide for about every 70 students in 1998-99.

Table 32

## Instructional Aides in Iowa Public Schools, 1985-86 and 1998-99

| Number of Full-time Equivalent Aides |  |  |  |
| :---: | :---: | :---: | :---: |
| Enrollment |  |  | \% Change in FTE Aides |
| Category | 1985-86 | 1998-99 | 1985-86 to 1998-99 |
| <250 | 40.1 | 48.9 | 21.9\% |
| 250-399 | 124.2 | 336.5 | 170.9 |
| 400-599 | 167.5 | 402.6 | 140.4 |
| 600-999 | 249.1 | 1,021.5 | 310.1 |
| 1,000-2,499 | 605.9 | 1,792.8 | 195.9 |
| 2,500-7,499 | 625.7 | 1,632.8 | 161.0 |
| 7,500+ | 856.1 | 1,984.4 | 131.8 |
| State | 2,668.6 | 7,219.5 | 170.5 |
| Source: Iowa Department of Education, Basic Educational Data Survey, Policies and Procedures files. |  |  |  |

## Pupil-Teacher Ratio

Pupil-teacher ratios are not indicative of actual class sizes in Iowa schools, but are sometimes used as a substitute measure to estimate class sizes. The pupil-teacher ratio in Iowa public schools is calculated by dividing the total number of $\mathrm{K}-12$ students by the total number of K-12 teachers. Ungraded special education students are excluded from the calculation and only regular program teachers are included. In 198586 the average pupil-teacher ratio on a statewide basis was 16.6 to one (Figure 7). In 1998-99 the pupil-teacher ratio statewide was 16.0 to one, down from the 1997-98 figure of 16.4 to one.

Figure 7
K-12 Pupil-Teacher Ratios for Iowa Public Schools 1985-86 and 1998-99


Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files.
Note: Pupil-Teacher ratios do not include special education teachers or ungraded special education students.

Pupil-teacher ratios in 1998-99 were lower than ratios in 1985-86 in all seven enrollment categories and pupil-teacher ratios, with one exception, increased with each successively larger enrollment category.

A comparison of pupil-teacher ratios in Iowa and surrounding mid-west states is presented in Table 33. The pupil-teacher ratios in Table 33 are provided by the National Center for Education Statistics and reflect students and teachers in prekindergarten through grade 12 and are measured in terms of average daily membership. Four other mid-west states reported pupil-teacher ratios lower than Iowa in 1997-98 and only two other mid-west states, Nebraska and North Dakota reported lower pupil-teacher ratios in 1998-99.

Table 33

## PK-12 Pupil-Teacher Ratios for Iowa and Midwest States

|  |  | Average Daily Membership |  |
| :---: | :---: | :---: | :---: |
|  | State | 1997-98 | 1998-99 |
|  | Nation | 16.8 | 16.6 |
|  | Iowa | 15.3 | 14.9 |
|  | Iowa's Rank in Nation | 15* | 13* |
|  | Illinois | 16.8 | 16.5 |
|  | Kansas | 14.9 | 14.9 |
|  | Minnesota | 16.4 | 16.3 |
|  | Missouri | 15.0 | 14.9 |
|  | Nebraska | 14.5 | 14.4 |
|  | North Dakota | 14.7 | 14.5 |
|  | South Dakota | 15.3 | 15.3 |
|  | Wisconsin | 15.4 | 15.4 |
| Source: <br> Notes: | U.S. Department of Education Includes public school grades *RANKED IN ASCENDING ORDER, | Common Co ergarten thr with two o |  |

## Program

The program portion of the Condition of Education Report presents information on school district organizational structures, curriculum offerings, foreign language enrollments, student enrollments in higher level mathematics and science, and graduation requirements for mathematics and science. Information is also presented on class size in grades kindergarten through grade four, enrollments in computer-related courses, technology hardware and software expenditures, school district involvement in electronic data interchange, the use of automated student information systems, as well as other aspects of technology in the schools including the availability of computers. In addition, information on early childhood education is also provided.

## School District Organizational Structure

The patterns of school district organizational structures are reflected in Tables 34 and 35 for 1985-86 and 1998-99. Information regarding organizational structure is provided annually to the Iowa Department of Education by public school districts through the Basic Educational Data Survey (BEDS) and reflects how school districts are organized to deliver programs and services to Iowa public school students.

Table 34

## Organizational Structures in Iowa Public School Districts 1985-1986

| Structure | Percent of |
| :---: | :---: |
| (Grade Levels included) | Districts |


| K6-712 | 38.9 |
| :--- | ---: |
| K5-68-912 | 18.6 |
| K6-78-912 | 14.2 |
| K4-58-912 | 10.8 |
| K6-79-1012 | 7.8 |
| K8-912 | 7.1 |
| K5-612 | 0.5 |
| K3-46-712 | 0.5 |
| PK2-35-68-912 | 0.5 |
| K7-812 | 0.5 |
| K3-46-78-912 | 0.2 |
| K3-56-79-1012 | 0.2 |

Source: Iowa Department of Education, Basic Educational Data Survey, Policies and Procedures File, 1985-86.

Table 35

# Organizational Structures in Iowa Public School Districts 1998-1999 

| Structure | Percent of |
| :---: | :---: |
| (Grade Levels included) | Districts |
|  |  |
| K5-68-912 | 30.0 |
| K6-78-912 | 27.0 |
| K4-58-912 | 12.1 |
| PK5-68-912 | 9.6 |
| PK-78-912 | 9.6 |
| PK4-58-912 | 3.5 |
| K6-712 | 1.8 |
| K4-56-78-912 | 1.1 |
| PK6-712 | 1.1 |
| K6-79-1012 | 1.1 |
| K3-48-912 | 0.8 |
| PK6-79-1012 | 0.5 |
| PK-36-78-912 | 0.3 |
| K3-45-68-912 | 0.3 |
| K3-46-78-912 | 0.3 |
| PK3-47-812 | 0.3 |
| K3-46-79-1012 | 0.3 |
| PK3-46-78-912 | 0.3 |
|  | 100.0 |
| Source: | Iowa DeparTment of Education, Basic Educational Data Survey, Polcices and Procedures File, 1998-99. |
|  |  |

In 1985-86, nearly 39 percent of Iowa school districts were organized as K6-712 structures. An additional 43.6 percent of districts reflected organizational structures of K6-78-912, K5-68-912, and K4-58-912 (Table 34). In 1998-99, five organizational patterns encompassed more than 88.3 percent of organizational structures. These included K6-78-912, K5-68-912, K4-58-912, PK6-78-912, and PK5-68-912.

In the organizational structures reflected in Tables 34 and 35 it is noted that substantial changes have occurred in the patterns of school district structures since 1985-86. The first is the increase in the number of middle schools. Although there are a number of definitions for middle schools, a middle school is defined here as encompassing some combination of grades four through eight and as having at least three grade levels represented. In 1985-86, only 30.3 percent of districts operated middle schools compared to 57.5 percent in 1998-99. An additional change over the time period from 1985-86 to 1998-99 was the decline of the grade 10-12 high school that was primarily prevalent in larger school districts in the 1985-86 school year. In 1998-99, only 1.9 percent of public school districts reported organizational structures featuring 10-12 high schools, compared to 8.0 percent in 1985-86. The percentage of school districts reflecting pre-kindergarten in their organizational structures has also changed markedly from 1985-86 to 1998-99. In 1985-86, less than 1.0 percent of districts reported a structure encompassing pre-kindergarten, compared to 25.2 percent of districts in 1998-99.

## Curriculum Unit Offerings

The average number of curriculum units offered and taught by Iowa public schools in the areas of English/language arts, mathematics, science, social studies, and foreign language are presented in Tables 36-37. Data are provided for the base year 1985-86, as well as for the 1998-99 school year. Average unit offerings in all curriculum areas presented, reflected substantial increases over average unit offerings in 1985-86.

In both 1985-86, and in 1998-99, the average number of units offered in English/ language arts, mathematics, science, social studies, and foreign language increased with increases in enrollment categories.

Table 36

## Average Curriculum Units Offered and Taught in Iowa Public School Districts - 1985-86

| Subject Area | Enrollment Category |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <250 | $\begin{gathered} 250- \\ 399 \end{gathered}$ | $\begin{gathered} 400- \\ 599 \end{gathered}$ | $\begin{aligned} & 600- \\ & 999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & 2,500- \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| English/Language Arts | 5.0 | 5.6 | 6.3 | 6.6 | 8.2 | 11.4 | 17.7 | 6.9 |
| Mathematics | 6.4 | 6.4 | 6.8 | 7.0 | 8.0 | 9.8 | 12.7 | 7.2 |
| Science | 4.6 | 4.8 | 5.2 | 5.7 | 6.2 | 8.1 | 9.6 | 5.6 |
| Social Studies | 4.2 | 4.4 | 4.7 | 4.8 | 5.6 | 6.5 | 8.8 | 4.9 |
| Foreign Language | 2.1 | 2.3 | 2.5 | 3.2 | 4.9 | 9.8 | 14.9 | 3.6 |

Source: Iowa Department of Education, Basic Educational Data Survey, curriculum file.
Note: Waiver provisions are available under special circumstances.

Table 37

## Average Curriculum Untis Offered and Taught in Iowa Public School Districts - 1998-99

|  | Enrollment Category |  |  |  |  |  |  |  |
| :--- | :---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\quad$ Subject |  | $250-$ | $400-$ | $600-$ | $1,000-$ | $2,500-$ |  |  |
| $\quad$ Area |  | 390 | 599 | 999 | 2,499 | 7,499 | $7,500+$ | State |
|  |  |  |  |  |  |  |  |  |
| English/Language Arts | 5.8 | 6.6 | 7.0 | 7.9 | 9.8 | 12.6 | 16.9 | 9.2 |
| Mathematics | 6.8 | 7.7 | 7.4 | 8.2 | 9.4 | 12.7 | 13.6 | 9.3 |
| Science | 5.2 | 6.0 | 5.9 | 6.8 | 7.4 | 11.0 | 11.4 | 7.5 |
| Social Studies | 5.1 | 5.5 | 5.7 | 6.2 | 6.9 | 9.9 | 10.9 | 7.1 |
| Foreign Language | 3.1 | 4.0 | 4.3 | 4.6 | 7.1 | 11.4 | 16.6 | 6.3 |

[^14]
## Foreign Language Enrollments

Student enrollment in foreign language courses, as well as estimated percentages of 912 public school students taking foreign language courses, are reflected in Table 38.

Comparisons are made for the school years 1995-96 through 1998-99 as well as for the base year 1985-86. In the 1985-86 school year, just under an estimated 31 percent of students in grades 9-12 were enrolled in foreign language courses. By 199596 this figure had grown to an estimated 50 percent, increasing to 51 percent in 1996-97, and to 52.2 percent for both 1997-98 and 1998-99. More than 81,000 public school students in 1998-99 were enrolled in foreign language courses in Iowa high schools.

Since 1985-86, significant increases in the estimated percentage of students enrolled in foreign languages were evident for all enrollment categories.

Table 38

## Total Iowa Public School Enrollment in All Foreign Language Courses by Enrollaent Category - Grades 9-12

| Enrollment Category | 1985-86 |  | 1995-96 |  | 1996-97 |  | 1997-98 |  | 1998-99 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \begin{array}{c} \text { Number } \\ \text { of } \\ \text { Students } \end{array} \end{gathered}$ | Estimated <br> Percent <br> Enrolled | Number of Students | Estimated <br> Percent <br> Enrolled | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { Students } \end{aligned}$ | Estimated <br> Percent <br> Enrolled | Number of Students | Estimated <br> Percent <br> Enrolled | Number of Student | Estimated Percent Enrolled |
| <250 | 658 | 20.4\% | 268 | 38.2\% | 263 | 37.0\% | 272 | 39.7\% | 259 | 38.4\% |
| 250-399 | 1,667 | 18.2 | 2,093 | 43.0 | 2,031 | 41.7 | 2,016 | 39.6 | 2,222 | 41.4 |
| 400-599 | 2,769 | 18.9 | 5,947 | 40.9 | 5,792 | 41.0 | 5,820 | 43.3 | 5,545 | 42.4 |
| 600-999 | 5,079 | 21.8 | 11,641 | 45.6 | 12,512 | 47.1 | 12,289 | 46.8 | 12,438 | 47.5 |
| 1,000-2,499 | 10,536 | 30.2 | 20,378 | 50.8 | 21,733 | 53.2 | 22,330 | 52.5 | 22,757 | 54.3 |
| 2,500-7,499 | 13,018 | 42.7 | 16,845 | 57.6 | 16,751 | 56.0 | 16,571 | 55.3 | 16,447 | 54.4 |
| 7,500+ | 13,064 | 35.9 | 19,049 | 50.8 | 19,923 | 52.6 | 21,890 | 58.3 | 21,671 | 56.4 |
| State | 46,791 | 30.8 | 76,221 | 50.0 | 79,005 | 51.0 | 81,188 | 52.2 | 81,339 | 52.2 |

Source: Iowa Department of Education, Basic Educational Data Survey, curriculum and enrollment files.
Note: Percents are estimated with an assumption that foreign language courses are normally taken in grades 9-12.

Table 39 depicts enrollment in foreign language by specific foreign language course. As in previous years, enrollment in Spanish represented the largest portion of public school students taking foreign languages. More than 75 percent of all students taking foreign language were enrolled in Spanish. French and German language courses represented 14.8 percent and 7.6 percent of foreign language enrollments respectively. Enrollments in 1998-99 in Spanish, French, and German represented
slight increases over the previous school year. Enrollments in Spanish in 1998-99 represented an increase of 120 percent over 1985-86 figures. Enrollments in German reflected a 13 percent increase over 1985-86 enrollments. On the other hand, enrollments in French decreased 6.1 percent from 1985-86 levels.

Table 39

## 1998-99 Foreign Language Enrollment in Iowa Public Schools Grades 9-12

| Language | Number <br> of <br> Districts | Enrollment | Percent of Foreign <br> Language <br> Enrollments |
| :--- | :---: | :---: | :---: |
| Spanish | 337 | 61,504 | $75.6 \%$ |
| French | 106 | 12,055 | 14.8 |
| German | 72 | 6,173 | 7.6 |
| Japanese | 9 | 459 | 0.6 |
| Russian | 10 | 352 | 0.4 |
| Latin | 5 | 214 | 0.3 |
| Chinese | 2 | 35 | $<0.1$ |
| Italian | - | 76 | $<0.1$ |
| All Others |  | 471 | 0.6 |

Source: Iowa Department of Education, Basic Educational Data Survey, curriculum file.

## Higher Level Mathematics Enrollments

## Calculus

Table 40 compares the number and estimated percentage of twelfth grade public school students enrolled in calculus for 1985-86 and for the years 1991-92 through 1998-99. The estimated percentage of students enrolled in calculus increased from 5.6 percent in 1985-86 to 16.6 percent in 1998-99. The greatest percentage increases in the number of students enrolled in calculus occurred from 1991-92 to 1992-93 and from 1995-96 to 1996-97. Calculus enrollments in 1998-99 increased by 3.4 percent over the previous school year.

Table 40
Iowa Public School Enrollment in Calculus

| Year | Number of <br> Students <br> Enrolled | Estimated Percent <br> of Students <br> Enrolled |
| :---: | :---: | :---: |
| $1985-86$ | 2,004 | $5.6 \%$ |
| $1991-92$ | 2,471 | 7.8 |
| $1992-93$ | 3,528 | 10.7 |
| $1993-94$ | 3,864 | 11.9 |
| $1994-95$ | 4,094 | 12.0 |
| $1995-96$ | 4,183 | 12.1 |
| $1996-97$ | 5,050 | 14.2 |
| $1997-98$ | 5,980 | 16.2 |
| $1998-99$ | 6,186 |  |

[^15]Calculus enrollments for the seven enrollment categories are reported in Table 41. Figures in Table 41 reflect that the estimated percentage of twelfth graders in 1998-99, in general, increased with each successively larger enrollment category. On a statewide basis, 53.7 percent of students enrolled in calculus were males.

Table 41

## 1998-99 Iowa Public School Enrollment in Calculus by Enrollment Category

|  |  | Enrollment Category |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  | $250-$ | $400-$ | $600-$ | $1,000-$ | $2,500-$ |  |
|  |  | 399 | 599 | 999 | 2,499 | 7,499 | $7,500+$ | State |
| Number of Districts | 4 | 27 | 59 | 84 | 74 | 24 | 9 | 281 |
| Pupils Enrolled | 9 | 155 | 548 | 807 | 1,708 | 1,229 | 1,730 | 6,186 |
| Estimated Percent | 6.0 | 11.7 | 17.1 | 12.4 | 16.9 | 17.2 | 19.8 | 16.6 |
| Males | 4 | 76 | 264 | 417 | 912 | 697 | 950 | 3,320 |
| Females | 5 | 79 | 284 | 390 | 796 | 532 | 780 | 2,866 |

Source: Iowa Department of Education, Basic Educational Data Survey, curriculum and enrollment files.
Note: Estimated Percents are based on the assumption that calculus is normally taken in grade 12.

## Trigonometry

The estimated percentage of eleventh grade students in Iowa public schools enrolled in trigonometry increased from 9.2 percent in 1985-86 to 14.8 percent in 1998-99 (Table 42). Figures reflecting year-over-year changes in the estimated percentage of public school students enrolled in trigonometry indicate that percentage changes have varied from year-to-year since 1992-93 reflecting both slight increases and decreases over the period.

Table 42
Iowa Public School Enrollment in Trigonometry

| Year | Number of <br> Students | Estimated Percent <br> of Students |
| :---: | :---: | :---: |
| $1985-86$ | 5,107 | $9.2 \%$ |
| $1991-92$ | 4,984 | 15.0 |
| $1992-93$ | 4,663 | 14.2 |
| $1993-94$ | 4,915 | 14.1 |
| $1994-95$ | 5,046 | 14.3 |
| $1995-96$ | 4,677 | 12.7 |
| $1996-97$ | 5,161 | 13.5 |
| $1997-98$ | 5,819 | 15.2 |
| $1998-99$ | 5,656 | 14.8 |

[^16]Trigonometry enrollments and the estimated percentage of students enrolled in trigonometry are depicted in Table 43 by enrollment category for 1998-99. No pattern in the estimated percentage of students enrolled in trigonometry was apparent across enrollment categories. The gender balance for students enrolled in trigonometry in 1998-99 was 47 percent male and 53 percent female in contrast to calculus enrollment where about 54 percent of students enrolled were male and 46 percent were female.

Table 43

| 1998-99 Iowa Public School Enrollment in Trigonometry by Enrollment Category |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enrollment Category |  |  |  |  |  |  |  |
|  | $<250$ | $\begin{aligned} & 250- \\ & 399 \end{aligned}$ | $\begin{aligned} & 400- \\ & 5999 \end{aligned}$ | $\begin{aligned} & 600- \\ & 999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & 2,500- \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| Pupils Enrolled | 17 | 178 | 470 | 1,135 | 1,696 | 740 | 1,420 | 5,656 |
| Estimated Percent | 10.2 | 13.3 | 14.1 | 17.2 | 16.5 | 10.0 | 15.5 | 14.8 |
| Males | 5 | 92 | 213 | 548 | 820 | 324 | 650 | 2,652 |
| Females | 12 | 86 | 257 | 587 | 876 | 416 | 770 | 3,004 |

Source: Iowa Department of Education, Basic Educational Data Survey, curriculum and enrollment files.
Note: Estimated percents are based on the assumption that trigonometry is normally taken in grade 11.

## Higher Level Science Enrollments

## Chemistry

Enrollments of Iowa public school students in chemistry and the estimated percentage of students enrolled are shown in Table 44. Percentages are calculated based on the assumption that chemistry is generally taken in grade 11 . The estimated percentage of students enrolled in chemistry was 48.2 percent in 1985-86 and has varied from 63.5 percent to 69 percent during the 1990s.

Table 44
Iowa Public School Enrollment in Chemistry

| Year | Number of <br> Students | Estimated Percent <br> of Students |
| :---: | :---: | :---: |
| $1985-86$ | 17,945 | $48.2 \%$ |
| $1991-92$ | 21,180 | 63.5 |
| $1992-93$ | 22,521 | 68.4 |
| $1993-94$ | 22,860 | 65.6 |
| $1994-95$ | 24,432 | 69.0 |
| $1995-96$ | 24,234 | 65.7 |
| $1996-97$ | 24,641 | 64.7 |
| $1997-98$ | 25,536 | 66.8 |
| $1998-99$ | 25,065 | 65.5 |

[^17]Chemistry enrollments for 1998-99 are presented for enrollment categories in Table 45. Estimated percentages of eleventh grade public school students enrolled in chemistry ranged from 41.6 percent in districts with enrollments under 250 to 69.1 percent enrolled in chemistry in districts with enrollments of 600-999. In terms of the gender distribution, 53.6 percent of the total students enrolled in chemistry were females.

Table 45

| 1998-99 Iowa Public School Enrollment in Chemistry by Enrollment Category |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enrollment Category |  |  |  |  |  |  |  |
|  | <250 | $\begin{aligned} & 250- \\ & 399 \end{aligned}$ | $\begin{aligned} & 400- \\ & 599 \end{aligned}$ | $\begin{aligned} & 600- \\ & 999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & 2,500- \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| Number of Districts | 6 | 43 | 73 | 103 | 85 | 24 | 9 | 343 |
| Pupils Enrolled | 69 | 734 | 1,902 | 4,573 | 6,828 | 4,882 | 6,077 | 25,065 |
| Estimated Percent | 41.6 | 54.9 | 57.2 | 69.1 | 66.5 | 65.9 | 66.4 | 65.5 |
| Males | 33 | 324 | 842 | 2,155 | 3,144 | 2,302 |  | 11,640 |
| Females | 36 | 410 | 1,060 | 2,418 | 3,684 | 2,580 | 3,237 | 13,425 |

Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum and Enrollment files.
Note: Estimated percents are based on the assumption that chemistry is normally taken in grade 11.

## Physics

The number of students enrolled in physics has grown by just over 24 percent since 1985-86, while the estimated percentage of twelfth graders enrolled in physics has increased from just over 24 percent in 1985-86 to 30.2 percent in 1998-99, however, the estimated percentages have decreased each year since 1994-95 (Table 46).

Table 46

## Iowa Public School Enrollment in Physics

| Year | Number of <br> Students | Estimated Percent <br> of Students |
| :---: | :---: | :---: |
| $1985-86$ | 9,051 | $24.3 \%$ |
| $1991-92$ |  |  |
| $1992-93$ | 9,723 | 30.7 |
| $1993-94$ | 10,714 | 32.5 |
| $1994-95$ | 11,062 | 34.0 |
| $1995-96$ | 11,505 | 33.8 |
| $1996-97$ | 11,107 | 32.1 |
| $1997-98$ | 11,363 | 31.9 |
| $1998-99$ | 11,695 | 31.8 |

[^18]Table 47 displays public school enrollments in physics by enrollment category for 199899. An estimated 55.6 percent of twelfth graders enrolled in physics were males. This was in contrast to chemistry where the majority, 53.6 percent of students enrolled were females. The estimated percent of students enrolled in physics was the highest in districts with enrollments greater than 2,500.

Table 47

| 1998-99 Iowa Public School Enrollment in Physics by Enrollment Category |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enrollment Category |  |  |  |  |  |  |  |
|  | <250 | $\begin{aligned} & 250- \\ & 399 \end{aligned}$ | $\begin{aligned} & 400- \\ & 599 \end{aligned}$ | $\begin{aligned} & 600- \\ & 9999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & 2,500- \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| Number of Districts | 6 | 42 | 70 | 101 | 84 | 24 | 9 | 336 |
| Pupils Enrolled | 29 | 364 | 768 | 1,876 | 2,603 | 2,612 | 2,980 | 11,232 |
| Estimated Percent | 19.2 | 27.6 | 24.0 | 28.9 | 25.7 | 36.5 | 34.1 | 30.2 |
| Males | 17 | 178 | 442 | 1,053 | 1,481 | 1,440 | 1,637 | 6,248 |
| Females | 12 | 186 | 326 | 823 | 1,122 | 1,172 | 1,343 | 4,984 |

Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum and Enrollment Files.
Note: Estimated percents are based on the assumption that physics is normally taken in grade 12.

## Graduation Requirements for Mathematics and Science

Table 48 displays the average number of mathematics and science units required for graduation from Iowa public high schools. In 1985-86, the average number of mathematics and science units required for graduation was 1.88 and 1.86 units respectively. In 1998-99, the average number of units required for graduation increased for both mathematics and science; climbing to 2.14 units for mathematics, and 2.06 units for science. The average number of mathematics and science units required for graduation was higher for districts with enrollments under 1,000 in both 1985-86 and in 1998-99. Average units required for graduation in both mathematics and science reflected increases across all enrollment categories from 1985-86 to 1998-99.

Table 48

## Average Number of Mathematics and Science Units Required for Graduation in Iowa Public Schools - 1985-86 and 1998-99

| Enrollment <br> Category | Mathematics |  | Science |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $1985-86$ | $1998-99$ | $1985-86$ | $1998-99$ |
| $<250$ | 2.00 | 2.16 | 1.98 | 2.05 |
| $250-399$ | 2.01 | 2.30 | 1.99 | 2.27 |
| $400-599$ | 1.89 | 2.16 | 1.84 | 2.05 |
| $600-999$ | 1.91 | 2.14 | 1.88 | 2.05 |
| $1,000-2,499$ | 1.77 | 2.08 | 1.74 | 2.04 |
| $2,500-7,499$ | 1.49 | 1.93 | 1.52 | 1.85 |
| $7,500+$ | 1.69 | 2.00 | 1.75 | 1.89 |
| State | 1.88 | 2.14 | 1.86 | 2.06 |

[^19]
## Class Size

In December of 1998 the Iowa Department of Education conducted a survey to determine class size in kindergarten through grade four in Iowa public school districts. Information was collected on a building basis within each school district. A total of 864 individual schools, housing any combination of students in kindergarten through grade four, composed the population for the survey. The findings from the class size survey were based on returns from 363 or 96.8 percent of Iowa's 375 public school districts.

Information was collected on a classroom level from public school buildings housing students in grades K-4. Districts were directed to exclude special classrooms for students in special education, Title 1 or other "pull-out" situations. Average class size was calculated by dividing the number of students by the number of classrooms for each of the grade levels K-4.

The data used for class size calculations have the following limitations:

- Classrooms defined as multi-age or multi-grade classrooms were not considered in the calculation of average class size since the purpose was to calculate an average class size for each of the grades, kindergarten through four.
- In some instances, information provided could not be interpreted or could not be reported in the manner requested. This information was excluded.

Table 49 provides a summary of average class size in grades K-4 in Iowa public schools for the 1998-99 school year. Average class size was the lowest in kindergarten and the highest in grade four, although average class size varied by only 2.2 students comparing kindergarten to grade four.

Table 49

## Iowa Public School Class Size Statistics for Grades K-4 - 1998-99 School Year

Grade Average Class Size

In Table 50 average class size for grades K-4 is presented by enrollment categories. Across enrollment categories, average class size for grades K-4 tended to reflect increases with successively larger enrollment categories. The highest average class size in grades K-4 was most often found in the enrollment category of 2,500 -7,499.

Table 50

# Average Class Size in Iowa Public Schools <br> Kindergarten through Grade Four <br> by Enrollment Category 1998-99 School Year 

|  | Grade Level |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Kindergarten | First | Second | Third | Fourth |
| Enrollment Category |  |  | Class Size |  |  |
| <250 | 12.4 | 12.8 | 12.8 | 14.2 | 13.1 |
| 250-399 | 17.6 | 18.4 | 17.7 | 19.5 | 20.2 |
| 400-599 | 17.5 | 16.9 | 18.0 | 19.4 | 19.4 |
| 600-999 | 18.2 | 19.0 | 19.6 | 20.3 | 20.7 |
| 1,000-2,499 | 19.8 | 20.3 | 21.3 | 21.9 | 22.3 |
| 2,500-7,499 | 21.5 | 21.6 | 22.0 | 23.0 | 22.9 |
| 7,500+ | 20.7 | 21.1 | 21.7 | 23.0 | 23.4 |
| State | 19.7 | 20.1 | 20.7 | 21.7 | 21.9 |

[^20]Tables 51-52 display frequency distributions of class sizes for grades $\mathrm{K}-1$. The kindergarten distribution of class sizes reported in Table 51 reflect that 21 percent of kindergarten classes had fewer than 17 students while 5.2 percent had class sizes over 25 students. Just over 85 percent of kindergarten classrooms reported class sizes of 15-25.

Table 51

Distribution of Kindergarten Class Sizes in Iowa Public Schools 1998-99 School Year

| Class Size | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: |
| 6 | 1 | 0.1 | 1 | 0.1 |
| 7 | 1 | 0.1 | 2 | 0.1 |
| 8 | 2 | 0.1 | 4 | 0.2 |
| 9 | 10 | 0.6 | 14 | 0.8 |
| 10 | 9 | 0.5 | 23 | 1.3 |
| 11 | 11 | 0.6 | 34 | 2.0 |
| 12 | 21 | 1.2 | 55 | 3.2 |
| 13 | 43 | 2.5 | 98 | 5.8 |
| 14 | 59 | 3.5 | 157 | 9.2 |
| 15 | 70 | 4.1 | 227 | 13.3 |
| 16 | 130 | 7.6 | 357 | 21.0 |
| 17 | 123 | 7.2 | 480 | 28.2 |
| 18 | 159 | 9.3 | 639 | 37.5 |
| 19 | 137 | 8.0 | 776 | 45.5 |
| 20 | 195 | 11.4 | 971 | 57.0 |
| 21 | 147 | 8.6 | 1,118 | 65.6 |
| 22 | 154 | 9.0 | 1,272 | 74.6 |
| 23 | 144 | 8.5 | 1,416 | 83.1 |
| 24 | 109 | 6.4 | 1,525 | 89.5 |
| 25 | 91 | 5.3 | 1,616 | 94.8 |
| 26 | 50 | 2.9 | 1,666 | 97.8 |
| 27 | 14 | 0.8 | 1,680 | 98.6 |
| 28 | 7 | 0.4 | 1,687 | 99.0 |
| 29 | 7 | 0.4 | 1,694 | 99.4 |
| 30 | 6 | 0.4 | 1,700 | 99.8 |
| 31 | 1 | 0.1 | 1,701 | 99.8 |
| 32 | 2 | 0.1 | 1,703 | 99.9 |
| 35 | 1 | 0.1 | 1,704 | 100.0 |

Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

For first grade 15.9 percent of classrooms reported class sizes under 17 students while only 5.4 percent reported classrooms with class sizes over 25 students. More than 89 percent of first grade classrooms reported class sizes ranging from 15-25 students (Table 52).

Table 52

Distribution of First Grade Class Sizes

## in Iowa Public Schools <br> 1998-99 School Year

| Class Size | Frequency | Percent | Cumulative <br> Frequency | Cumulative <br> Percent |
| :---: | :---: | :---: | :---: | :---: |
| 6 | 1 | 0.1 | 1 | 0.1 |
| 8 | 4 | 0.2 | 5 | 0.3 |
| 9 | 3 | 0.2 | 8 | 0.5 |
| 11 | 7 | 0.4 | 15 | 0.9 |
| 12 | 12 | 0.7 | 27 | 1.6 |
| 13 | 26 | 1.6 | 53 | 3.2 |
| 14 | 34 | 2.1 | 87 | 5.3 |
| 15 | 72 | 4.4 | 159 | 9.7 |
| 16 | 103 | 6.3 | 262 | 15.9 |
| 17 | 142 | 8.6 | 404 | 24.5 |
| 18 | 144 | 8.7 | 548 | 33.3 |
| 19 | 165 | 10.0 | 713 | 43.3 |
| 20 | 175 | 10.6 | 888 | 53.9 |
| 21 | 186 | 11.3 | 1,074 | 65.2 |
| 22 | 160 | 9.7 | 1,234 | 74.9 |
| 23 | 123 | 7.5 | 1,357 | 82.4 |
| 24 | 112 | 6.8 | 1,469 | 89.2 |
| 25 | 89 | 5.4 | 1,558 | 94.6 |
| 26 | 41 | 2.5 | 1,599 | 97.1 |
| 27 | 24 | 1.5 | 1,623 | 98.5 |
| 28 | 14 | 0.9 | 1,637 | 99.4 |
| 29 | 4 | 0.2 | 1,641 | 99.6 |
| 30 | 2 | 0.1 | 1,643 | 99.8 |
| 31 | 1 | 0.1 | 1,644 | 99.8 |
| 33 | 1 | 0.1 | 1,645 | 99.9 |
| 35 | 2 | 0.1 | 1,647 | 100.0 |

[^21]The distributions of class sizes; depicted in Tables 53-55, for grades two through four, reflect that the percentage of classrooms with fewer than 17 students decreases with successive increases in grade level. Class size for grades two through four reflected successive decreases in the percentage of class sizes under 17 students, with percentages for grades two through four of 11.7 percent, 8.6 percent, and 7.3 percent respectively.

## Table 53

Distribution of Second Grade Class Sizes in Iowa Public Schools 1998-99 School Year

| Class Size | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: |
| 5 | 1 | 0.1 | 1 | 0.1 |
| 8 | 4 | 0.3 | 5 | 0.3 |
| 9 | 2 | 0.1 | 7 | 0.4 |
| 10 | 2 | 0.1 | 9 | 0.6 |
| 11 | 4 | 0.3 | 13 | 0.8 |
| 12 | 15 | 0.9 | 28 | 1.8 |
| 13 | 11 | 0.7 | 39 | 2.4 |
| 14 | 29 | 1.8 | 68 | 4.3 |
| 15 | 53 | 3.3 | 121 | 7.6 |
| 16 | 66 | 4.1 | 187 | 11.7 |
| 17 | 81 | 5.1 | 268 | 16.8 |
| 18 | 101 | 6.3 | 369 | 23.1 |
| 19 | 147 | 9.2 | 516 | 32.3 |
| 20 | 217 | 13.6 | 733 | 45.9 |
| 21 | 196 | 12.3 | 929 | 58.1 |
| 22 | 186 | 11.6 | 1,115 | 69.8 |
| 23 | 121 | 7.6 | 1,236 | 77.3 |
| 24 | 145 | 9.1 | 1,381 | 86.4 |
| 25 | 91 | 5.7 | 1,472 | 92.1 |
| 26 | 76 | 4.8 | 1,548 | 96.9 |
| 27 | 25 | 1.6 | 1,573 | 98.4 |
| 28 | 11 | 0.7 | 1,584 | 99.1 |
| 29 | 9 | 0.6 | 1,593 | 99.7 |
| 30 | 2 | 0.1 | 1,595 | 99.8 |
| 31 | 1 | 0.1 | 1,596 | 99.9 |
| 32 | 1 | 0.1 | 1,597 | 99.9 |
| 35 | 1 | 0.1 | 1,598 | 100.0 |

Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

Table 54

## Distribution of Third Grade Class Sizes in Iowa Public Schools 1998-99 School Year

| Class Size | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: |
| 7 | 1 | 0.1 | 1 | 0.1 |
| 9 | 2 | 0.1 | 3 | 0.2 |
| 10 | 3 | 0.2 | 6 | 0.4 |
| 11 | 2 | 0.1 | 8 | 0.5 |
| 12 | 7 | 0.4 | 15 | 1.0 |
| 13 | 9 | 0.6 | 24 | 1.5 |
| 14 | 16 | 1.0 | 40 | 2.5 |
| 15 | 29 | 1.8 | 69 | 4.4 |
| 16 | 66 | 4.2 | 135 | 8.6 |
| 17 | 63 | 4.0 | 198 | 12.6 |
| 18 | 87 | 5.5 | 285 | 18.1 |
| 19 | 129 | 8.2 | 414 | 26.3 |
| 20 | 162 | 10.3 | 576 | 36.6 |
| 21 | 161 | 10.2 | 737 | 46.8 |
| 22 | 142 | 9.0 | 879 | 55.8 |
| 23 | 173 | 11.0 | 1,052 | 66.8 |
| 24 | 159 | 10.1 | 1,211 | 76.9 |
| 25 | 137 | 8.7 | 1,348 | 85.6 |
| 26 | 105 | 6.7 | 1,453 | 92.3 |
| 27 | 67 | 4.3 | 1,520 | 96.6 |
| 28 | 27 | 1.7 | 1,547 | 98.3 |
| 29 | 8 | 0.5 | 1,555 | 98.8 |
| 30 | 13 | 0.8 | 1,568 | 99.6 |
| 31 | 2 | 0.1 | 1,570 | 99.7 |
| 32 | 4 | 0.3 | 1,574 | 100.0 |

[^22]Table 55

## Distribution of Fourth Grade Class Sizes <br> in Iowa Public Schools 1998-99 School Year

| Class Size | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
| :---: | :---: | :---: | :---: | :---: |
| 7 | 2 | 0.1 | 2 | 0.1 |
| 8 | 2 | 0.1 | 4 | 0.3 |
| 9 | 2 | 0.1 | 6 | 0.4 |
| 10 | 2 | 0.1 | 8 | 0.5 |
| 11 | 2 | 0.1 | 10 | 0.7 |
| 12 | 1 | 0.1 | 11 | 0.7 |
| 13 | 9 | 0.6 | 20 | 1.3 |
| 14 | 22 | 1.5 | 42 | 2.8 |
| 15 | 24 | 1.6 | 66 | 4.4 |
| 16 | 44 | 2.9 | 110 | 7.3 |
| 17 | 63 | 4.2 | 173 | 11.4 |
| 18 | 75 | 4.9 | 248 | 16.4 |
| 19 | 106 | 7.0 | 354 | 23.4 |
| 20 | 141 | 9.3 | 495 | 32.7 |
| 21 | 154 | 10.2 | 649 | 42.8 |
| 22 | 176 | 11.6 | 825 | 54.4 |
| 23 | 169 | 11.1 | 994 | 65.6 |
| 24 | 139 | 9.2 | 1,133 | 74.7 |
| 25 | 123 | 8.1 | 1,256 | 82.8 |
| 26 | 115 | 7.6 | 1,371 | 90.4 |
| 27 | 81 | 5.3 | 1,452 | 95.8 |
| 28 | 42 | 2.8 | 1,494 | 98.5 |
| 29 | 11 | 0.7 | 1,505 | 99.3 |
| 30 | 8 | 0.5 | 1,513 | 99.8 |
| 31 | 2 | 0.1 | 1,515 | 99.9 |
| 32 | 1 | 0.1 | 1,516 | 100.0 |

[^23]
## Technology

The technology section reports information on computer-related course enrollments, compares expenditures for technology hardware and software, and provides information on the use of automated student information systems, and public school participation in electronic data interchange (EDI) through Project EASIER (electronic access system for Iowa education records). This section also provides information on computer-to-student ratios.

## Computer-Related Course Enrollments

Enrollments for Iowa public school students, in grades 9-12, in computer-related courses, are presented for 1985-86 and for 1998-99. The estimated percentages of students enrolled in computer-related course are also reported. Percentages were calculated using the sum of grade 9-12 enrollments as the denominator. In 1985-86, just under 18,500 students were enrolled in computer-related courses. This represented an estimated 12.1 percent of the combined $9-12$ public school enrollment (Table 56). More than 83 percent of districts in 1985-86 offered computer-related courses. The estimated percentage of high school students enrolled in computerrelated courses in 1985-86 ranged from six percent in the largest enrollment category to 21.6 percent in the smallest enrollment category. Just over 56 percent of students enrolled in computer-related courses in 1985-86 were males.

Table 56

## Iowa Public High School Students Enrolled in Computer-Related Courses 1985-86 School Year

|  | Number of <br> Districts |  |  |  |  |  |  |
| :--- | :---: | :---: | ---: | ---: | ---: | ---: | ---: |
| Number of <br> Districts | Offering <br> Courses | Pupils <br> Enrolled | Males <br> Enrolled | Females <br> Enrolled | Total 9-12 <br> Enrollments | Estimated <br> Percent |  |
| $<250$ | 52 | 41 | 697 | 372 | 325 | 3,223 | $21.6 \%$ |
| $250-399$ | 90 | 72 | 1,262 | 689 | 573 | 9,160 | 13.8 |
| $400-599$ | 95 | 74 | 2,047 | 1,073 | 974 | 14,882 | 13.8 |
| $600-999$ | 97 | 81 | 3,466 | 1,859 | 1,607 | 23,420 | 14.8 |
| $1,000-2,499$ | 71 | 65 | 4,565 | 2,505 | 2,060 | 34,558 | 13.2 |
| $2,500-7,499$ | 24 | 24 | 4,250 | 2,670 | 1,580 | 30,491 | 13.9 |
| $7,500+$ | 8 | 7 | 2,178 | 1,248 | 930 | 36,400 | 6.0 |
| State | 437 | 364 | 18,465 | 10,416 | 8,049 | 152,134 | 12.1 |

[^24]During the 1998-99 school year, public school grade 9-12 enrollment in computerrelated courses increased to 35,847 , a 94.1 percent increase over 1985-86 figures (Table 57). The gender balance remained relatively constant with just under 56 percent of enrollments represented by males. The estimated percentage of public high school students enrolled in computer-related courses was 23 percent statewide compared to 12.1 percent in 1985-86. Estimated percentages ranged from 14 percent in the largest districts to 34.6 percent of high school students in the smallest school districts. In general, the estimated percentage of students enrolled in com-puter-related courses decreased with increases in enrollment categories. In 199899, 92.3 percent of public school districts offered computer-related courses compared to just over 83 percent in 1985-86.

Table 57

# Iowa Public High School Students Enrolled in Computer-Related Courses 1998-99 School Year 

|  | Number of Districts | Number of Districts Offering Courses | Pupils <br> Enrolled | Males Enrolled | Females <br> Enrolled | Total 9-12 <br> Enrollments | Estimated <br> Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <250 | 28 | 9 | 233 | 112 | 121 | 674 | 34.6\% |
| 250-399 | 51 | 45 | 1,696 | 914 | 782 | 5,364 | 31.6 |
| 400-599 | 74 | 73 | 3,881 | 2,121 | 1,760 | 13,085 | 29.7 |
| 600-999 | 104 | 101 | 7,803 | 4,269 | 3,534 | 26,208 | 29.8 |
| 1,000-2,499 | 85 | 85 | 11,205 | 6,255 | 4,950 | 41,877 | 26.8 |
| 2,500-7,499 | 24 | 24 | 5,651 | 3,280 | 2,371 | 30,208 | 18.7 |
| 7,500+ | 9 | 9 | 5,378 | 3,018 | 2,360 | 38,418 | 14.0 |
| State | 375 | 346 | 35,847 | 19,969 | 15,878 | 155,834 | 23.0 |

Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum and Enrollment files.
Note: Percents are estimated with an assumption that computer-related courses are taken in grades 9-12.

## Expenditures for Computer Hardware and Software

Data on expenditures for hardware and software are provided from the Certified Annual Financial Report. Data are reported over a six-year period from 1992-93 through 1997-98 (Table 58). Software expenditures increased from about $\$ 5.6$ million in 1992-93 to about $\$ 8.1$ million in 1997-98, an increase of 44.7 percent. Per pupil expenditures for software over the period increased from $\$ 11.27$ to nearly $\$ 16$ in 1997-98, an increase of 41.9 percent. Hardware expenditures, on the other hand, increased to about $\$ 41.4$ million in 1997-98, an increase of 184 percent, while per pupil expenditures for hardware increased to nearly $\$ 82$ in 1997-98 from just over $\$ 29$ in 1992-93. Total expenditures for hardware and software combined increased nearly 146 percent from 1992-93 to 1997-98, to about $\$ 49.5$ million and resulted in per pupil expenditures of just under $\$ 100$ (Figure 8).

Table 58
Total Expenditures and Average Per Pupil Expenditures for Computer Software and Hardware* In Iowa Public Schools Six-Year Comparison

| Year | No. of Districts | Total Enrollment | Software |  | Hardware |  | Software \& Hardware Combined |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Total Spent | Per Pupil Spent | Total Spent | Per Pupil Spent | Total <br> Spent | Per Pupil Spent |
| 1992-93 | 418 | 495,342 | \$5,581,237 | \$11.27 | \$14,562,080 | \$29.40 | \$20,143,317 | \$40.67 |
| 1993-94 | 397 | 497,009 | \$3,957,878 | \$7.96 | \$20,244,041 | \$40.73 | \$24,201,919 | \$48.70 |
| 1994-95 | 390 | 500,592 | \$5,448,978 | \$10.88 | \$21,049,364 | \$42.05 | \$26,498,342 | \$52.93 |
| 1995-96 | 384 | 504,505 | \$5,303,893 | \$10.51 | \$25,513,948 | \$50.57 | \$30,817,841 | \$61.09 |
| 1996-97 | 379 | 505,531 | \$7,182,899 | \$14.21 | \$40,201,374 | \$79.52 | \$47,384,273 | \$93.73 |
| 1997-98 | 377 | 505,130 | \$8,078,414 | \$15.99 | \$41,405,937 | \$81.97 | \$49,484,351 | \$97.96 |

Source: Iowa Department of Education, Certified Annual Financial Reports. (Per Pupil expenditures based on Certified
Enrollment).
Note: $\quad$ *Includes Admintrative, Instructional, and all other Software and Hardware Purchased.

Figure 8

## Per Pupil Expenditures for Computer Software and Hardware in Iowa Public Schools



[^25]Note: *Includes Administrative, Instructional, and all other Software and Hardware Purchased.

Average expenditures for computer software and hardware are reported in Table 59 by enrollment category. No particular patterns were evident in per pupil expenditures across enrollment categories for the 1997-98 school year.

It is of interest to note that the minimum expenditures for both hardware and software in 1997-98 were zero. In fact, 25 school districts reported no expenditures for software in 1997-98, and 27 districts reported no expenditures for technology hardware. In the prior school year, 31 districts reported zero expenditures on software, and 32 reported no expenditures for technology hardware.

Table 59

## Iowa Public School Total and Average Per Pupil Expenditures for Computer Software and Hardware 1997-98*

|  |  |  | Software |  |  |  | Hardware |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \vec{む} \\ & \stackrel{\rightharpoonup}{n} \\ & \vec{N} \\ & 0 \end{aligned}$ |  |  | F $\overrightarrow{2}$ 2 0 0 0 0 0 0 0 0 | $\begin{aligned} & \overrightarrow{0} \\ & \stackrel{0}{n} \\ & \text { N } \\ & 0 \\ & 0 \end{aligned}$ | 亳 |  |  |
| <250 | 23 | 4,521 | \$57,022 | \$0 | \$12,405 | \$12.61 | \$386,931 | \$0 | \$68,597 | \$85.59 |
| 250-399 | 51 | 17,108 | \$338,453 | \$0 | \$54,327 | \$19.78 | \$1,271,229 | \$0 | \$119,533 | \$74.31 |
| 400-599 | 71 | 35,757 | \$537,594 | \$0 | \$36,872 | \$15.03 | \$2,741,508 | \$0 | \$107,128 | \$76.67 |
| 600-999 | 112 | 84,801 | \$1,252,643 | \$0 | \$59,814 | \$14.77 | \$5,870,508 | \$0 | \$218,798 | \$69.23 |
| 1,000-2,499 | 86 | 130,208 | \$1,943,227 | \$0 | \$153,020 | \$14.92 | \$10,326,055 | \$0 | \$429,162 | \$79.30 |
| 2,500-7,499 | 25 | 99,314 | \$1,727,402 | \$0 | \$230,520 | \$17.39 | \$8,643,197 | \$0 | \$820,229 | \$87.03 |
| 7,500+ | 9 | 133,421 | \$2,222,073 | \$101,816 | \$418,688 | \$16.65 | \$12,166,509 | \$0 | \$3,051,071 | \$91.19 |
| State | 377 | 505,130 | \$8,078,414 | \$0 | \$418,688 | \$15.99 | \$41,405,937 | \$0 | \$3,051,071 | \$81.97 |

Source: Iowa Department of Education, Certified Annual Financial Report, 1997-98. (Per Pupil Expenditures based on Certified Enrollment).
Note: *Includes Administrative, Instructional, and all other Software and Hardware Purchased.

## Availability of Computers

Table 60 reports information on the number of computers available for use by students in Iowa public schools. Comparisons are made by enrollment category for 1995-96 through 1998-99. Statewide, the ratio of pupils to computers has decreased substantially, dropping from 7.2 pupils per computer in 1995-96, to 4.6 pupils per computer in the 1998-99 school year. Substantial decreases in the pupil to computer ratio occurred for each of the seven enrollment categories across the four-year period. In general, the ratio of pupils to computers increased with each successively larger enrollment category. Overall, the number of computers more than doubled from 1995-96 to 1998-99. Year-over-year increases in the number of computers available for student use in Iowa public schools were 58.9 percent, 13.7 percent, and 11.7 percent for the last three school years respectively. The average annual increase over the past three school years was 28.1 percent.

| Number of Computers in Iowa Public Schools <br> by Enrollment Category <br> 1995-96 то 1998-99 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enrollment Category |  |  |  |  |  |  |  |
| 1995-96 | <250 |  | $\begin{aligned} & 900- \\ & \hline \end{aligned}$ | $\begin{aligned} & 600- \\ & 999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & 2,500- \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| Total Number of Districts | 26 | 50 | 81 | 108 | 85 | 25 | 9 | 384 |
| Number of Districts Reporting | 22 | 43 | 74 | 91 | 72 | 22 | 7 | 331 |
| Number of Computers | 829 | 2,778 | 6,043 | 11,258 | 13,989 | 10,010 | 9,371 | 54,278 |
| Certified Enrollment | 4,509 | 13,102 | 36,043 | 68,185 | 104,286 | 82,049 | 82,983 | 391,157* |
| Pupils per Computer | 5.4 | 4.7 | 6.0 | 6.1 | 7.6 | 8.2 | 8.9 | 7.2 |
| 1996-97 |  |  |  |  |  |  |  |  |
| Total Number of Districts | 24 | 46 | 76 | 116 | 83 | 25 | 9 | 379 |
| Number of Districts Reporting | 24 | 46 | 76 | 116 | 83 | 25 | 9 | 379 |
| Number of Computers | 1,155 | 3,813 | 7,904 | 18,206 | 21,910 | 16,910 | 17,054 | 86,239 |
| Certified Enrollment | 4,818 | 15,324 | 37,716 | 88,577 | 126,738 | 99,346 | 133,004 | 505,523 |
| Pupils per Computer | 4.2 | 4.0 | 4.8 | 4.9 | 5.8 | 5.9 | 7.8 | 5.9 |
| 1997-98 |  |  |  |  |  |  |  |  |
| Total Number of Districts | 23 | 51 | 71 | 112 | 86 | 25 | 9 | 377 |
| Number of Districts Reporting | 23 | 51 | 71 | 112 | 85 | 25 | 9 | 376 |
| Number of Computers | 1,078 | 4,565 | 8,809 | 18,632 | 25,292 | 18,783 | 20,870 | 98,029 |
| Certified Enrollment | 4,521 | 17,108 | 35,757 | 84,801 | 130,208 | 99,314 | 133,421 5 | 505,130 |
| Pupils per Computer | 4.2 | 3.7 | 4.1 | 4.6 | 5.1 | 5.3 | 6.4 | 5.2 |
| 1998-99 |  |  |  |  |  |  |  |  |
| Total Number of Districts | 22 | 51 | 72 | 113 | 84 | 24 | 9 | 375 |
| Number of Districts Reporting | 22 | 51 | 72 | 112 | 84 | 23 | 9 | 373 |
| Number of Computers | 1,208 | 4,743 | 9,640 | 20,468 | 28,505 | 20,301 | 24,662 | 109,527 |
| Certified Enrollment | 4,154 | 16,948 | 36,284 | 86,153 | 128,859 | 96,897 1 | 133,239 5 | 502,534 |
| Pupils per Computer | 3.4 | 3.6 | 3.8 | 4.2 | 4.5 | 4.8 | 5.4 | 4.6 |

Source: Iowa Department of Education, Basic Educational Data Survey, Technology Files, and Certified Enrollment Files.
Notes: In 1995-96 only 86.2 PERCENT OF the total 384 school districts reported.
The number of computers in 1997-98 was estimated based on the previous year for one school district. In 1998-99 all but two school districts reported. For these districts 1997-98 figures were used as a best estimate for current year figures.

Table 61 reports the distribution of computers compared to the distribution of certified enrollments by enrollment category for the school years 1995-96 through 1998-99. In general, districts with enrollments under 1,000 had a higher proportion of computers compared to the proportion of enrollment. In 1998-99, districts with enrollments under 1,000 accounted for 28.5 percent of the total certified enrollment in Iowa public schools while accounting for 32.9 percent of the public school computers used by students.

Table 61

## Distribution of Computers and Certified Enrollments in Iowa Public School Districts 1995-96 то 1998-99

| 1995-96 | Enrollment Category |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <250 | $\begin{aligned} & 250- \\ & 399 \end{aligned}$ | $\begin{array}{r} 400- \\ 599 \end{array}$ | $\begin{aligned} & 600- \\ & 999 \end{aligned}$ | $\begin{aligned} & 1,000- \\ & 2,499 \end{aligned}$ | $\begin{aligned} & \text { 2,500- } \\ & 7,499 \end{aligned}$ | 7,500+ | State |
| Total Number of Districts | 26 | 50 | 81 | 108 | 85 | 25 | 9 | 384 |
| Number of Districts Reporting | 22 | 43 | 74 | 91 | 72 | 22 | 7 | 331 |
| Percent of Certified Enrollment | 1.2 | 3.3 | 9.2 | 17.4 | 26.7 | 21.0 | 21.2 | 100 |
| Percent of Computers | 1.5 | 5.1 | 11.1 | 20.7 | 25.8 | 18.5 | 17.3 | 100 |
| 1996-97 |  |  |  |  |  |  |  |  |
| Total Number of Districts | 24 | 46 | 76 | 116 | 83 | 25 | 9 | 379 |
| Number of Districts Reporting | 24 | 46 | 76 | 116 | 83 | 25 | 9 | 379 |
| Percent of Certified Enrollment | 1.0 | 3.0 | 7.5 | 17.5 | 25.1 | 19.6 | 26.3 | 100 |
| Percent of Computers | 1.3 | 4.4 | 9.2 | 21.1 | 25.4 | 18.8 | 19.8 | 100 |
| 1997-98 |  |  |  |  |  |  |  |  |
| Total Number of Districts | 23 | 51 | 71 | 112 | 86 | 25 | 9 | 377 |
| Number of Districts Reporting | 23 | 51 | 71 | 112 | 85 | 25 | 9 | 376 |
| Percent of Certified Enrollment | 0.9 | 3.4 | 7.1 | 16.8 | 25.8 | 19.6 | 26.4 | 100 |
| Percent of Computers | 1.1 | 4.6 | 9.0 | 19.0 | 25.8 | 19.2 | 21.3 | 100 |

1998-99

| Total Number of Districts | 22 | 51 | 72 | 113 | 84 | 24 | 9 | 375 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Number of Districts Reporting | 22 | 51 | 72 | 112 | 84 | 23 | 9 | 373 |
| Percent of Certified Enrollment | 0.8 | 3.4 | 7.2 | 17.2 | 25.6 | 19.3 | 26.5 | 100 |
| Percent of Computers | 1.1 | 4.3 | 8.8 | 18.7 | 26.1 | 18.5 | 22.5 | 100 |

Source: Iowa Department of Education, Basic Educational Data Survey, Technology Files, and Certified Enrollment Files.
Notes: In 1995-96 only 86.2 Percent of the total 384 school districts reported.
The number of computers in 1997-98 was estimated based on the previous year for one school district. In 1998-99 all but two school districts reported. For these districts 1997-98 figures were used as a best ESTIMATE FOR CURRENT YEAR FIGURES.

## Electronic Data Interchange (EDI)

In 1995-96, Project EASIER (Electronic Access System for Iowa Education Records) was launched by the Iowa Department of Education. The mission of Project EASIER was to reduce data burden by utilizing information directly from school district student automated information systems and to encourage better decision making by
establishing and maintaining a cost effective method of accessing and transmitting accurate and timely education information among school districts, postsecondary institutions, and the Iowa Department of Education.

Project EASIER utilizes electronic data interchange (EDI). EDI is the transmission of data from computer to computer utilizing standardized formats. Information is transmitted between trading partners, including school districts, postsecondary institutions, and the Iowa Department of Education. Information is transmitted directly over the Internet as an e-mail attachment. All information is encrypted and only the intended trading partner can decrypt information received.

Project EASIER allows school districts to accomplish three major outcomes: 1) fulfill data requirements for seven Basic Educational Data Survey (BEDS) forms required by the Department of Education, 2) transmit electronic student transcripts to participating postsecondary institutions, and 3) electronically transmit individual student records to other school districts when students transfer from one school district to another.

Table 62 presents data on the number of school districts participating in Project EASIER over the time period from 1995-96 through 1998-99. In 1995-96, a total of six Iowa school districts were involved in Project EASIER on a pilot basis. This represented 1.6 percent of Iowa public school districts. By the end of the 1998-99 school year, 150 public school districts were participating in Project EASIER. This represented 40 percent of the state's 375 public school districts. Nearly 53 percent of Project EASIER participants had progressed to a readiness level where information necessary to satisfy Department of Education Basic Educational Data Survey forms related to student information were transmitted to the Department utilizing EDI.

Table 62

## Participation of Iowa Public School Districts in Electronic Data Interchange (EDI) through Project EASIER 1995-96 то 1998-99



About a dozen Iowa school districts have sent test electronic student transcripts utilizing EDI to the four participating postsecondary institutions. Participating postsecondary institutions include the University of Northern Iowa, the University of Iowa, Iowa State University, and Kirkwood Community College.

Table 63 reflects the distribution of Project EASIER sites by area education agency. Project EASIER sites are represented in each AEA.

Table 63

## Distribution of Iowa Project EASIER Sites by Area Education Agency 1998-99

| AEAs | Number of Participating Sites | Percent of Sites | Total Number of Districts | Percent of Total Districts |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 9 | 6.0\% | 25 | 6.7\% |
| 2 | 8 | 5.3 | 24 | 6.4 |
| 3 | 6 | 4.0 | 19 | 5.1 |
| 4 | 8 | 5.3 | 14 | 3.7 |
| 5 | 19 | 12.7 | 31 | 8.2 |
| 6 | 8 | 5.3 | 16 | 4.3 |
| 7 | 12 | 8.0 | 22 | 5.9 |
| 9 | 5 | 3.3 | 22 | 5.9 |
| 10 | 7 | 4.7 | 33 | 8.8 |
| 11 | 23 | 15.3 | 56 | 14.9 |
| 12 | 6 | 4.0 | 24 | 6.4 |
| 13 | 14 | 9.4 | 31 | 8.2 |
| 14 | 14 | 9.4 | 21 | 5.6 |
| 15 | 9 | 6.0 | 24 | 6.4 |
| 16 | 2 | 1.3 | 13 | 3.5 |
| State | 150 | 100.0\% | 375 | 100.0\% |

Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Project EASiER Site Records, 1998-99.

## Early Childhood Education

In 1985-86, only about 25 percent of all Iowa public school districts reported offering all-day, everyday, two-semester kindergarten programs. This percentage grew steadily in each subsequent year (Table 64). For the 1998-99 school year, 77.3 percent of all public school districts offered all-day, everyday, two-semester kindergarten programs. A comparison of kindergarten program types is presented in Table 65 by enrollment category for the 1998-99 school year. In general, about 80 percent or more of Iowa public school districts with enrollments under 1,000 , offered all-day, everyday, two-semester kindergarten programs compared to enrollment categories of 1,000 and above, where percentages ranged from about 45 percent to about 70 percent.

Table 64

| Number and Percent of Iowa Public School Districts Offering <br> All-Day, <br> Everydany, Two-Semester |
| :---: | :---: | :---: |
| Kindergarten Programs - 1985-86 to 1998-99 |

Source: Iowa Department of Education, Basic Educational Data Survey, Policies and Procedures and Early Childhood Files.

Table 65

## Iowa Public School Kindergarten Program Type - 1998-99

| Enrollment Category | Total Number of Districts | Kindergarten Program Type |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | All-Day, Everyday, Two-Semesters |  | All Others |
|  |  | Number of Districts | Percent in Category | Number of Districts |
| <250 | 22 | 18 | 81.8\% | 4 |
| 250-399 | 51 | 45 | 88.2 | 6 |
| 400-599 | 72 | 58 | 80.6 | 14 |
| 600-999 | 113 | 95 | 84.1 | 18 |
| 1,000-2,499 | 84 | 59 | 70.2 | 25 |
| 2,500-7,499 | 24 | 11 | 45.8 | 13 |
| 7,500+ | 9 | 4 | 44.4 | 5 |
| State | 375 | 290 | 77.3 | 85 |

Source: Iowa Department of Education, Basic Educational Data Survey, Early Childhood Files.

Table 66 compares preschool program enrollments in public school districts for 1996-97 through 1998-99. Overall, the number of children served in preschool programs since 1996-97, increased by 46.1 percent. The largest percentage increases occurred for the enrollment categories with enrollments under 250 and the category 400-599.

Table 66

## Iowa Public School Preschool Enrollments by Enrollment Category 1996-97 то 1998-99

| Enrollment Category | 1996-97 |  | 1997-98 |  | 1998-99 |  | Percent Change in Preschool Enrollment 1996-97 to 1998-99 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Preschool Enrollment | Percent of Total Preschool Enrollment | Preschool Enrollment | Percent of Total Preschool Enrollment | Preschool Enrollment | Percent of Total Preschool Enrollment |  |
| <250 | 90 | 1.8\% | 203 | 3.0\% | 246 | 3.3\% | 173.3\% |
| 250-399 | 378 | 7.5 | 417 | 6.1 | 459 | 6.2 | 21.4 |
| 400-599 | 410 | 8.1 | 551 | 8.0 | 837 | 11.3 | 104.1 |
| 600-999 | 888 | 17.6 | 1,606 | 23.4 | 1,571 | 21.3 | 76.9 |
| 1,000-2,499 | 1,001 | 19.8 | 1,118 | 16.3 | 1,470 | 19.9 | 46.9 |
| 2,500-7,499 | 679 | 13.4 | 865 | 12.6 | 826 | 11.2 | 21.6 |
| 7,500+ | 1,612 | 31.9 | 2,100 | 30.6 | 1,980 | 26.8 | 22.8 |
| State | 5,058 | 100.0 | 6,860 | 100.0 | 7,389 | 100.0 | 46.1 |

[^26]
## Student Performance

The student performance section of the Condition of Education Report is designed to report current information as well as student progress over time with respect to performance indicators which are made available through public school districts, as well as from other sources such as the Iowa Testing Programs, American College Testing, and Advanced Placement. Information is presented in summary form on a statewide basis and is also reported, where available, by subgroups such as gender and enrollment category. When possible, comparisons are made with figures for the nation and other midwest states.

Data presented in the student performance section of the 1999 Condition of Education Report includes: Iowa Tests of Basic Skills (ITBS), Iowa Tests of Educational Development (ITED), American College Testing Assessment (ACT), Scholastic Assessment Tests (SAT), Advanced Placement (AP), postsecondary education/training pursuits, grade 7-12 dropouts, and postsecondary enrollment options.

## Iowa Testing Programs

Iowa is one of only a few states which does not have a mandated statewide testing program. However, nearly all Iowa public school districts voluntarily participate in the student achievement testing offered through the Iowa Testing Programs at the University of Iowa. Two test batteries are offered by the Iowa Testing Programs: the Iowa Tests of Basic Skills for grades 3-8, and the Iowa Tests of Educational Development for grades 9-12. Scores from the two test batteries provide Iowa educators with information to help improve student learning and instructional practices. Iowa Testing Programs provides student achievement reports to school districts at nominal fees. These reports provide diagnostic information as well as describe student achievement levels. The reports also provide information needed to monitor achievement over time for specific grade levels and attendance centers, as well as at the school district level. This section presents ITBS information for grades 3-8 and ITED information for grades 9-11.

## Iowa Tests of Basic Skills (ITBS) Performance

The ITBS battery contains 13 specific tests: Vocabulary, Reading Comprehension, Capitalization, Punctuation, Spelling, Language Usage and Expression, Mathematics Concepts and Estimation, Mathematics Problem Solving and Data Interpretation, Mathematics Computation, Social Studies, Science, Maps and Diagrams, and Reference Materials. An average of all scores in the test battery, a composite score, is also calculated.

Average composite ITBS scores for grades three through eight are reported in Figure 9. Scores are presented as Iowa grade equivalents for the years 1985 to 1999. Average Iowa grade equivalent scores describe students' performance, based on a given grade and the number of months in that grade. For example, a student with a grade equivalent score of 7.5 has scored like the typical student finishing five months of grade seven. ITBS composite scores for Iowa students in grades 3-8 have, in general, gradually declined since the early 1990s.

Figure 9
Iowa ITBS Average Composite Scores for Grades 3-8, 1985-1999 In Terms of 1965 "Base Year" Iowa Grade Equivalents


[^27]ITBS Iowa grade equivalent scores for the Mathematics Total score for students in grades 3-8 are presented in Figure 10 for the years 1985 through 1999 (the Mathematics Total score is an average of the Mathematics Concepts and Estimation and the Mathematics Problem Solving and Data Interpretation scores). Scores generally increased from 1985 through 1992-93, with the exception of scores for grades three and four, which showed a general decline over the last five years. Mathematics Total scores have shown relative stability from 1994 to the present.

Figure 10

## Iowa ITBS Average Mathematics Total Scores for <br> Grades 3-8, 1985-1999

In Terms of 1965 "Base Year" Iowa Grade Equivalents


School Year Ending

Source: Iowa Testing Programs, University of Iowa.
Note: Baseline is midyear of 1965.

Iowa reading achievement as indicated by the ITBS Reading Comprehension score, showed a general decline over the last seven years for grades three through eight (Figure 11).

Figure 11

# Iowa ITBS Average Reading Comprehension Scores <br> for Grades 3-8, 1985-1999 <br> In Terms of 1965 "Base Year" Iowa Grade Equivalents 



Source: Iowa Testing Programs, University of Iowa.
Note: Baseline is midyear of 1965.

## Iowa Tests of Educational Development (ITED) Performance

Seven specific tests are included in the ITED test battery: Vocabulary, Literary Materials, Expression, Quantitative Thinking, Social Studies, Science, and Sources of Information. The composite ITED score is an average of the seven individual ITED tests. A Content Area Reading score, which is based on excerpts from the Literary Materials, Science, and Social Studies tests, is also provided.

Iowa ITED average composite scores for the years 1985 through 1998 are reported for grades 9-11 in Figure 12. In general, scores for each of the three grade levels showed gradual increases from 1985 through 1994. ITED composite scores after 1994 showed a slight decrease in grades 9-11.

Figure 12
Iowa ITED Average Composite Scores for Grades 9-11 1985-1998


Iowa Average ITED scores for the Quantitative Thinking Test, presented in Figure 13 for grades 9-11, showed an upward trend from 1986 through 1992. Average ITED Quantitative Thinking scores remained relatively stable from 1993 to 1997 and showed a slight decline in 1998.

Figure 13

Iowa ITED Average Quantitative Thinking Scores for Grades 9-11 1985-1998


Source: Iowa Testing Programs, University of Iowa
Notes: In 1993 new scale scores were developed for ITED, therefore both old and new scales are shown so THAT A CONSISTENT TREND LINE CAN BE PROVIDED. SCORES PROVIDED ARE BASED ON FALL TESTING.

Average ITED Science scores for Iowa students in grades 9-11 are depicted in Figure 14. In general, average science scores for each of grades 9-11 increased from 1987 to 1992. These scores have remained relatively stable since 1992.

Figure 14
Iowa ITED Average Science Scores for Grades 9-11 1985-1998


Average ITED Content Area Reading scores for Iowa students in grades 9-11 showed a general upward trend from 1985 through 1994. Since 1994, however, scores in each grade have fluctuated somewhat (Figure 15).

Figure 15

## Iowa ITED Average Content Area Reading Scores for Grades 9-11 1985-1998



## ITBS and ITED Achievement Level Distributions

As a guide to the interpretation of the ITBS and ITED student achievement level distributions shown in Figures 16-27, the following descriptions, provided by Iowa Testing Program staff, have been included.
"The biennium summaries of Iowa statewide achievement data describe student performance in reading and mathematics on the Iowa Tests of Basic Skills (ITBS) and the Iowa Tests of Educational Development (ITED). The purpose of the summaries is to use scores from two successive school years to describe annual achievement changes.

Beginning in the 1996-97 school year, achievement levels were used to report system and building results for each school district in Iowa. These achievement levels are available to describe achievement trends in the Condition of Education Report as well. One advantage of using achievement levels instead of only average scores is that achievement levels permit the user to view a broader range of student performance rather than simply to know how the average student in each grade scored. That is, with achievement levels, the performance of high achieving and low achieving groups of students can be tracked over time; the use of average scores alone only permits the tracking of the average student.

Scores are combined for pairs of consecutive years for the biennium reporting for several reasons. The merging of test results from two years provides greater stability in the information than would be apparent if results from each year were used. Because not all schools test every year in each of the three grades used for reporting (4, 8, and 11), annual data is subject to fluctuations due to inconsistent annual testing patterns. Twoyear averages help overcome that problem.

Several additional pieces of information about the achievement level summaries are needed for interpretative purposes. These are outlined below:

1. The approximate number of students per grade per year upon which the percentages for 1997-99 are based are: grade 4, 36,000; grade 8, 35,000; and grade 11, 30,000.
2. Forms $K$ and $L$ of both test batteries were first used in Iowa in the 1993-94 school
year. Therefore, that year was chosen to develop baseline data that schools might use for beginning to establish goals and for describing local achievement trends. The baseline biennium is 1993-95.
3. The descriptions of the achievement levels - Low, Intermediate, and High - are needed in order to interpret scores based on these designations. The descriptors for these three levels are on the back side of the Achievement Levels Report, the report printed for each district and building in red ink on white paper, showing a bar graph and corresponding percentages of students scoring within each level.
4. Comparisons of results from one grade to another are not appropriate because the corresponding descriptions of performance are not exactly the same from grade to grade. For example, 'Low' in reading does not mean the same thing at grade 4 and grade 11.
5. Comparisons from one subject area to another are not appropriate because the corresponding descriptions of performance are much different from subject to subject. For example, 'Low' in grade 4 reading does not mean the same thing as 'Low' in grade 4 mathematics. ${ }^{\text {" }}$

Descriptions for each of the three achievement levels accompany each figure displaying achievement level distributions.

## Achievement Levels for Reading Comprehension

The achievement level distributions of Iowa fourth grade students on the ITBS Reading Comprehension Test are presented in Figure 16 for the five biennium periods from 1993-95 through 1997-99. The achievement level distributions reflect a gradual increase in the percentage of students classified as Low performers and a gradual decline in the percentage of students classified as High performers across the five, two-year periods.

[^28]Figure 16

## ITBS Reading Comprehension - Grade 4 Percentages for Iowa Achievement Levels



[^29]
## HIGH PERFORMANCE LEVEL

Understands factual information; draws conclusions and makes inferences about the motives and feelings of Characters; identifies the main idea; evaluates the style and structure of the text; and interprets nonliteral LANGUAGE.

INTERMEDIATE PERFORMANCE LEVEL
Understands some factual information; Sometimes can draw conclusions and make inferences about the motives and feelings of characters; and is beginning to be able to identify the main idea, evaluate the style and structURE OF THE TEXT, AND INTERPRET NONLITERAL LANGUAGE.

LOW PERFORMANCE LEVEL
Understands little factual information; seldom draws conclusions or makes simple inferences about characters; rarely grasps the main idea, evaluates the style and structure of the text, or interprets nonliteral LANGUAGE.

The achievement level distribution of Iowa eighth grade students on the ITBS Reading Comprehension Test is shown in Figure 17. The pattern of results is much like the one for grade four: there has been a gradual increase in the percentage of eighth grade students classified as Low achievers and a decrease in the percentage classified as High achievers over the two most recent biennium periods.

Figure 17

> ITBS Reading Comprehension - Grade 8 Percentages for Iowa Achievement Levels


[^30]HIGH PERFORMANCE LEVEL
Understands factual information; draws conclusions and makes inferences about the motives and feelings of CHARACTERS; MAKES APPLICATIONS TO NEW SITUATIONS; IDENTIFIES THE MAIN IDEA; EVALUATES THE STYLE AND STRUCTURE OF THE TEXT; AND INTERPRETS NONLITERAL LANGUAGE.

INTERMEDIATE PERFORMANCE LEVEL
Understands some factual information; sometimes can draw conclusions, make inferences about the motives and feelings of characters, and apply what has been read to new situations; and sometimes can identify the MAIN IDEA, EVALUATE THE STYLE AND STRUCTURE OF THE TEXT, AND INTERPRET NONLITERAL LANGUAGE.

## LOW PERFORMANCE LEVEL

Understands little factual information; can seldom draw conclusions or make simple inferences about characters; usually cannot apply what has been read to new situations; can rarely grasp the main idea, evaluate the style and structure of the text, and interpret nonliteral language.

Figure 18 shows that there has been a steady increase in the percentage of Iowa eleventh grade students at the Low achievement level in reading. In general, the percentage of students at the High achievement level remained relatively stable.

Figure 18

## ITED Content Area Reading - Grade 11 Percentages for Iowa Achievement Levels



Source: Iowa Testing Programs, University of Iowa.
Note: The descriptions below indicate how the typical grade 11 student at each achievement level performs with respect to the ITED test tasks that determine the Content Area Reading score:

HIGH PERFORMANCE LEVEL
UNDERSTANDS FACTUAL INFORMATION; INFERS THE TRAITS AND FEELINGS OF CHARACTERS; IDENTIFIES THE MAIN IDEA; IDENTIFIES AUTHOR VIEWPOINT AND STYLE; INTERPRETS NONLITERAL LANGUAGE; AND JUDGES THE VALIDITY OF CONCLUSIONS.

INTERMEDIATE PERFORMANCE LEVEL
UNDERSTANDS SOME FACTUAL INFORMATION; SOMETIMES CAN MAKE INFERENCES ABOUT CHARACTERS, IDENTIFY THE MAIN IDEA, AND IDENTIFY AUTHOR VIEWPOINT AND STYLE; OCCASIONALLY CAN INTERPRET NONLITERAL LANGUAGE AND JUDGE THE VALIDITY OF CONCLUSIONS.

LOW PERFORMANCE LEVEL
UNDERSTANDS LITTLE FACTUAL INFORMATION; SELDOM MAKES SIMPLE INFERENCES; RARELY GRASPS THE MAIN IDEA; AND USUALLY CANNOT IDENTIFY AUTHOR VIEWPOINT AND STYLE, INTERPRET NONLITERAL LANGUAGE, OR JUDGE THE VALIDITY OF CONCLUSIONS.

## Achievement Levels for Mathematics

Distributions of achievement levels for Iowa fourth, eighth, and eleventh grade students in mathematics are reported for the biennium periods 1993-95 through 1997-99 in Figures 19-21. For fourth grade students, increases in the percentage of students classified at Low achievement levels occurred across the five biennium periods, with a corresponding decrease in the percentage of students classified as High achievers. In grade eight these same trends appeared in the past three years. At grade 11, the percentage of both Low and High achievers are each fairly stable over the five biennium periods.

Figure 19

## ITBS Mathematics - Grade 4 Percentages for Iowa Achievement Levels



Source: Iowa Testing Programs, University of Iowa.
Note: The descriptions below indicate how the typical grade 4 student at each achievement level performs with respect to the ITBS test tasks that determine the Mathematics Total score:

HIGH PERFORMANCE LEVEL
Understands math concepts, solves complex word problems, uses various estimation methods, and is learning TO INTERPRET DATA FROM GRAPHS AND TABLES.

INTERMEDIATE PERFORMANCE LEVEL
Is developing and understanding of most math concepts, is developing the ability to solve simple and complex WORD PROBLEMS AND TO USE ESTIMATION METHODS, AND IS BEGINNING TO DEVELOP THE ABILITY TO INTERPRET DATA FROM gRaphics and tables.

## LOW PERFORMANCE LEVEL

Is beginning to develop an understanding of many math concepts and an ability to solve simple word problems, IS GENERALLY UNABLE TO USE ESTIMATION METHODS, AND IS SELDOM ABLE TO INTERPRET DATA FROM GRAPHS and tables.

## ITBS Mathematics - Grade 8 Percentages for Iowa Achievement Levels



Source: Iowa Testing Programs, University of Iowa.
Note: The descriptions below indicate how the typical grade 8 student at each achievement level performs with respect to the ITBS test tasks that determine the Mathematics Total score:

HIGH PERFORMANCE LEVEL
Understands math concepts and is developing the ability to solve complex word problems, use a variety of ESTIMATION METHODS AND INTERPRET DATA FROM GRAPHS AND TABLES

INTERMEDIATE PERFORMANCE LEVEL
Is BEGINNING TO DEVELOP AN UNDERSTANDING OF MOST MATH CONCEPTS AND TO DEVELOP THE ABILITY TO SOLVE WORD PROBLEMS, USE A VARIETY OF ESTIMATION METHODS, AND INTERPRET DATA FROM GRAPHS AND TABLES

LOW PERFORMANCE LEVEL
Understands little about math concepts, is unable to solve most simple word problems or use estimation methODS, AND IS SELDOM ABLE TO INTERPRET DATA FROM GRAPHS AND TABLES.

Figure 21

## ITED Mathematics - Grade 11 Percentages for Iowa Achievement Levels



Source: Iowa Testing Programs, University of Iowa.
Note: The descriptions below indicate how the typical grade 11 student at each level performs with respect to concepts and problems in the ITED Quantitative Thinking test:

HIGH PERFORMANCE LEVEL
Understand how to apply math concepts and procedures, makes inferences with quantitative information, and solves a variety of novel quantitative reasoning problems.

INTERMEDIATE PERFORMANCE LEVEL
Is BEGINNING TO DEVELOP THE ABILITY TO APPLY A VARIETY OF MATH CONCEPTS AND PROCEDURES, MAKE INFERENCES ABOUT QUANTITATIVE INFORMATION, AND SOLVE A VARIETY OF NOVEL QUANTITATIVE REASONING PROBLEMS.

LOW PERFORMANCE LEVEL
Demonstrates little understanding about how to apply math concepts and procedures, generally cannot MAKE INFERENCES WITH QUANTITATIVE INFORMATION, AND CANNOT SOLVE MOST NOVEL QUANTITATIVE REASONING PROBLEMS.

## ITBS and ITED Achievement Levels by Gender

ITBS and ITED reading and mathematics achievement level information for grades 4,8 , and 11 is reported in Figures 22-27 by gender for the biennium period 1997-99 the first year for which data are available statewide. Gender subgroups vary in size in a given year and each varies in size from year-to-year. The subgroup data cannot be averaged to obtain an overall value that matches the data for the combined group. Score distributions for reading achievement levels indicated that a higher percentage of males than females were classified as Low achievers and a higher percentage of females than males were classified as High achievers for each grade level reported.
Figure 22

## ITBS Iowa Reading Achievement - Grade 4, 1997-99 Percentages for Iowa Achievement Levels



Source: Iowa Testing Programs, University of lowa.
Figure 23


Figure 24
ITED Iowa Reading Achievement - Grade 11, 1997-99 Percentages for Iowa Achievement Levels


| Source: | lowa Testing Programs, University of lowa. |
| :--- | :--- |
| Note: | See Figure 18 for a description of 11th grade achievement levels. |

In mathematics, a higher percentage of males was reported at the High achievement level than females at all three grade levels, with the greatest difference in percentages for males and females occurring at grade 11. The distribution of students at the Low achievement level was mixed, with a higher percentage of Low scoring females at grade four, a higher percentage of Low scoring males at the eighth grade level, and nearly equal percentages of Low scoring males and females at the eleventh grade level.
Figure 25
ITBS Iowa Mathematics Achievement - Grade 4, 1997-99 Percentages for Iowa Achievement Levels


Source: lowa Testing Programs, University of lowa
Note: See Figure 19 for a description of 4th grade achievement levels.
Figure 26
ITBS Iowa Mathematics Achievement - Grade 8, 1997-99 Percentages for Iowa Achievement Levels


Figure 27

## ITED Iowa Mathematics Achievement - Grade 11, 1997-99 Percentages for Iowa Achievement Levels



[^31]
## American College Testing (ACT) Assessments

The ACT assessment is a college entrance examination. The ACT provides assessments for English, mathematics, reading, and science reasoning. A composite score is also calculated. Scores on the ACT range from a low of zero to a high of 36. ACT reports scores according to high school program type. High school program types are classified by ACT as core and non-core programs. ACT considers high school programs comprised of four or more years of English and three or more years of natural science, mathematics, and social studies as core programs. Students completing high school programs not meeting the core program standard are considered to have completed non-core programs. In addition, ACT reports scores by gender and race/ethnicity. Since the number of ACT test takers for a given race/ethnicity category is not sufficient to be considered representative for Iowa, average ACT scores are not reported here by race/ethnicity.

The ACT is the principal college entrance examination taken by Iowa college-bound students. This is primarily due to the fact that the majority of Iowa students enroll in Iowa and other midwestern colleges and universities for which ACT scores are required for admission.

In 1999, 24,829 Iowa students took the ACT examination. This represented 66 percent of the graduating class. The percentages of Iowa graduates taking the ACT have increased steadily since 1985, rising from 57.8 percent to 66 percent in 1999 (Table

Table 67

## Percent of Iowa Graduates Taking the ACT

|  |  |
| :---: | :---: |
| Year | Percent |
|  |  |
| 1985 | 57.8 |
| 1986 | 57.9 |
| 1987 | 59.2 |
| 1988 | 60.3 |
| 1989 | 60.5 |
| 1990 | 61.2 |
| 1991 | 61.0 |
| 1992 | 62.0 |
| 1993 | 61.5 |
| 1994 | 62.0 |
| 1995 | 64.0 |
| 1996 | 64.0 |
| 1997 | 64.0 |
| 1998 | 65.0 |
| 1999 | 66.0 |

Source: American College Testing Program, The High School Profile Report for Iowa.

Figure 28
Percent of Iowa Graduates Taking the ACT


Source: American College Testing Program, The High School Profile Report for Iowa.

## National Ranking

Since 1990, Iowa students have ranked in the top three states in the nation in terms of ACT average composite scores for states whose primary college entrance examination is the ACT. From 1990 through 1994, Iowa ranked first or tied for first among these states. From 1995 through 1999, Iowa ranked third each year, except in 1997 where Iowa was tied for second (Table 68).

## Table 68

Iowa's Rank in the Nation on Average Composite ACT Scores Among States where ACT is the Primary College Entrance Examination

| Year | ACT Average <br> Composite Score | Rank |
| :---: | :---: | :--- |
| 1989 | 21.8 | 2 |
| 1990 | 21.8 | 1 tied with WI. |
| 1991 | 21.7 | 1 tied with WI. |
| 1992 | 21.6 | 1 tied with WI. |
| 1993 | 21.8 | 1 tied with WI. |
| 1994 | 21.9 | 1 |
| 1995 | 21.8 | 3 |
| 1996 | 21.9 | 2 |
| 1997 | 22.1 | 3 |
| 1998 | 22.1 | 3 |
| 1999 | 22.0 | tied with MN. |

[^32]
## ACT Composite Score Comparisons of Iowa and Midwest States

Table 69 reports average ACT composite scores for Iowa and midwest states for 1997 through 1999. Of the three top ranking states, Wisconsin, Minnesota, and Iowa, only scores for Wisconsin showed no decrease in 1999 from the previous year.

Table 69

| ACT Average Composite Scores for Iowa, the Nation and Midwest States - 1997 and 1999 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1997 |  |  | 1998 |  |  | 1999 |  |
|  |  |  | \% Core |  |  | \% Core |  |  |  |
|  |  | \% of | Completers |  | \% of | Completers |  | \% of | Completers |
| Nation | ACT | Graduates | out of | ACT | Graduates | out of | ACT | Graduates | out of |
| \& State C | Composite | Tested | Total Tested | Composite | Tested | Total Tested | Composite | Tested | Total Tested |
| Nation | 21.0 | 36\% | 59\% | 21.0 | 37\% | 61\% | 21.0 | 36\% | 60\% |
| Iowa | 22.1 | 64 | 66 | 22.1 | 65 | 68 | 22.0 | 66 | 66 |
| Illinois | 21.2 | 69 | 49 | 21.4 | 69 | 52 | 21.4 | 67 | 51 |
| Kansas | 21.7 | 74 | 52 | 21.7 | 74 | 55 | 21.5 | 75 | 54 |
| Minnesota | 22.1 | 60 | 71 | 22.2 | 63 | 71 | 22.1 | 64 | 69 |
| Missouri | 21.5 | 64 | 58 | 21.5 | 66 | 61 | 21.6 | 67 | 61 |
| Nebraska | 21.7 | 73 | 63 | 21.8 | 71 | 67 | 21.7 | 73 | 67 |
| North Dakota | a 21.4 | 78 | 64 | 21.4 | 78 | 64 | 21.4 | 79 | 63 |
| South Dakota | a 21.3 | 68 | 65 | 21.4 | 70 | 65 | 21.2 | 70 | 63 |
| Wisconsin | 22.3 | 64 | 62 | 22.3 | 66 | 62 | 22.3 | 67 | 61 |

Source: American College Testing Program, ACT 1997, 1998, and 1999 Assessment Results.

## ACT Composite Score Comparisons for Iowa and the Nation

Data for the nation, presented in this section, are based on a national sample of 36 percent for the 1999 graduating class. Iowa figures are based on a participation rate of 66 percent for the graduating class of 1999.

Average ACT composite scores for Iowa, and for the nation, were relatively steady from 1989 to 1991. From 1992 through 1999, scores for both Iowa and the nation reflected a steady to slight upward trend, dropping by only one-tenth of a point from the previous year in 1995 and in 1999 for Iowa students (Table 70 and Figure 29). Average ACT scores for Iowa students remained well above their national counterparts across the period from 1989 through 1999.

Table 70

## Iowa and National ACT Average Composite Scores

| Year | Iowa Composite <br> ACT Score | Percent Iowa <br> Student Participation* | Nation Composite <br> ACT Score | Percent Nation <br> Student Participation |
| :---: | :---: | :---: | :---: | :---: |
| 1989 | 21.8 | $60.5 \%$ |  |  |
| 1990 | 21.8 | 61.2 | 20.6 | $-\%$ |
| 1991 | 21.7 | 61.0 | 20.6 | - |
| 1992 | 21.6 | 62.0 | 20.6 | - |
| 1993 | 21.8 | $61.5^{* *}$ | 20.6 | - |
| 1994 | 21.9 | 62.0 | 20.7 | - |
| 1995 | 21.8 | 64.0 | 20.8 | - |
| 1996 | 21.9 | 64.0 | 20.8 | 37.0 |
| 1997 | 22.1 | 64.0 | 20.9 | 35.0 |
| 1998 | 22.1 | 65.0 | 21.0 | 35.0 |
| 1999 | 22.0 | 66.0 | 21.0 | 35.0 |

[^33]Figure 29


Source: American College Testing Program, The High School Profile Report for Iowa.

## ACT Score Comparisons for Mathematics, English, Reading, and Science Reasoning

ACT average sub-test scores for Iowa and the nation are depicted in Table 71 and in Figures 30-33. Average scores for Iowa students exceeded scores for the nation in all sub-test areas across the period from 1991 through 1999.

Table 71

## Average ACT Scores for Iowa Graduates and the Nation 1991-1999

|  | Iowa |  |  |  | Nation |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mathematics | English | Reading | Science <br> Reasoning | Mathematics | English | Reading | Science Reasoning |
| 1991 | 21.0 | 21.3 | 22.2 | 21.9 | 20.0 | 20.3 | 21.2 | 20.7 |
| 1992 | 21.0 | 21.2 | 21.9 | 21.9 | 20.0 | 20.2 | 21.1 | 20.7 |
| 1993 | 21.1 | 21.3 | 22.2 | 22.0 | 20.1 | 20.3 | 21.2 | 20.8 |
| 1994 | 21.2 | 21.4 | 22.2 | 22.3 | 20.2 | 20.3 | 21.2 | 20.9 |
| 1995 | 21.2 | 21.3 | 22.1 | 22.1 | 20.2 | 20.2 | 21.3 | 21.0 |
| 1996 | 21.3 | 21.4 | 22.2 | 22.3 | 20.2 | 20.3 | 21.3 | 21.1 |
| 1997 | 21.5 | 21.4 | 22.4 | 22.4 | 20.6 | 20.3 | 21.3 | 21.1 |
| 1998 | 21.9 | 21.5 | 22.3 | 22.4 | 20.8 | 20.4 | 21.4 | 21.1 |
| 1999 | 21.6 | 21.5 | 22.2 | 22.1 | 20.7 | 20.5 | 21.4 | 21.0 |

Source: American College Testing Program, The High School Profile Report for Iowa.

Iowa mathematics scores showed a steady upward trend from 1991 through 1998, with a substantial decrease occurring in 1999 from the high in 1998. Iowa English scores were slightly higher in 1999 compared to 1991, with relatively stable scores across the period. Iowa average ACT reading scores have been relatively stable across the period from 1991 to 1999, but have decreased slightly over the last two years. Average science reasoning scores for Iowa students were slightly higher in 1999 than in 1991, but were down somewhat from the highs in 1997 and 1998.

Figure 30


Source: American College Testing Program, The High School Profile Report for Iowa.
Figure 31
Average ACT English Scores
Iowa vs. Nation - 1991-1999


Figure 32


Source: American College Testing Program, The High School Profile Report for Iowa.
Figure 33
Average ACT Science Reasoning Scores
Iowa vs. Nation - 1991-1999


[^34]
## ACT Scores for Core and Non-core Students

ACT scores are reported separately for students completing two types of high school programs, core and non-core programs. A core program is defined by ACT as a typical college preparatory program which includes four or more years of English, and three or more years of mathematics, social studies, and natural science.

The percent of Iowa students completing core programs has risen substantially since 1990 (Figure 34 and Table 72). The percentage of Iowa ACT participants taking the core program increased by 12.9 percentage points since 1990 , while core participation by Iowa's national counterparts increased by 14.7 percentage points.

Figure 34
Percent of ACT Participants Taking Core High School Program 1990-1999


Source: American College Testing Program, The High School Profile Report for Iowa.
Table 72
Percent of ACT Participants Taking Core High School Program 1990-1999

| Year | Iowa | Nation |
| :---: | :---: | :---: |
|  |  |  |
| 1990 | 53.1 | 45.3 |
| 1991 | 58.0 | 48.6 |
| 1992 | 59.4 | 50.4 |
| 1993 | 61.6 | 51.7 |
| 1994 | 62.2 | 53.7 |
| 1995 | 63.1 | 56.0 |
| 1996 | 65.8 | 59.0 |
| 1997 | 66.0 | 59.0 |
| 1998 | 68.0 | 61.0 |
| 1999 | 66.0 | 60.0 |

Source: American College Testing Program, The High School Profile Report for Iowa.

As a group, students who completed core programs scored substantially higher than students in non-core high school programs, in terms of ACT average composite scores (Table 73 and Figure 35).

Table 73

| Average ACT Composite Scores for re and Non-core Test Takers, 1990-1999 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Iowa |  | Nation |  |
| Year | Core | Non-core | Core | Non-core |
| 1990 | 23.5 | 19.8 | 22.3 | 19.1 |
| 1991 | 23.1 | 19.7 | 22.1 | 19.1 |
| 1992 | 23.0 | 19.6 | 22.0 | 19.1 |
| 1993 | 23.0 | 19.7 | 22.0 | 19.1 |
| 1994 | 23.1 | 19.8 | 22.0 | 19.1 |
| 1995 | 22.9 | 19.7 | 22.0 | 19.1 |
| 1996 | 23.0 | 19.8 | 22.0 | 19.2 |
| 1997 | 23.1 | 20.0 | 22.1 | 19.3 |
| 1998 | 23.2 | 20.0 | 22.1 | 19.3 |
| 1999 | 23.0 | 19.9 | 22.0 | 19.4 |

Source: American College Testing Program, The High School Profile Report for Iowa.

Figure 35


## ACT Score Distributions

Iowa ACT composite score distributions for the years 1991, 1994, and 1999 indicate markedly similar patterns (Figure 36). The percentage of Iowa students with scores of 25 and above has shown incremental increases from 1991 to 1994, and from 1994 to 1999, with percentages of 26.2, 27.2, and 28.6 respectively. The percentage of Iowa students with scores of 30 and above has also shown increases over the three comparison periods, increasing from 4.6 percent in 1991, to 5.1 percent and 5.5 percent in 1994 and 1999 respectively (Table 74).

Figure 36
Distribution of Iowa Average ACT Composite Scores


Table 74
Iowa ACT Composite Score Distributions 1991, 1994, and 1999

|  | 1991 |  | $\begin{aligned} & \text { Year } \\ & 1994 \end{aligned}$ |  | 1999 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Score | Percent At | Percent at and Above | Percent At | Percent at and Above | Percent At | Percent at and Above |
| $<13$ | 1.4 | 100.0 | 1.5 | 100.0 | 1.0 | 100.0 |
| 14 | 1.8 | 98.6 | 1.7 | 98.5 | 1.9 | 99.0 |
| 15 | 3.1 | 96.8 | 3.1 | 97.0 | 3.2 | 97.1 |
| 16 | 4.6 | 93.7 | 4.4 | 93.9 | 4.3 | 93.5 |
| 17 | 6.2 | 89.1 | 5.9 | 89.5 | 5.6 | 89.2 |
| 18 | 7.6 | 82.9 | 7.0 | 83.6 | 7.1 | 83.6 |
| 19 | 8.2 | 75.3 | 7.7 | 76.6 | 7.7 | 76.5 |
| 20 | 8.8 | 67.1 | 9.1 | 68.9 | 8.5 | 68.8 |
| 21 | 8.7 | 58.3 | 9.2 | 59.8 | 8.5 | 60.3 |
| 22 | 8.6 | 49.6 | 8.3 | 50.6 | 8.4 | 51.8 |
| 23 | 7.9 | 41.0 | 7.9 | 42.3 | 7.5 | 43.4 |
| 24 | 6.9 | 33.1 | 7.2 | 34.4 | 7.3 | 35.9 |
| 25 | 6.3 | 26.2 | 6.3 | 27.2 | 6.5 | 28.6 |
| 26 | 5.2 | 19.9 | 5.4 | 20.9 | 5.6 | 22.1 |
| 27 | 4.3 | 14.7 | 4.4 | 15.5 | 4.7 | 16.5 |
| 28 | 3.2 | 10.4 | 3.4 | 11.1 | 3.7 | 11.8 |
| 29 | 2.6 | 7.2 | 2.6 | 7.7 | 2.6 | 8.1 |
| 30 | 1.9 | 4.6 | 2.1 | 5.1 | 2.2 | 5.5 |
| 31 | 1.4 | 2.7 | 1.4 | 3.0 | 1.5 | 3.3 |
| 32 | 0.6 | 1.3 | 0.9 | 1.6 | 1.0 | 1.8 |
| 33 | 0.4 | 0.7 | 0.5 | 0.7 | 0.5 | 0.8 |
| 34+ | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 |

[^35]
## ACT Scores by Gender

Average ACT composite scores for Iowa and for the nation are compared in Figure 37 and in Table 75. Across the period from 1990 to 1999 scores for males were higher than for females for both Iowa and the nation. Scores for females, for both Iowa and the nation, climbed steadily over the period from 1990 to 1999, resulting in a substantial decrease in gender differences reported in 1990. Differences between Iowa and national scores for both males and females have remained fairly constant from 1992 to 1998.

Figure 37

## ACT Average Composite Scores by Gender 1990-1999



Source: American College Testing Program, The High School Profile Report for Iowa.

Table 75

## Iowa Average ACT Scores by Gender

| Gender | Number of Test-takers |  | Average ACT Scores |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | English |  | Math |  | Reading |  | Science Reasoning 19981999 | Composite |  |
|  | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 |  | 1998 | 1999 |
| Male | 10,712 | 11,222 | 20.9 | 20.9 | 22.7 | 22.4 | 22.1 | 21.9 | 23.122 .7 | 22.3 | 22.1 |
| Female | 13,521 | 13,539 | 21.9 | 21.9 | 21.3 | 21.0 | 22.5 | 22.4 | 21.821 .6 | 22.0 | 21.9 |
| Other* |  | 68 |  |  |  |  |  |  |  |  |  |

Source: American College Testing Program, The High School Profile Report for Iowa.
Note: *ACT test-takers not reporting gender.

Table 75 reflects average ACT scores for English, mathematics, reading, and science reasoning for 1998 and 1999. In 1999 as in 1998, more females took the ACT than males, 54.5 percent compared to 45.2 percent of males. Also, as in the previous year, 1999 average ACT scores were higher for males in mathematics and science reasoning, and higher for females in English and reading. The greatest difference in average scores between Iowa males and females occurred in mathematics in both 1998 and in 1999.

## Average ACT Scores by Planned Educational Majors

ACT participants self-report their intended college majors when they take the ACT tests. ACT reports average scores by planned college major on an annual basis. Average ACT scores for Iowa and the nation are presented by planned major for the years 1990 to 1999 (Table 76).

The highest average ACT scores for Iowa students were reported in the planned majors of mathematics, letters (letters consist of preparation in the following areas; classics, comparative literature, creative writing, general English, linguistics, literature, speech, debate, and forensics) engineering, and sciences, respectively. Letters, mathematics, cross-disciplinary studies, foreign languages, and science were the highest reported average scores for the nation.

Students with planned majors in education and teacher education ranked 17th and 16th respectively, for Iowa; and 16.5 for the nation in 1999 (Table 77).

Table 76

| ACT | OMP | ITE | SCO | RES | BY | 199 | NED | DUC | ATIO | NAL | MA | RS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Average ACT Composite Score |  |  |  |  |  |  |  |  |  | 1999 |
| Planned Major |  | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | Number of Students |
| Agriculture \& Agri- | Iowa | 20.3 | 20.0 | 19.8 | 20.1 | 20.2 | 20.3 | 20.4 | 20.4 | 20.6 | 20.3 | 903 |
| culture Technologies | Nation | 19.5 | 19.0 | 19.0 | 19.2 | 19.2 | 19.2 | 19.4 | 19.5 | 19.4 | 19.3 | 20,138 |
| Agriculture \& Envi- | Iowa | 21.2 | 21.9 | 21.2 | 21.2 | 21.5 | 21.7 | 21.7 | 22.0 | 21.8 | 21.8 | 563 |
| ronmental Design | Nation | 20.5 | 20.5 | 20.4 | 20.4 | 20.4 | 20.5 | 20.7 | 20.8 | 20.9 | 20.8 | 21,644 |
| Business \& | Iowa | 21.5 | 21.4 | 21.2 | 21.4 | 21.4 | 21.2 | 21.5 | 21.6 | 21.6 | 21.5 | 2,830 |
| Management | Nation | 20.2 | 20.2 | 20.1 | 20.2 | 20.2 | 20.3 | 20.4 | 20.5 | 20.6 | 20.6 | 105,414 |
| Business \& | Iowa | 18.2 | 18.9 | 18.6 | 19.1 | 19.1 | 18.8 | 18.8 | 19.1 | 19.6 | 19.4 | 240 |
| Office | Nation | 17.4 | 17.7 | 17.5 | 17.6 | 17.7 | 17.7 | 18.0 | 18.0 | 18.2 | 18.3 | 7,908 |
| Marketing \& | Iowa | 19.1 | 18.7 | 19.1 | 19.2 | 19.7 | 19.3 | 19.4 | 19.8 | 20.2 | 20.5 | 136 |
| Distribution | Nation | 19.0 | 18.7 | 18.6 | 18.6 | 18.7 | 18.8 | 19.0 | 19.2 | 19.4 | 19.6 | 6,173 |
| Communications \& | Iowa | 21.9 | 21.7 | 21.8 | 21.6 | 21.9 | 21.9 | 22.1 | 22.3 | 22.4 | 22.3 | 911 |
| Comm. Tech. | Nation | 20.8 | 20.9 | 20.9 | 20.9 | 20.9 | 21.0 | 21.2 | 21.2 | 21.4 | 21.5 | 38,398 |
| Community \& | Iowa | 19.3 | 19.3 | 19.2 | 19.5 | 19.5 | 19.4 | 19.5 | 19.7 | 20.0 | 19.9 | 773 |
| Personal Service | Nation | 18.3 | 18.3 | 18.3 | 18.5 | 18.5 | 18.6 | 18.6 | 18.7 | 18.9 | 18.8 | 28,372 |
| Computer and | Iowa | 22.3 | 22.1 | 22.0 | 22.1 | 22.6 | 22.5 | 22.8 | 22.9 | 23.1 | 23.0 | 903 |
| Information Science | Nation | 20.1 | 20.0 | 20.0 | 20.3 | 20.5 | 20.8 | 20.9 | 21.1 | 21.4 | 21.4 | 37,162 |
| Cross-Disciplinary | Iowa | 22.3 | 22.7 | 22.7 | 21.9 | 24.0 | 23.6 | 23.7 | 22.3 | 23.4 | 23.7 | 20 |
| Studies | Nation | 21.7 | 23.3 | 23.3 | 23.0 | 23.3 | 23.1 | 23.2 | 23.5 | 23.0 | 23.8 | 833 |
| Education | Iowa | 21.0 | 21.0 | 20.7 | 20.9 | 21.1 | 20.8 | 20.8 | 21.0 | 21.2 | 20.9 | 1,526 |
|  | Nation | 20.0 | 20.0 | 20.0 | 20.1 | 20.1 | 20.1 | 20.1 | 20.2 | 20.3 | 20.3 | 54,482 |
| Teacher Education | Iowa | 20.7 | 21.3 | 21.0 | 21.1 | 21.1 | 21.0 | 21.3 | 21.3 | 21.6 | 21.2 | 902 |
|  | Nation | 19.7 | 20.0 | 20.0 | 20.1 | 20.1 | 20.1 | 20.2 | 20.3 | 20.4 | 20.3 | 34.582 |
| Engineering | Iowa | 24.9 | 24.4 | 24.4 | 24.8 | 24.7 | 24.7 | 24.6 | 24.8 | 24.7 | 24.1 | 1,389 |
|  | Nation | 23.0 | 22.9 | 22.9 | 23.0 | 22.9 | 22.8 | 22.7 | 22.9 | 22.8 | 22.6 | 65,776 |
| Engineering-Related | Iowa | 21.5 | 21.6 | 21.3 | 21.9 | 22.1 | 21.9 | 21.8 | 22.6 | 22.5 | 22.3 | 368 |
| Technologies | Nation | 20.1 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.6 | 20.9 | 21.1 | 21.1 | 16,264 |
| Foreign | Iowa | 23.5 | 24.1 | 23.8 | 24.1 | 24.0 | 23.6 | 24.2 | 23.0 | 24.0 | 24.0 | 88 |
| Language | Nation | 22.8 | 23.0 | 22.9 | 23.0 | 23.0 | 23.0 | 23.1 | 23.1 | 23.4 | 23.5 | 3,595 |
| Health Science \& | Iowa | 22.1 | 22.1 | 21.9 | 22.0 | 22.1 | 22.1 | 22.3 | 22.3 | 22.4 | 22.2 | 3,789 |
| Allied Health Fields | Nation | 20.6 | 20.6 | 20.5 | 20.6 | 20.7 | 20.7 | 20.9 | 20.9 | 21.0 | 20.9 | 180,349 |
| Home | Iowa | 18.6 | 19.0 | 18.7 | 19.1 | 19.1 | 19.2 | 19.6 | 19.6 | 19.7 | 19.4 | 208 |
| Economics | Nation | 18.1 | 18.2 | 18.2 | 18.2 | 18.3 | 18.4 | 18.7 | 18.9 | 18.8 | 18.9 | 7,388 |
| Letters | Iowa | 24.7 | 25.1 | 24.3 | 25.6 | 24.7 | 24.7 | 25.1 | 25.1 | 25.1 | 24.8 | 174 |
|  | Nation | 24.5 | 24.4 | 24.5 | 24.5 | 24.3 | 24.5 | 24.6 | 24.8 | 24.7 | 24.6 | 7,196 |
| Mathematics | Iowa | 26.0 | 25.1 | 25.2 | 24.8 | 25.7 | 25.1 | 25.2 | 25.8 | 25.7 | 25.6 | 116 |
|  | Nation | 24.1 | 24.0 | 23.9 | 24.0 | 24.1 | 24.1 | 24.2 | 24.3 | 24.4 | 24.3 | 3,969 |
| Philosophy, Religion | Iowa | 21.4 | 23.1 | 21.9 | 21.7 | 22.1 | 23.3 | 23.0 | 23.6 | 23.4 | 23.3 | 169 |
| \& Theology | Nation | 21.4 | 21.7 | 21.7 | 21.8 | 21.9 | 22.2 | 22.3 | 22.4 | 22.4 | 22.4 | 6,723 |
| Sciences | Iowa | 24.5 | 23.9 | 24.6 | 24.2 | 24.3 | 24.2 | 23.9 | 24.2 | 24.3 | 24.1 | 1,109 |
|  | Nation | 23.4 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 | 23.4 | 23.5 | 23.5 | 23.3 | 48,297 |
| Social | Iowa | 22.9 | 22.6 | 22.7 | 22.7 | 22.6 | 22.7 | 22.8 | 22.9 | 23.1 | 23.0 | 1,796 |
| Sciences | Nation | 21.6 | 21.5 | 21.5 | 21.5 | 21.6 | 21.6 | 21.7 | 21.8 | 22.0 | 21.9 | 81,121 |
| Trade \& | Iowa | 19.7 | 19.5 | 20.2 | 19.9 | 19.2 | 19.4 | 19.3 | 19.8 | 19.8 | 19.3 | 341 |
| Industrial | Nation | 18.4 | 18.7 | 18.7 | 18.6 | 18.5 | 18.5 | 18.5 | 18.7 | 18.8 | 18.8 | 11,340 |
| Visual \& Performing | Iowa | 21.3 | 22.2 | 21.5 | 21.8 | 22.0 | 22.1 | 22.1 | 22.3 | 22.5 | 22.1 | 1,334 |
| Arts | Nation | 20.5 | 20.7 | 20.7 | 20.9 | 21.0 | 21.0 | 21.2 | 21.3 | 21.3 | 21.3 | 55,330 |

Source: American College Testing Program, The High School Profile Report for Iowa.

Table 77

## 1999 Average ACT Composite Scores by Planned Educational Majors, Rank by Iowa Scores

| Planned Major | Iowa Score | Iowa Rank | National Score | National Rank |
| :---: | :---: | :---: | :---: | :---: |
| Mathematics | 25.6 | 1 | 24.3 | 2 |
| Letters | 24.8 | 2 | 24.6 | 1 |
| Engineering | 24.1 | 3.5 | 22.6 | 6 |
| Sciences | 24.1 | 3.5 | 23.3 | 5 |
| Foreign Language | 24.0 | 5 | 23.5 | 4 |
| Cross-Disciplinary Studies | 23.7 | 6 | 23.8 | 3 |
| Philosophy, Religion, \& Theology | 23.3 | 7 | 22.4 | 7 |
| Computer \& Information Science | 23.0 | 8.5 | 21.4 | 10 |
| Social Sciences | 23.0 | 8.5 | 21.9 | 8 |
| Communication and Communication Tech. | . 22.3 | 10.5 | 21.5 | 9 |
| Engineering-Related Technologies | 22.3 | 10.5 | 21.1 | 12 |
| Health Science \& Allied Health Fields | 22.2 | 12 | 20.9 | 13 |
| Visual \& Performing Arts | 22.1 | 13 | 21.3 | 11 |
| Architecture \& Environmental Design | 21.8 | 14 | 20.8 | 14 |
| Business \& Management | 21.5 | 15 | 20.6 | 15 |
| Teacher Education | 21.2 | 16 | 20.3 | 16.5 |
| Education | 20.9 | 17 | 20.3 | 16.5 |
| Marketing \& Distribution | 20.5 | 18 | 19.6 | 18 |
| Agriculture \& Agriculture Technologies | 20.3 | 19 | 19.3 | 19 |
| Community \& Personal Services | 19.9 | 20 | 18.8 | 21.5 |
| Business \& Office | 19.4 | 21.5 | 18.3 | 23 |
| Home Economics | 19.4 | 21.5 | 18.9 | 20 |
| Trade \& Industrial | 19.3 | 23 | 18.8 | 21.5 |

Source: American College Testing Program, The High School Profile Report for Iowa.

## Average ACT Scores by Enrollment Category

Average ACT scores for each of the four ACT tests, English, mathematics, reading, and science reasoning, as well as composite scores for 1999 reflected increases with successive increases in enrollment categories (Table 78). ACT scores for the largest enrollment category were lower than scores for the 2,500-7,499 category across all tests. Compared to ACT average scores for 1998, scores generally were lower across all enrollment categories for all tests, including composite scores in 1999.

Table 78

## Iowa Average ACT Scores by Enrollment Category 1998 and 1999

| Enrollment Category | Number of Students |  | Average ACT Scores |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | English |  | Math |  | Reading |  | Science Reasoning |  | Composite |  |
|  | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 | 1998 | 1999 |
| <250 | 82 | 78 | 19.7 | 18.7 | 20.5 | 19.0 | 20.9 | 19.2 | 21.6 | 20.3 | 20.8 | 19.4 |
| 250-300 | 737 | 737 | 20.6 | 20.4 | 20.9 | 20.4 | 21.5 | 21.0 | 21.5 | 21.3 | 21.3 | 20.9 |
| 400-599 | 1,601 | 1,677 | 20.9 | 21.1 | 21.2 | 21.0 | 21.8 | 21.6 | 22.1 | 21.8 | 21.6 | 21.5 |
| 600-999 | 4,052 | 4,127 | 21.2 | 21.1 | 21.6 | 21.3 | 22.0 | 21.8 | 22.3 | 22.0 | 21.9 | 21.7 |
| 1,000-2,499 | 5,930 | 5,849 | 21.3 | 21.5 | 21.9 | 21.6 | 22.2 | 22.2 | 22.4 | 22.2 | 22.1 | 22.0 |
| 2,500-7,499 | 3,968 | 4,136 | 22.0 | 22.0 | 22.8 | 22.4 | 22.9 | 22.8 | 22.9 | 22.6 | 22.8 | 22.6 |
| 7,500+ | 4,183 | 4,338 | 21.7 | 21.8 | 22.3 | 22.1 | 22.7 | 22.7 | 22.5 | 22.2 | 22.4 | 22.3 |
| Other* | 3,680 | 3,887 |  |  |  |  |  |  |  |  |  |  |
| State | 24,233 | 24,829 | 21.5 | 21.5 | 21.9 | 21.6 | 22.3 | 22.2 | 22.4 | 22.1 | 22.1 | 22.0 |

Source: American College Testing Program, ACT Assessment Magnetic Tape; Iowa Department of Education Certified Enrollment File.
Note*: "OTHER" INCLUDES STUDENTS NOT REPORTING DISTRICT ATTENDED, AND ALSO INCLUDES NONPUBLIC STUDENTS.

Average ACT composite scores for students completing core and non-core programs are reported by enrollment category in Figure 38 and Table 79. As with previous years, 1999 average ACT scores for Iowa students were substantially higher for students completing core high school programs than for students completing non-core programs in each of the seven enrollment categories. As in 1998, 1999 average scores for core completers and non-core completers generally increased with successive increases in enrollment categories through the 2,500-7,499 enrollment category.

Figure 38
1999 Average ACT Composite Scores for Iowa Public High School Graduates by Enrollment Category and Course of Study


Source: American College Testing Program, ACT Assessment Magnetic Tape; Iowa Department of Education Certified Enrollment File.

Table 79

## Average ACT Composite Scores for Iowa Public High School Graduates by Enrollment Category and Course of Study

|  | Course of Study |  |  |  |  |
| :--- | :--- | :---: | :--- | :---: | :---: |
| Enrollment | Core | Non-core |  |  |  |
| Category | 1998 | 1999 | 1998 | 1999 |  |
|  |  |  |  |  |  |
| $<250$ | 22.4 | 20.4 | 18.2 | 17.9 |  |
| $250-399$ | 22.3 | 22.0 | 19.2 | 19.0 |  |
| $400-599$ | 22.3 | 22.5 | 20.0 | 20.1 |  |
| $600-999$ | 22.6 | 22.7 | 20.0 | 20.3 |  |
| $1,000-2,499$ | 22.9 | 23.0 | 20.4 | 20.6 |  |
| $2,500-7,499$ | 23.4 | 23.4 | 20.6 | 21.1 |  |
| $7,500+$ | 23.1 | 23.3 | 20.1 | 20.3 |  |
| State | 23.2 | 23.0 | 20.0 | 19.9 |  |

[^36]
## Iowa Student ACT Scores Compared to Self-Reported High School Performance

Average ACT scores for Iowa graduates are reported in Table 80 and in Figure 39 by two separate self-reported measures of high school performance. Iowa student scores are reported by grade point average (GPA) and by high school rank, as denoted by quartiles. As has historically been the case, students reporting the highest GPAs had the highest average ACT scores. Scores for each successively higher GPA category reflected increases for each of the four ACT tests and for composite scores.

Table 80

| 1999 Iowa Average ACT Scores vs. Self-REported High School Grade Point Average (GPA) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average ACT Scores |  |  |  |  |  |  |  |
| GPA | Number* | Percent | English | Math | Reading | Science <br> Reasoning | Composite |
| $3.5+$ | 9,607 | 41.5\% | 24.7 | 24.8 | 25.3 | 24.6 | 25.0 |
| 3.0-3.49 | 6,559 | 28.3 | 20.8 | 20.8 | 21.5 | 21.6 | 21.3 |
| 2.5-2.99 | 4,309 | 18.6 | 18.8 | 19.0 | 19.5 | 20.0 | 19.4 |
| 2.0-2.49 | 2,156 | 9.3 | 17.3 | 17.8 | 18.0 | 18.8 | 18.1 |
| <2.0 | 528 | 2.3 | 16.1 | 16.8 | 17.0 | 17.9 | 17.1 |

Source: American College Testing Program, The High School Profile Report for Iowa.
Note*: Number of nonreported students was 1,670.

Figure 39
Iowa ACT Average Scores vs. Self-Reported High School Rank


Source: American College Testing Program, The High School Profile Report for Iowa.
Patterns for average ACT composite scores, when grouped by self-reported class rank, by quartile, reflected markedly similar results over time.

## Advanced Placement

The College Board administers the Advanced Placement Program (AP). The AP program provides high school students an opportunity to earn college credit for designated high school courses. AP examinations are scored on a five-point scale. AP scores are as follows: a score of one (1) carries no recommendation for college credit, two (2) is interpreted as possibly qualified, three (3) indicates qualified, four (4) indicates well qualified, and five (5) indicates a student is extremely well qualified.

Participation of high school students in AP increased from nearly 324,000 students in 1990 to more than 618,000 students nationwide in 1998, an increase of about 90 percent. In terms of the number of AP exams taken across the nation, more than 480,000 exams were taken by high school students in 1990, compared to nearly 992,000 exams in 1998 (Table 81).
Table 81

|  | Average Advanced Placement Examination Scores |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FOR ALL CANDIDATES - 1993 TO 1998 |  |  |  |  |  |  |  |  |  |  |  |
|  | 199 |  |  | 94 |  | 55 Ye |  | 996 |  | 97 |  |  |
|  | Total <br> Exams <br> Taken | Average AP Score | Total <br> Exams <br> Taken | Average AP Score | Total <br> Exams <br> Taken | Average AP Score | Total <br> Exams <br> Taken | Average AP Score | Total Exams Taken | Average AP Score | Total Exams Taken | Average AP Score |
| Iowa | 2,788 | 3.13 | 3,037 | 3.27 | 3,627 | 3.11 | 4,112 | 3.14 | 4,647 | 3.11 | 4,874 | 3.13 |
| Nation | 623,933 | 3.00 | 684,449 | 3.06 | 767,881 | 2.96 | 824,329 | 2.99 | 899,463 | 3.02 | 991,952 | 3.02 |

Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
The number of exams taken by Iowa AP candidates increased from 1,797 in 1990, to 4,874 in 1998. Table 82 presents information on the number of Iowa AP candidates and the number of AP exams taken since 1988. The average yearly increases in the number of Iowa AP candidates and exams taken were 12.7 percent and 16.9 percent respectively. Since 1988, the number of Iowa AP candidates has increased by about 228 percent while the number of AP exams taken by Iowa candidates increased more than 360 percent.

Table 82
Number of AP Examinations Taken by Iowa Students, 1989-1998

| Year | Number of <br> Candidates | \% Increase in Candidates <br> from Prior Year | Number <br> of Exams | Percent Increase in Exams <br> from Prior Year |
| :---: | :---: | :---: | :---: | :---: |
| 1989 | 1,221 | - | 1,536 |  |
| 1990 | 1,375 | 12.6 | 1,797 | - |
| 1991 | 1,475 | 7.3 | 2,023 | 17.0 |
| 1992 | 1,649 | 15.2 | 2,289 | 12.6 |
| 1993 | 2,030 | 19.5 | 2,788 | 13.1 |
| 1994 | 2,279 | 17.2 | 3,037 | 21.8 |
| 1995 | 2,601 | 9.3 | 3,627 | 8.9 |
| 1996 | 2,929 | 12.6 | 4,112 | 19.4 |
| 1997 | 3,313 | 13.1 | 4,647 | 13.4 |
| 1998 | 3,470 | 4.7 | 4,874 | 13.0 |
|  |  |  | 4.9 |  |

Source: The College Board, Advanced Placement Program, Iowa Summary Reports.

The percentage of Iowa schools participating in Advanced Placement has shown incremental increases each year since 1991, increasing from 18 percent in 1991 to more than 36 percent in 1998. Figures for the nation indicate that 53.8 percent of schools participated in AP in 1998 (Table 83). Iowa ranked 40th of the 50 states and the District of Columbia in the percentage of schools participating in the Advanced Placement Program in 1998.

Table 83
Percent of Total Schools Participating in Advanced Placement


Table 84 reflects AP participation in terms of the number of AP exams per 1,000 eleventh and twelfth grade students. In 1998, Iowa ranked 46th of the 50 states and the District of Columbia with 54 AP examinations per 1,000 eleventh and twelfth grade students. The average for the nation in 1998 was 150 per 1,000 . The number of Iowa AP exams per 1,000, 11th and 12th graders has doubled since 1991.

Table 84

| Number of Advanced Placement Exams Per 1,000 11TH \& 12TH Graders |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Rank Based } \\ \text { on } 1998 \end{gathered}$ |  |  | Year |  |  |  |  |  |  |
| Data | State | 1998 | 1997 | 1996 | 1995 | 1994 | 1993 | 1992 | 1991 |
| 1 | District of Columbia | 359 | 331 | 277 | 249 | 251 | 221 | 220 | 283 |
| 2 | New York | 256 | 237 | 218 | 195 | 192 | 180 | 170 | 157 |
| 3 | Virginia | 249 | 241 | 227 | 221 | 209 | 184 | 170 | 161 |
| 4 | Utah | 231 | 232 | 221 | 229 | 239 | 215 | 211 | 193 |
| 5 | California | 221 | 206 | 195 | 178 | 167 | 157 | 147 | 139 |
| 6 | Connecticut | 218 | 188 | 171 | 152 | 144 | 138 | 134 | 123 |
| 7 | Maryland | 216 | 201 | 188 | 177 | 164 | 157 | 145 | 135 |
| 8 | Florida | 215 | 183 | 197 | 190 | 189 | 171 | 181 | 156 |
| 9 | Massachusetts | 213 | 202 | 180 | 162 | 153 | 145 | 134 | 121 |
| 10 | New Jersey | 210 | 206 | 195 | 163 | 155 | 143 | 136 | 121 |
| 11 | South Carolina | 191 | 184 | 178 | 171 | 165 | 152 | 141 | 130 |
| 12 | North Carolina | 190 | 178 | 167 | 170 | 145 | 119 | 95 | 81 |
| 13 | Delaware | 176 | 168 | 155 | 136 | 132 | 135 | 120 | 103 |
| 14 | Hawaii | 157 | 142 | 129 | 140 | 136 | 127 | 129 | 118 |
|  | United States | 150 | 139 | 130 | 122 | 116 | 106 | 98 | 89 |
| 15 | Alaska | 150 | 108 | 101 | 91 | 97 | 103 | 98 | 94 |
| 16 | Texas | 149 | 136 | 115 | 103 | 82 | 69 | 57 | 52 |
| 17 | Colorado | 147 | 131 | 124 | 119 | 122 | 121 | 123 | 115 |
| 18.5 | Illinois | 144 | 136 | 130 | 122 | 115 | 106 | 101 | 90 |
| 18.5 | Georgia | 144 | 122 | 110 | 144 | 154 | 125 | 85 | 77 |
| 20 | New Hampshire | 138 | 127 | 122 | 111 | 95 | 91 | 83 | 74 |
| 21 | Rhode Island | 131 | 122 | 118 | 104 | 98 | 90 | 89 | 86 |
| 22 | Vermont | 123 | 107 | 94 | 87 | 102 | 94 | 84 | 82 |
| 23.5 | Maine | 118 | 125 | 104 | 96 | 84 | 80 | 71 | 63 |
| 23.5 | Nevada | 118 | 100 | 103 | 101 | 97 | 87 | 80 | 80 |
| 25 | Wisconsin | 117 | 106 | 96 | 85 | 74 | 64 | 48 | 39 |
| 26 | Pennsylvania | 116 | 110 | 102 | 91 | 90 | 86 | 79 | 72 |
| 27 | Michigan | 112 | 107 | 105 | 91 | 84 | 82 | 76 | 70 |
| 28 | Arizona | 107 | 102 | 98 | 92 | 105 | 94 | 85 | 66 |
| 29 | Minnesota | 105 | 80 | 75 | 77 | 51 | 46 | 40 | 35 |
| 30 | Tennessee | 104 | 97 | 94 | 88 | 89 | 80 | 74 | 70 |
| 31 | Ohio | 103 | 96 | 88 | 83 | 72 | 68 | 63 | 55 |
| 32 | Kentucky | 98 | 94 | 86 | 79 | 78 | 74 | 69 | 59 |
| 33 | Indiana | 91 | 89 | 97 | 92 | 84 | 68 | 59 | 50 |
| 34 | Alabama | 84 | 94 | 88 | 88 | 81 | 73 | 70 | 62 |
| 35 | New Mexico | 83 | 80 | 76 | 74 | 78 | 74 | 80 | 72 |
| 36 | Washington | 82 | 74 | 63 | 57 | 60 | 58 | 57 | 54 |
| 37 | Oregon | 75 | 70 | 58 | 60 | 65 | 65 | 65 | 61 |
| 38 | Montana | 72 | 64 | 63 | 52 | 51 | 44 | 44 | 41 |
| 39 | Oklahoma | 71 | 56 | 49 | 45 | 51 | 48 | 42 | 37 |
| 40 | South Dakota | 68 | 48 | 37 | 35 | 23 | 24 | 18 | 18 |
| 41 | Idaho | 67 | 60 | 46 | 50 | 56 | 52 | 47 | 44 |
| 42 | West Virginia | 66 | 72 | 68 | 68 | 62 | 58 | 55 | 48 |
| 43 | Arkansas | 62 | 54 | 42 | 41 | 37 | 32 | 29 | 29 |
| 44 | Mississippi | 58 | 58 | 54 | 48 | 45 | 39 | 38 | 36 |
| 45 | Missouri | 56 | 51 | 48 | 47 | 47 | 44 | 38 | 34 |
| 46 | Iowa | 54 | 53 | 48 | 44 | 39 | 37 | 31 | 27 |
| 47 | Kansas | 51 | 48 | 47 | 41 | 40 | 38 | 35 | 36 |
| 48 | Nebraska | 50 | 49 | 44 | 48 | 46 | 47 | 41 | 39 |
| 49 | Louisiana | 42 | 39 | 38 | 36 | 39 | 37 | 34 | 34 |
| 50 | North Dakota | 38 | 28 | 32 | 24 | 21 | 19 | 19 | 19 |
| 51 | Wyoming | 31 | 30 | 34 | 45 | 48 | 42 | 42 | 33 |

Iowa AP exam score distributions are presented in Table 85 and Figure 40. The data reflect that the percentage of Iowa students with AP scores from one through five remained relatively constant across the period from 1990 to 1998. The majority of Iowa exam scores, generally around 70 percent, were three (3) (qualified) or above for each year shown. The percentage of exams rated as one (1) and two (2) (no recommendation and possibly qualified) in general, ranged from about 30 percent to 25 percent for the nine year period.

Table 85

## Advanced Placement Exam Score Distribution for Iowa Students - 1990-1998

|  | AP Score Distributions |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Year | 1 | 2 | 3 | 4 | 5 |
|  |  |  |  |  |  |
| 1990 | $5.4 \%$ | $22.7 \%$ | $32.2 \%$ | $24.1 \%$ | $15.6 \%$ |
| 1991 | 4.3 | 23.1 | 34.9 | 22.4 | 15.3 |
| 1992 | 5.9 | 22.7 | 35.3 | 22.3 | 13.8 |
| 1993 | 6.5 | 24.4 | 33.0 | 22.2 | 13.9 |
| 1994 | 3.8 | 21.4 | 35.5 | 22.6 | 16.7 |
| 1995 | 6.6 | 24.6 | 33.2 | 22.8 | 12.8 |
| 1996 | 5.8 | 24.1 | 33.9 | 23.1 | 13.2 |
| 1997 | 7.6 | 23.4 | 32.3 | 23.8 | 12.9 |
| 1998 | 6.1 | 23.1 | 33.1 | 24.1 | 13.4 |

[^37]Figure 40

## Advanced Placement Exam Score Distribution 1990-1998

The distribution of AP exam scores for males and females is shown in Tables 86 and 87 and in Figures 41 and 42. In general, the distributions of exam scores for all years are similar in nature for males and females, although a higher percentage of exams taken by males were scored four (4) and five (5) well qualified and extremely well qualified) than for females and a higher percentage of females received exam scores of two (2) and three (3) (possibly qualified and qualified) than males.

In particular, the percentage of males with AP scores of five (5) (extremely well qualified) was, in general, about five percentage points higher than for females for all years shown.

Table 86

## Advanced Placement Score Distribution of Iowa Males

|  | AP Score Distributions |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Year | 1 | 2 | 3 | 4 | 5 |
|  |  |  |  |  |  |
| 1990 | $5.5 \%$ | $19.2 \%$ | $31.0 \%$ | $24.6 \%$ | $19.7 \%$ |
| 1991 | 4.6 | 19.5 | 34.6 | 23.3 | 18.0 |
| 1992 | 6.1 | 20.8 | 32.9 | 24.0 | 16.2 |
| 1993 | 6.6 | 24.5 | 29.8 | 23.7 | 15.4 |
| 1994 | 3.4 | 19.4 | 33.7 | 25.0 | 18.5 |
| 1995 | 6.6 | 22.4 | 30.8 | 24.1 | 16.1 |
| 1996 | 5.3 | 22.3 | 32.0 | 24.5 | 15.9 |
| 1997 | 7.5 | 21.5 | 31.4 | 24.4 | 15.2 |
| 1998 | 6.1 | 21.7 | 31.7 | 24.8 | 15.7 |

[^38]Table 87

## Advanced Placement Score <br> Distribution of Iowa Females

|  | AP Score Distributions |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Year | 1 | 2 | 3 | 4 | 5 |
|  |  |  |  |  |  |
| 1990 | $5.5 \%$ | $26.9 \%$ | $33.6 \%$ | $23.5 \%$ | $10.7 \%$ |
| 1991 | 3.9 | 27.1 | 35.2 | 21.4 | 12.4 |
| 1992 | 5.5 | 24.8 | 38.1 | 20.4 | 11.2 |
| 1993 | 6.3 | 24.4 | 35.9 | 20.8 | 12.6 |
| 1994 | 4.2 | 23.3 | 37.3 | 20.2 | 15.0 |
| 1995 | 6.6 | 26.6 | 35.5 | 21.6 | 9.7 |
| 1996 | 6.3 | 25.8 | 35.7 | 21.6 | 10.6 |
| 1997 | 7.8 | 25.5 | 33.1 | 23.1 | 10.5 |
| 1998 | 6.3 | 25.7 | 35.5 | 22.1 | 10.4 |

[^39]Figure 41
Advanced Placement Score Distribution of Iowa Males


[^40]Figure 42

## Advanced Placement Score Distribution of Iowa Females



[^41]Figure 43 compares AP exam scores for Iowa and the nation for 1998. Compared to the nation, the percentage of Iowa exams scored as one (1) and two (2) (no recommendation and possibly qualified) were less than the percentage for the nation. Iowa also had a higher percentage of AP exams with scores of three (3) and four (4) qualified and well qualified) than the nation and a slightly lower percentage than the nation of AP exams scored as five (5) (extremely well qualified).

Figure 43
Advanced Placement Exam Score Distributions for Iowa and the Nation - 1998


[^42]
## Scholastic Assessment Test (SAT)

The Scholastic Assessment Test (SAT), published by The College Board, is a college entrance examination. Only about five percent of Iowa high school graduates take the SAT, primarily since the majority of Iowa graduates attend colleges and universities that do not require SAT scores for admission. The SAT scores presented in this section are provided from the SAT Reasoning Test. The SAT Reasoning Test provides both a verbal score and a mathematics score. Score values on each of the two test parts range from a low of 200 to a high of 800 .

In 1999, 1.2 million students nationwide took the SAT. A total of 1,873 Iowa graduates participated in the SAT. These figures represented 43 percent of the nation's graduates and five percent of Iowa graduates.

A comparison of average Iowa SAT scores and scores for the nation is presented in Table 88 and Figure 44. Iowa verbal and mathematics scores were substantially above average scores for the nation from 1986-87 through 199899. SAT average verbal scores for 1998-99 were at an all time high of 594 while average mathematics scores were down slightly from the all time high of 601 in 1996-97 and 1997-98 for Iowa.
Table 88

## Thirteen-Year Trends of Average SAT Scores for Iowa and the Nation, 1987-1999

| Year | SAT Verbal | SAT Math |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Nation | Iowa | Nation |
| $1986-87$ | 588 |  |  |  |
| $1987-88$ | 587 | 507 | 588 | 501 |
| $1988-89$ | 585 | 505 | 586 | 501 |
| $1989-90$ | 584 | 500 | 591 | 502 |
| $1990-91$ | 588 | 499 | 591 | 501 |
| $1991-92$ | 585 | 500 | 596 | 500 |
| $1992-93$ | 593 | 500 | 595 | 501 |
| $1993-94$ | 580 | 499 | 586 | 503 |
| $1994-95$ | 589 | 504 | 595 | 504 |
| $1995-96$ | 590 | 505 | 600 | 506 |
| $1996-97$ | 589 | 505 | 601 | 508 |
| $1997-98$ | 593 | 505 | 601 | 511 |
| $1998-99$ | 594 | 505 | 598 | 512 |

Source: The College Board, 1999 Profile of SAT Program Test Takers.
Note: The Iowa participation rate in SAT for the class of 1999 was 5 percent.
Figure 44
Thirteen-Year Trends of Average SAT Scores for Iowa and the Nation


[^43]Average SAT scores for Iowa and midwest states are reported in Table 89 for 1989 and for 1996 through 1999. In all years except 1996 and 1999 average SAT verbal and mathematics scores for Iowa students ranked first in the nation. In 1996, Iowa ranked second behind North Dakota on verbal scores and was tied with Minnesota for second on the mathematics test behind North Dakota in 1999.

Table 89

| Average SAT Scores for Iowa, The Nation and Midwest States 1989, 1996-1999 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{V}=$ Verbal $\quad \mathrm{M}=\mathrm{M}$ <br> Nation and State |  | $89$ |  | $\begin{gathered} 96 \\ \text { M } \end{gathered}$ |  | $\begin{gathered} 97 \\ \mathrm{M} \end{gathered}$ | V 19 | $\mathrm{M}$ |  | $9$ | \% of Graduates Taking SAT in 1999 |
| Iowa | 585 | 585 | 590 | 600 | 589 | 601 | 593 | 601 | 594 | 598 | 5\% |
| Nation | 504 | 502 | 505 | 508 | 505 | 511 | 505 | 512 | 505 | 511 | 43 |
| Illinois | 537 | 539 | 564 | 575 | 562 | 578 | 564 | 581 | 569 | 585 | 12 |
| Kansas | 569 | 561 | 579 | 571 | 578 | 575 | 582 | 585 | 578 | 576 | 9 |
| Minnesota | 550 | 550 | 582 | 593 | 582 | 592 | 585 | 598 | 586 | 598 | 9 |
| Missouri | 546 | 538 | 570 | 569 | 567 | 568 | 570 | 573 | 572 | 572 | 8 |
| Nebraska | 562 | 560 | 567 | 568 | 562 | 564 | 565 | 571 | 568 | 571 | 8 |
| North Dakota | 574 | 581 | 596 | 599 | 588 | 595 | 590 | 599 | 594 | 605 | 5 |
| South Dakota | 573 | 560 | 574 | 566 | 574 | 570 | 584 | 581 | 585 | 588 | 4 |
| Wisconsin | 553 | 554 | 577 | 586 | 579 | 590 | 581 | 594 | 584 | 595 | 7 |
| Iowa Rank in Nation | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2* |  |

Source: The College Board, 1999 Profile of SAT Program Test-Takers.
Note: *Indicates a tie.

Average SAT verbal and mathematics scores for Iowa graduates are shown by gender in Figures 45 and 46 for 1995 though 1999. Males scored higher on both the verbal and mathematics tests than females in all years presented, with the most pronounced differences occurring on the mathematics test. Both verbal and mathematics average scores for males showed a general increase for the years reported while average scores for females were generally stable.

Figure 45


Source: The College Board, 1999 Profile of SAT Program Test Takers.
Note: The Iowa participation rate in SAT for the class of 1999 was 5 percent.
Figure 46
Iowa Average SAT Mathematics Scores by Gender


[^44]
## Postsecondary Enrollment Options

Chapter 261C of the Iowa Code, Postsecondary Enrollment Options Act, makes provisions for Iowa high school students to earn college credit for courses taken while students are enrolled in high school. Students eligible to take postsecondary enrollment option courses are defined by the Iowa Code as "a ninth or tenth grade pupil who is identified according to the district's gifted and talented criteria and procedures as a gifted and talented child, or an eleventh or twelfth grade pupil." School districts with students who participate in postsecondary enrollment options courses at postsecondary institutions are required to pay a tuition reimbursement amount to the postsecondary institution equal to the lesser of "actual and customary costs of tuition, textbooks, materials, and fees directly related to the course taken by the eligible student" or the sum of $\$ 250$.

Enrollments in postsecondary enrollment options courses have increased by 149 percent since 1992-93 with more than 5,500 students participating during the 1997-98 school year (Table 90 and Figure 47). The number of courses taken as postsecondary enrollment options grew to more than 8,200 in 1997-98, increasing 155 percent since 1992-93.

Table 90

| IOWA POSTSECONDARY ENROLLMENT OPTIONS |  |  |
| :---: | :---: | :---: |
| ENROLLMENTS AND COURSES - 1992-93 TO 1997-98 |  |  |
| Year | Enrollment | Courses |
|  |  |  |
| $1992-93$ | 2,219 | 3,229 |
| $1993-94$ | 2,978 | 4,421 |
| $1994-95$ | 3,465 | 5,016 |
| $1995-96$ | 4,098 | 5,645 |
| $1996-97$ | 4,577 | 7,125 |
| $1997-98$ | 5,524 | 8,226 |

Figure 47

| Iowa Postsecondary Enrollment Options Enrollments and Courses - 1992-93 to 1997-98 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Year |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Tables 91 and 92 also present a comparison of postsecondary enrollments and the number of courses taken in 1992－93 and 1997－98 according to institution．In 1992－93， 70 percent of juniors and seniors participated in postsecondary enroll－ ment options courses through community colleges compared to 14 percent in private four－year colleges and 6.8 percent in regents institutions．By compari－ son the percentage of students enrolled in postsecondary enrollment options courses in 1997－98 was 79.7 percent at community colleges， 10.9 percent in private four－year colleges，and about eight percent in regents institutions．

Table 91

| 1992－1993 Iowa Postsecondary Enrollment Options Act Enrollment by Type of Institution and Type of Course |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Institution | Enroluments |  |  | Number of Courses Taken During the Year |  |  |  |  |  |
|  | 皆 | $\begin{aligned} & \text { © } \\ & \stackrel{0}{\#} \\ & \text { H } \end{aligned}$ |  | 甹 | $\begin{aligned} & \text { 炭 } \\ & \text { 营 } \end{aligned}$ | $\begin{aligned} & \text { 岂 } \\ & \text { 㩊 } \\ & \overrightarrow{\frac{1}{0}} \\ & 0 \end{aligned}$ | 蜀 |  |  |
| Regents Institution | 28 | 120 | 148 | 63 | 38 | 56 | 88 | 4 | 5 |
| Community College | 311 | 1，416 | 1，727 | 243 | 217 | 738 | 901 | 210 | 247 |
| Private 4 Yr．College | 39 | 267 | 306 | 54 | 30 | 135 | 163 | 19 | 7 |
| Private 2 Yr．College |  | 6 | 6 | 8 |  |  | 2 |  | 1 |
| Totals ${ }^{1}$ | 378 | 1，809 | 2，187 | 368 | 285 | 929 | 1，154 | 233 | 260 |

Source：Iowa Department of Education，Basic Educational Data Survey，Postsecondary Enrollment Options file，1992－93． Note：$\quad 1$ Excluded from total enrollments are 32 freshmen and sophomores．

Table 92
1997－98 Iowa Postsecondary Enrollment Options Act Enrollment by Type of Institution and Type of Course

| Institution | Enrollments |  |  | Number of Courses Taken During the Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | － | $\begin{aligned} & \text { © } \\ & \stackrel{0}{己} \\ & \text { © } \end{aligned}$ |  | $\frac{\text { I }}{\substack{\Sigma}}$ | $\begin{aligned} & \text { W } \\ & \text { W } \\ & \text { © } \\ & \hline 0 \end{aligned}$ |  |  |  |  |
| Regents Institution | 72 | 358 | 430 | 81 | 153 | 166 | 198 | 21 | 10 |
| Community College | 940 | 3，358 | 4，298 | 673 | 520 | 2，004 | 2，097 | 746 | 605 |
| Private 4 Yr．College | 84 | 506 | 590 | 118 | 91 | 333 | 228 | 37 | 6 |
| Private 2 Yr．College | 8 | 66 | 74 | 36 | 18 | 24 | 42 | 13 | 6 |
| Totals ${ }^{1}$ | 1，104 | 4，288 | 5，392 | 908 | 782 | 2，527 | 2，565 | 817 | 627 |

[^45]Figure 48 provides a six-year comparison of postsecondary enrollments by institution type. Over the period from 1992-93 to 1997-98 the preponderance of students electing to take postsecondary enrollment options courses participated through community colleges. Postsecondary enrollment options enrollments in community colleges from 1992-93 to 1997-98 have ranged from a high of 81.4 percent in 1995-96 to a low of 75.5 percent in 1996-97.

Figure 48
Percentage Distribution of Iowa Postsecondary Enrollment Options Enrollments - 1992-93 to 1997-98


[^46]
## Pursuit of Postsecondary Education/Training

The percentage of Iowa public school students pursuing or intending to pursue education or training beyond the high school level is presented in Figure 49. Data are presented for the graduating class of 1985 and for the classes of 1992 through 1997. Since 1985, the percentage of high school guaduates pursuing or intending to pursue some type of postsecondary education or training has increased more than 11 percentage points.

Figure 49

| Percent of Iowa Public School Graduates Pursuing Postsecondary |
| :---: |
| Education/Training, Graduating Classes of |
| 1985 and 1992-1997 |



Source: Iowa Department of Education, Basic Educational Data Survey Files.

Figure 50 reflects postsecondary education/training pursuits by enrollment category. Data are reported for 1985 and for 1996 and 1997 graduating classes. For the graduating class of 1997 the range among enrollment categories was only 7.6 percentage points. In general, the percentage of graduates pursuing or intending to pursue postsecondary education/training increased across the period from 1985 to 1997 for all enrollment categories.

Figure 50
Percent of Iowa Public School Graduates Pursuing or Intending to Pursue Postsecondary Education/Training, Graduating Classes of 1985, 1996, and 1997 by Enrollment Category


Source: Iowa Department of Education, Basic Educational Data Survey. Graduate Follow-Up Files.

Table 93 compares the number and percentage of high school graduates who were reported to be attending or intended to pursue postsecondary education/training by institution type. Data are presented for 1985 and for 1996 and 1997. The predominant changes since 1985 occurred for community colleges and technical/trade schools. The percentage of graduates pursuing or intending to pursue postsecondary education at Iowa community colleges increased from 18.2 percent in 1985, to 29.4 percent in 1997, while the percentage of public school graduates pursuing postsecondary education/training at technical/trade schools dropped from 6.1 percent in 1985 to only 3.3 percent in 1997.

Table 93

## Iowa Public School Graduates Pursuing or Intending to Pursue Postsecondary Education Training After Graduation by Postsecondary Institution

| Postsecondary Institution | Number of Students |  |  | Percent of Total Graduates |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | 1996 | 1997 | 1985 | 1996 | 1997 |
| Private 4-Year College | 4,236 | 4,203 | 4,256 | 12.3 | 13.3 | 13.1 |
| Public 4-Year College | 8,061 | 7,971 | 8,170 | 23.3 | 25.3 | 25.1 |
| Community College | 6,295 | 8,905 | 9,541 | 18.2 | 28.3 | 29.4 |
| Private 2-Year College | 488 | 381 | 427 | 1.4 | 1.2 | 1.3 |
| Technical/Trade School | 2,113 | 1,088 | 1,067 | 6.1 | 3.5 | 3.3 |
| Apprentice Training | 39 | 104 | 109 | 0.1 | 0.3 | 0.3 |
| Total | 21,232 | 22,648 | 23,570 | 61.4 | 71.9 | 72.5 |

Source: Iowa Department of Education, Basic Educational Data Survey Files.

Table 94 and Figure 51 compare graduate postsecondary pursuits by four-year and twoyear institutions from 1985 through 1997. Percentages for four-year institutions have remained relatively constant across the time period, reaching a peak of 39.2 percent in 1994. On the other hand, percentages of graduates pursuing or intending to pursue postsecondary education or training at two-year colleges has generally shown a steady increase since 1985 , reaching a high of 30.7 percent in 1997. This represented a gain of more than 11 percentage points across the 13-year period.

## Table 94

## Percent of Iowa Public School Graduates Pursung or Intending to Pursue Postsecondary Education at Four-Year and Two-Year Colleges

| Postsecondary |  |  | Graduating Class |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Institution |  | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| 4-Year | Total | 12,297 | 12,264 | 13,065 | 13,004 | 12,587 | 11,958 | 11,129 | 11,445 | 11,509 | 11,610 | 11,957 | 12,174 | 12,426 |
| College | Percent | 35.6\% | 36.5\% | 38.1\% | 37.7\% | 37.8\% | 38.8\% | 38.5\% | 39.1\% | 39.0\% | 39.2\% | 38.5\% | 38.6\% | 38.2\% |
| 2-Year | Total | 6,783 | 6,583 | 6,737 | 7,274 | 7,564 | 7,463 | 7,258 | 7,946 | 8,162 | 8,269 | 9,156 | 9,286 | 9,968 |
| College | Percent | 19.6\% | 19.6\% | 19.6\% | 21.1\% | 22.7\% | 24.2\% | 25.1\% | 27.1\% | 27.6\% | 27.9\% | 29.5\% | 29.5\% | 30.7\% |

Source: Iowa Department of Education, Basic Educational Data Survey Files.

Figure 51

## Percent of Iowa Public High School Graduates Pursuing or Intending to Pursue Four-Year and Two Year Colleges



Source: Iowa Department of Education, Basic Educational Data Survey Files.

## Dropouts

Students in grades seven through twelve who fail to graduate or fail to complete a school district or a state approved education program and are not enrolled in an education program provided by a school district are considered to be dropouts. Dropout information is collected annually as a part of the Basic Educational Data Survey. Information is collected by grade level, gender, and by racial/ethnic status. The dropout rate is calculated by dividing the combined number of dropouts in grades seven through twelve by the sum of seven through twelve enrollments. The percentage of 7-12 dropouts in Iowa public schools is depicted in Figure 52 for the years 1985-86 and for 1990-91 through 1997-98. The percentage of 7-12 students who were classified as dropouts has shown a general decline since 1990-91, decreasing from 2.49 percent to 1.98 percent in 1997-98.

Figure 52


Source: Iowa Department of Education, Basic Educational Data Survey, Dropout files.

Table 95 presents the most current Iowa dropout data available for Iowa public schools. A total of 4,581 public school students in grades seven through twelve were reported as dropouts in 1997-98. The highest percentage of Iowa dropouts, 31.2 percent, was reported for grade 11 . This continues to follow the historical trend. Grades 12 and 10 accounted for 29.9 percent and 23.6 percent of all dropouts respectively, while 14.3 percent of reported dropouts were from grade nine. A total of one percent of all dropouts in 1997-98 was from grades seven and eight combined.

Table 95 also reflects dropouts by enrollment category. Nearly 61 percent of all public school dropouts in 1997-98 were from districts with enrollments of 2,500 and above. By comparison, these districts accounted for only 43.6 percent of all 7-12 enrollments. While more than 29 percent of total 7-12 enrollments were represented by school districts under 1,000 enrollment, only about 16 percent of all dropouts were reported by districts with enrollments under 1,000 .

Table 95

## Total Iowa Public School Dropouts by Enrollment Category 1997-98

| Enrollment Category | Grade Level |  |  |  |  |  | $\underset{\text { Dropouts }}{\text { Total }}$ | $\begin{gathered} \% \text { of } \\ \text { Total } \\ \text { Dropouts } \end{gathered}$ | $\begin{gathered} \% \text { of } \\ \text { Enroll } \\ 7-12 \end{gathered}$ | $\begin{aligned} & \text { Drop- } \\ & \text { Percent } \\ & \text { Perce } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7 | 8 | 9 | 10 | 11 | 12 |  |  |  |  |
| <250 | 0 | 0 | 2 | 8 | 4 | 6 | 20 | 0.4 | 0.6 | 1.42 |
| 250-399 | 1 | 0 | 6 | 15 | 29 | 27 | 78 | 1.7 | 3.4 | 1.00 |
| 400-599 | 1 | 2 | 17 | 44 | 70 | 87 | 221 | 4.8 | 8.4 | 1.13 |
| 600-999 | 2 | 3 | 41 | 83 | 149 | 133 | 411 | 9.0 | 16.7 | 1.06 |
| 1,000-2,499 | 6 | 4 | 127 | 252 | 346 | 326 | 1,061 | 23.2 | 27.3 | 1.68 |
| 2,500-7,499 | 0 | 0 | 117 | 250 | 295 | 312 | 974 | 21.3 | 19.4 | 2.18 |
| 7,500+ | 9 | 18 | 347 | 429 | 536 | 477 | 1,816 | 39.6 | 24.2 | 3.24 |
| State | 19 | 27 | 657 | 1,081 | 1,429 | 1,368 | 4,581 | 100\% | 100\% | 1.98\% |

Source: Iowa Department of Education, Basic Educational Data Survey, Dropout files.

Dropouts for Iowa public schools are presented by gender for the 1993-94 through the 1997-98 school year in Table 96. In 1997-98, as in past years, males accounted for the largest percentage of dropouts in grades seven through twelve. Males represented 57.1 percent of total dropouts. A comparison of the years 1993-94 through 1997-98 reflects that the dropout percentage for males has generally been about one-half percentage point higher than for females. Percentages for both males and females have, in general, shown declines across the period from 1993-94 to 1997-98.

Table 96

## Total Iowa Public School Dropouts by Gender 1993-94 - 1997-98

|  | $1993-94$ | $1994-95$ | $1995-96$ | $1996-97$ | $1997-98$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| Female Dropout Percent | $1.83 \%$ | $1.87 \%$ | $1.81 \%$ | $1.75 \%$ | $1.73 \%$ |
| Male Dropout Percent | $2.39 \%$ | $2.54 \%$ | $2.38 \%$ | $2.27 \%$ | $2.22 \%$ |
| Female Dropouts as a Percent of Total Dropouts | $42.6 \%$ | $41.7 \%$ | $42.2 \%$ | $42.6 \%$ | $42.94 \%$ |
| Female Enrollment as a Percent of Total Enrollment | $49.3 \%$ | $49.2 \%$ | $49.0 \%$ | $49.1 \%$ | $49.05 \%$ |

Source: Iowa Department of Education, Basic Educational Data Survey, Dropout files.

Table 97 presents 1997-98 dropout data by race/ethnicity groups as well as the proportion of grade 7-12 students by ethnic group. The data reflect that the 7-12 minority dropout rates for all but Asians exceeded the overall dropout rate of 1.98 percent. The percentage of dropouts for all minorities combined in 1997-98, was 16.7 percent compared to the 6.9 percent of the $7-12$ enrollments that they represented. All minority groups except Asians accounted for a higher percentage of the total dropouts than the percentage of 7-12 enrollments they represented.

Table 97

## 1997-98 Iowa Public School Grade 7-12 Dropouts by Race/Ethnictiy

| Race/ <br> Ethnicity <br> Group | Dropout <br> Rate as a \% | Total <br> Dropouts | \% of Total <br> Dropouts | Grade 7-12 <br> Enrollment | \% of 7-12 <br> Enrollment |
| :--- | :---: | :---: | :---: | ---: | :---: |
| White | 1.8 | 3,815 | $83.3 \%$ | 215,389 | $93.1 \%$ |
| All Minority | 4.8 | 766 | 16.7 | 15,906 | 6.9 |
| American Indian | 5.8 | 54 | 1.1 | 928 | 0.4 |
| Asian | 1.7 | 64 | 1.4 | 3,715 | 1.6 |
| Hispanic | 6.5 | 310 | 6.8 | 4,802 | 2.1 |
| African American | 5.2 | 338 | 7.4 | 6,461 | 2.8 |
| State | 1.98 | 4,581 | 100.0 | 231,295 | 100.0 |
|  |  |  |  |  |  |

Source: Iowa Department of Education, Basic Educational Datas Survey, Dropout File.

Table 98 presents trend information on dropouts by race/ethnicity for the years 1993-94 through 1997-98. Over the period, the percentage of dropouts for three minority groups, African Americans, Hispanics, and American Indians was higher than the proportion of 7-12 enrollments represented by the three minority groups. The percentage of total 7-12 dropouts represented by Hispanic students has shown incremental increases from 199394 through 1997-98.

Table 98

## Percent of Iowa Public School Dropouts by Racial/Ethnic Group 1993-94 то 1997-98

| Racial/Ethnic Group | \% of 7-12 Total Dropouts |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
| White | 85.5\% | 87.8\% | 83.6\% | 84.8\% | 83.3\% |
| African American | 8.0 | 5.6 | 9.0 | 7.6 | 7.4 |
| Hispanic | 3.8 | 4.3 | 4.6 | 5.4 | 6.7 |
| Asian | 1.7 | 1.3 | 1.6 | 1.3 | 1.4 |
| American Indian | 1.0 | 1.0 | 1.2 | 0.9 | 1.2 |
| \% of 7-12 Enrollment |  |  |  |  |  |
| Racial/Ethnic Group | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
| White | 94.2\% | 94.0\% | 93.7\% | 93.4\% | 93.1\% |
| African American | 2.6 | 2.7 | 2.7 | 2.8 | 2.8 |
| Hispanic | 1.5 | 1.5 | 1.7 | 1.9 | 2.1 |
| Asian | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 |
| American Indian | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 |

Source: Iowa Department of Education, Basic Educational Data Survey, Dropout Files.

Data provided through the National Center for Education Statistics (NCES) are presented in Table 99 on the percentage of grade 9-12 dropouts for Iowa and for other states and territories providing information to NCES. Iowa ranked third, fourth, and fifth, respectively for the years 1993-94, 1994-95, and 1995-96. Compared to other midwest states, only North Dakota ranked higher than Iowa.

Table 99

| Public High School Dropouts 1993-94 то 1995-96 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 199 |  |  |  | 1995 |  |
|  | Percent of 9-12 |  | Percent of 9-12 |  | Percent of 9-12 |  |
| State | Dropouts | Rank | Dropouts | Rank | Dropouts | Rank |
| Puerto Rico | - | - | - | - | 1.5 | 1 |
| North Dakota | 2.7 | 1 | 2.5 | 1 | 2.5 | 2 |
| South Carolina | - | - | - | - | 2.9 | 3 |
| Maine | 3.1 | 2 | 3.4 | 3 | 3.1 | 4 |
| Iowa | 3.2 | 3 | 3.5 | 4 | 3.1 | 5 |
| Massachusetts | 3.7 | 4 | 3.6 | 6 | 3.3 | 6 |
| Indiana | - | - | 4.6 | 15 | 3.5 | 7 |
| New York | 4.0 | 7 | 4.1 | 9 | 3.7 | 8 |
| West Virginia | - | - | 4.2 | 10 | 3.8 | 9 |
| California | 5.3 | 16 | 4.4 | 11 | 3.9 | 10 |
| Pennsylvania | 3.8 | 6 | 4.1 | 8 | 4.0 | 11 |
| Arkansas | 5.3 | 17 | 4.9 | 17 | 4.1 | 12 |
| Utah | - | - | 3.6 | 7 | 4.4 | 13 |
| Nebraska | 4.6 | 8 | 4.5 | 12 | 4.5 | 14 |
| Delaware | 4.6 | 9 | 4.6 | 13 | 4.5 | 15 |
| Rhode Island | 4.9 | 11 | 4.6 | 14 | 4.6 | 16 |
| Hawaii | 5.1 | 14 | 4.9 | 16 | 4.7 | 18 |
| Kansas | 5.0 | 13 | 5.1 | 19 | 4.7 | 17 |
| Connecticut | 4.9 | 12 | 5.0 | 18 | 4.8 | 19 |
| Minnesota | 5.1 | 15 | 5.2 | 20 | 5.3 | 20 |
| Ohio | - | - | 5.3 | 21 | 5.4 | 21 |
| Alabama | 5.8 | 18 | 6.2 | 22 | 5.6 | 22 |
| Montana | - | - | - | - | 5.6 | 23 |
| Wyoming | - | - | 6.7 | 24 | 5.7 | 24 |
| Mississippi | 6.1 | 19 | 6.4 | 23 | 6.2 | 25 |
| Missouri | 7.1 | 20 | 7.1 | 25 | 6.6 | 26 |
| Oregon | 7.3 | 21 | 7.1 | 26 | 7.0 | 27 |
| Georgia | 8.7 | 23 | 9.0 | 28 | 8.5 | 28 |
| Nevada | 9.8 | 25 | 10.3 | 29 | 9.6 | 29 |
| Louisiana | 4.7 | 10 | 3.5 | 5 | 11.6* | 30 |
| Texas | 3.7 | 5 | 2.7 | 2 | - | - |
| New Mexico | 8.1 | 22 | 8.5 | 27 | - | - |
| Dist. of Columbia | 9.6 | 24 | 10.6 | 30 | - | - |

[^47]In summary, Iowa public school dropout rates have been declining since 1990-91. The highest dropout rates occurred for grade 11. Males had higher dropout rates than females. Minority students, with the exception of Asians, had substantially higher dropout rates than majority students. In addition, districts with enrollments over 1,000 accounted for more than 84 percent of all 7-12 dropouts and 71.1 percent of total 7-12 enrollments. Iowa's 9-12 dropout rate ranked third, fourth, and fifth in the nation in 1993-94, 1994-95, and 1995-96, respectively.

## Finance

The finance chapter of the Annual Condition of Education Report is intended to provide current status and baseline information on Iowa public school district finance. The most current year for which expenditure information on Iowa school districts is available is the 1997-98 school year. Financial information is provided by local school districts through the Certified Annual Financial Report. Additional information included was provided from the Iowa Department of Management Program and Budget Summary, Iowa Department of Management School Budget Master File, Aid and Levy Worksheets, and from the Iowa Legislative Fiscal Bureau.

Information reported in this chapter includes expenditures by function category, object category, revenues, expenditures per pupil, state aid, property taxes, income surtaxes, and elementary and secondary education budgets.

## Function Category Expenditures

Function category expenditures include instruction, student support services, staff support services, administrative services, operations and maintenance, student transportation, central support services, food services subsidy, and community service and education. Function category expenditures are presented in Table 100 as a percentage of total general fund expenditures for the two most current school years and for the base year 1985-86.

Table 100

| Function Category Expenditures as a Percent of Total General Fund Expenditures in Iowa Public Schools 1985-86, 1996-97, AND 1997-98 |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | Year |  |
| Function Category | 1985-86 | 1996-97 | 1997-98 |
| Instruction | 65.3\% | 68.3\% | 68.6\% |
| Student Support Services | 2.9 | 3.8 | 3.8 |
| Staff Support Services | 3.2 | 4.0 | 3.9 |
| Administrative Services | 10.2 | 9.5 | 9.7 |
| Operations and Maintenance | 12.2 | 9.3 | 9.1 |
| Student Transportation | 5.2 | 4.0 | 3.8 |
| Central Support Services | 0.6 | 0.8 | 0.8 |
| Food Services Subsidy | 0.2 | 0.1 | 0.1 |
| Community Service and Education | 0.2 | 0.2 | 0.2 |

[^48]The percentage of general fund expenditures allocated for instruction, student support services, staff support services, and central support services reflected increases from 1985-86 to 1997-98. The greatest increase occurred for instruction, which reflected an increase of 3.3 percentage points. The percentage of general fund expenditures for instruction in 1997-98 also reflected increases over the previous school year. Function categories experiencing decreases, as a proportion of the general fund, from 1985-86 to 1997-98 included administrative services, student transportation, and food services subsidy. Operations and maintenance expenditures declined 3.1 percentage points over the period.

Function category expenditures as a percent of total general fund expenditures by enrollment category for 1997-98 are presented in Table 101. Student support services, staff support services, and operations and maintenance, as a percentage of general fund expenditures, tended to increase with increases in enrollment, while administrative services tended to decrease with increases in enrollment.

Table 101

## Function Category Expenditures as a Percent of Total <br> General Fund Expenditures in Iowa Public Schools by Enrollment Category 1997-98

|  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enrollment Category |  |  |  |  |  |  |  |
| Function Category | $<250$ | $250-399$ | $400-599$ | $600-999$ | $1,000-2,499$ | $2,500-7,499$ | $7,500+$ | State |
| Instruction | $70.6 \%$ | $68.8 \%$ | $68.4 \%$ | $68.1 \%$ | $68.7 \%$ | $69.2 \%$ | $68.3 \%$ | $68.6 \%$ |
| Student Support Services | 1.6 | 2.5 | 2.5 | 3.1 | 3.7 | 3.9 | 4.8 | 3.8 |
| Staff Support Services | 2.7 | 2.9 | 3.2 | 3.4 | 4.1 | 4.9 | 3.9 | 3.9 |
| Administrative Services | 12.1 | 12.4 | 11.6 | 10.9 | 10.0 | 9.0 | 8.4 | 9.7 |
| Operations and Maintenance | 7.6 | 8.1 | 8.8 | 8.7 | 8.8 | 9.1 | 9.9 | 9.1 |
| Student Transportation | 4.9 | 4.9 | 4.9 | 5.4 | 4.3 | 3.2 | 2.5 | 3.8 |
| Central Support Services | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.6 | 1.9 | 0.8 |
| Food Services Subsidy | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Community Service and Ed. | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 |

[^49]
## Object Category Expenditures

Expenditures for object categories, which include salaries, benefits, purchased services, supplies, property, and other objects are reported in Table 102 as a percentage of total general fund expenditures. Comparisons are made for the base year, 198586, and for the two most current school years for which data are available. Salaries encompass the largest portion of general fund expenditures and have decreased from 68.1 percent of general fund expenditures in 1985-86, to 64.8 percent in 199798, up slightly from 1996-97 levels. Employee benefits rose from 12.9 percent of general fund expenditures in 1985-86, to 15.5 percent in 1997-98. Expenditures for supplies also increased across the period from 1985-86 to 1997-98.

Table 102

| Object Category Expenditures as a Percent of Total General Fund Expenditures in Iowa Public Schools 1985-86, 1996-97, and 1997-98 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Year |  |  |
|  | 1985-86 | 1996-97 | 1997-98 |
| Object Category | Percent | Percent | Percent |
| Salaries | 68.1\% | 64.6\% | 64.8\% |
| Benefits | 12.9 | 15.4 | 15.5 |
| Purchased Services | 9.9 | 9.9 | 9.8 |
| Supplies | 5.7 | 6.5 | 6.5 |
| Property | 2.6 | 3.3 | 3.0 |
| Other Objects | 0.8 | 0.3 | 0.4 |

Source: Iowa Department of Education, Certified Annual Financial Reports.

Object category expenditures, as a percent of general fund expenditures, are reported by enrollment category for the 1997-98 school year in Table 103. Expenditures for salaries and benefits, as a percentage of total general fund expenditures, generally increased with increases in enrollment, while purchased services decreased with increases in enrollments. Differences across enrollment categories in purchased services were primarily a function of whole-grade sharing for smaller school districts. No particular pattern across enrollment categories was evident for the portion of general fund expenditures allocated for property and other objects.

Table 103

# Object Category Expenditures as a Percent of <br> Total General Fund Expenditures in Iowa Public Schools by Enrollment Category 1997-98 

|  | Enrollment Category |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Object Category | $<250$ | $250-399$ | $400-599$ | $600-999$ | $1,000-2,499$ | $2,500-7,499$ | $7,500+$ | State |
|  |  |  |  |  |  |  |  |  |
| Salaries | $49.3 \%$ | $58.8 \%$ | $62.4 \%$ | $62.9 \%$ | $65.4 \%$ | $66.0 \%$ | $66.6 \%$ | $64.8 \%$ |
| Benefits | 11.8 | 13.6 | 14.0 | 14.5 | 15.0 | 15.6 | 17.4 | 15.5 |
| Purchased Services | 29.4 | 16.8 | 12.6 | 11.0 | 8.9 | 8.6 | 8.4 | 9.8 |
| Supplies | 6.4 | 7.5 | 7.4 | 7.6 | 7.0 | 6.0 | 5.2 | 6.5 |
| Property | 2.6 | 3.0 | 3.2 | 3.7 | 3.4 | 3.0 | 2.1 | 3.0 |
| Other Objects | 0.5 | 0.3 | 0.4 | 0.3 | 0.3 | 0.8 | 0.3 | 0.4 |

[^50]
## Revenues

Table 104 reports revenues by source in Iowa public school districts for 1985-86 and for 1996-97 and 1997-98. The two primary sources of revenue for Iowa school districts were local taxes and state foundation aid for all years reported.

Figures reflected a shift in the percentage of revenue derived from local taxes and state foundation aid since 1985-86. In 1985-86, a nearly equal proportion of revenue for schools was derived from local taxes and from state foundation aid, 47.3 percent and 46 percent respectively (Table 104 and Figure 53). In 1997-98, the proportion of revenues derived from local taxes decreased 14.7 percentage points to 32.6 percent, while revenue from state aid increased from 46 percent to 53.1 percent, an increase of 7.1 percentage points. Revenue from local taxes and state foundation aid accounted for nearly 86 percent of all school district revenues in 1997-98.

Interagency revenues more than doubled from 1985-86 to 1997-98, while revenues from federal sources increased slightly from 2.4 percent to 2.7 percent over the period.

Table 104

# Revenues by Source as a Percent of Total General Fund Revenues in Iowa Public Schools 1985-86, 1996-97, and 1997-98 

|  | Year |  |  |
| :--- | :---: | :---: | :---: |
| Source of Revenue | $1985-86$ | $1996-97$ | $1997-98$ |
| Local Taxes | $47.3 \%$ | $32.4 \%$ | $32.6 \%$ |
| Interagency | 1.4 | 3.5 | 3.6 |
| Other Local Sources | 1.8 | 2.2 | 2.4 |
| Intermediate Sources | 0.1 | 0.3 | 0.2 |
| State Foundation Aid | 46.0 | 53.3 | 53.1 |
| Other State Sources | 0.7 | 5.3 | 5.1 |
| Federal Sources | 2.4 | 2.6 | 2.7 |
| Other Financing Sources | 0.3 | 0.4 | 0.3 |

[^51]Figure 53

## Percent of Total General Fund Revenues from Local Taxes and State Foundation Aid in Iowa Public Schools 1985-86 and 1994-95 то 1997-98



Source: Iowa Department of Education, Certified Annual Financial Reports.

Revenues by source for 1997-98, are reflected in Table 105 and Figure 54 by enrollment category. State foundation aid, as a percent of general fund revenues, in general, increased with increases in enrollment. Districts with enrollments under 400 derived a higher percentage of revenues from local taxes than districts with enrollments of 400 and above.

Table 105

## Revenues by Source as a Percent of Total General Fund Revenues in Iowa Public Schools - 1997-98

|  | Enrollment Category |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $<250$ | $250-399$ | $400-599$ | $600-999$ | $1,000-2,499$ | $2,500-7,499$ | $7,500+$ | State |
| Source of Revenue |  |  |  |  |  |  |  |  |
| Local Taxes | $39.1 \%$ | $35.7 \%$ | $33.9 \%$ | $33.0 \%$ | $31.1 \%$ | $32.5 \%$ | $32.7 \%$ | $32.6 \%$ |
| Interagency | 4.8 | 7.2 | 5.7 | 4.6 | 3.9 | 3.4 | 1.6 | 3.6 |
| Other Local Sources | 1.9 | 2.6 | 2.4 | 2.1 | 2.1 | 2.9 | 2.6 | 2.4 |
| Intermediate Sources | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.8 | 0.2 |
| State Foundation Aid | 43.5 | 45.8 | 49.9 | 52.4 | 55.2 | 54.1 | 53.1 | 53.1 |
| Other State Sources | 7.7 | 5.6 | 5.3 | 5.0 | 5.0 | 4.6 | 5.3 | 5.1 |
| Federal Sources | 2.7 | 2.8 | 2.3 | 2.4 | 2.4 | 2.2 | 3.6 | 2.7 |
| Other Financing Sources | 0.3 | 0.2 | 0.5 | 0.4 | 0.2 | 0.3 | 0.3 | 0.3 |
|  |  |  |  |  |  |  |  |  |

[^52]Figure 54


[^53]
## Expenditures Per Pupil

Per pupil expenditures for Iowa public school districts include the following components; instruction, student support services, administration, operations and maintenance, student transportation, and central support. Per pupil expenditure calculations exclude community services, adult education, nonpublic education, co-curricular activities, financial support for food services programs, area education agency flow-through, interfund transfers, facility acquisition, and debt services.

Also removed from expenditures were interagency revenues from other school districts and area education agencies for services sold. Per pupil expenditure calculations use budget enrollment figures from the Department of Education's Certified Enrollment Report.

Average expenditures per pupil in Iowa school districts in 1997-98 were \$5,119 compared to $\$ 2,916$ in 1985-86, an increase from the base year of 75.5 percent (Table 106). Average expenditures in 1997-98 increased by about four percent over the previous school year. The highest average per pupil expenditures in 1985-86, 1996-97, and in 1997-98 were reported by districts with enrollments under 250.

Table 106

# Average General Fund Per Pupil Expenditures For Iowa Public Schools by Enrollment Category 1985-86, 1996-97, and 1997-98 

|  | Year |  |  |
| :--- | :---: | :---: | :---: |
| Enrollment Category | $1985-86$ | $1996-97$ | $1997-98$ |
| $<250$ | $\$ 3,368$ | $\$ 5,567$ | $\$ 5,726$ |
| $250-399$ | 3,000 | 5,179 | 5,339 |
| $400-599$ | 2,917 | 4,867 | 5,025 |
| $600-999$ | 2,869 | 4,833 | 4,985 |
| $1,000-2,499$ | 2,819 | 4,721 | 4,881 |
| $2,500-7,499$ | 2,899 | 4,827 | 5,055 |
| $7,500+$ | 2,987 | 5,210 | 5,461 |
| State Average |  |  |  |

Source: Iowa Department of Education, Certified Enrollment and Certified Annual Financial Reports.

A comparison of per pupil expenditures for Iowa and contiguous states is provided in Table 107 and Figure 55. The figures are from the National Education Association's (NEA) publication, Estimates of School Statistics. Definitions of expenditures vary from those used to calculate per pupil expenditures in Table 106, therefore, figures are not the same. However, all states report the information to NEA according to the same definitions and thus figures are comparable across states.

In 1985-86, Iowa ranked 25 th overall, with a per pupil expenditure of $\$ 3,357$, just under $\$ 125$ less than the national average. Wisconsin, Minnesota, and Kansas ranked ahead of Iowa in 1985-86. In 1997-98, per pupil expenditures for Iowa ranked 34th, falling $\$ 677$ below the national average. This represented an increase of 61.5 percent in Iowa per pupil expenditures from 1985-86 to 1997-98, compared to an increase in per pupil expenditures for the nation of 75.2 percent. In 1997-98, of the states contiguous to Iowa, only South Dakota and Missouri ranked lower than Iowa in per pupil expenditures.

Table 107

## Per Pupil Expenditures 1985-86 and 1997-98 <br> in Terms of Fall Enrollaent

|  | Year | Year |  |  |
| :--- | :---: | :---: | :---: | :---: |
| State/Nation | $1985-86$ | Rank | $1997-98$ | Rank |
| Iowa | $\$ 3,357$ | 25 | $\$ 5,421$ | 34 |
| Nation | $\$ 3,481$ | - | $\$ 6,098$ | - |
|  |  |  |  |  |
| Illinois | $\$ 3,301$ | 26 | $\$ 5,748$ | 26 |
| Kansas | $\$ 3,573$ | 19 | $\$ 5,674$ | 28 |
| Minnesota | $\$ 3,766$ | 15 | $\$ 6,220$ | 16 |
| Missouri | $\$ 2,794$ | 38 | $\$ 5,227$ | 39 |
| Nebraska | $\$ 3,101$ | 32 | $\$ 5,480$ | 32 |
| South Dakota | $\$ 2,908$ | 36 | $\$ 4,858$ | 45 |
| Wisconsin | $\$ 3,878$ | 12 | $\$ 6,809$ | 14 |

Source: Estimates of School Statistics, National Education Association, 1986-87 and 1997-98.
Note: 1997-98 figures are estimated by NEA.

Figure 55

## Per Pupil Expenditures in Terms of Fall Enrollment 1985-86 and 1997-98



[^54]
## State Aid

The total state aid paid to school districts and area education agencies in 19992000 was $\$ 1,840.3$ billion (Table 108). Included in the total state aid is the State Foundation Aid, Instructional Support Aid, Educational Excellence (Phases I, II, and III), Technology/School Improvement and Class Size Reduction/School Improvement Aid. The $\$ 10$ million Class Size Reduction/Early Intervention funding was new in 1999-2000. Approximately 38.4 percent of the state's total general fund appropriations was allocated to school districts in 1999-2000. Increased property tax relief was provided in 1996-97 and in 1999-2000 by increasing the foundation level. The increase in the percent of total appropriations spent on education is primarily due to the increase in the foundation level of the state aid formula. In 1996-97 the foundation level was increased from 83 percent to 87.5 percent. In 1999-2000 the foundation aid percent for special education instruction was increased from 79 percent to 87.5 percent.

Table 108

## Total Iowa Government Appropriations (In Millions)

| Year | State Aid <br> to Districts | General Fund <br> Appropriations | Percent Spent <br> on Education |
| :--- | ---: | :---: | :--- |
| $1999-00$ | $\$ 1,840.3$ | $\$ 4,786.6$ | $38.4 \%$ |
| $1998-99$ | $1,739.7$ | $4,522.0$ | 38.5 |
| $1997-98$ | $1,686.0$ | $4,359.9$ | 38.7 |
| $1996-97$ | $1,615.8$ | $4,122.2$ | 39.2 |
| $1995-96$ | $1,425.5$ | $3,842.0$ | 37.1 |
| $1994-95$ | $1,360.5$ | $3,615.6$ | 37.6 |
| $1993-94$ | $1,324.8$ | $3,471.7$ | 38.2 |
| $1992-93$ | $1,273.1$ | $3,394.3$ | 37.5 |
| $1991-92$ | $1,185.4$ | $3,178.8$ | 37.3 |
| $1990-91$ | $1,147.7$ | $3,130.9$ | 36.7 |
| $1989-90$ | $1,047.8$ | $2,853.4$ | 36.7 |
| $1988-89$ | 964.1 | $2,667.5$ | 36.1 |
| $1987-88$ | 905.7 | $2,422.3$ | 37.4 |
| $1986-87$ | 761.1 | $2,190.2$ | 34.8 |
| $1985-86$ | 712.3 | $2,207.0$ | 32.3 |
| $1984-85$ | 708.5 | $2,088.6$ | 33.9 |
| $1983-84$ | 660.3 | $1,976.6$ | 33.4 |
| $1982-83$ | 642.3 | $1,870.9$ | 34.3 |
| $1981-82$ | 621.0 | $1,762.6$ | 35.2 |

Source: Legislative Fiscal Bureau, Session Fiscal Report.

## Property Taxes

The total property taxes needed to fund the combined district cost in 1999-2000 were $\$ 859.3$ million. A portion of those taxes were offset through the application of tax credits; such as, machinery and equipment, homestead, military, agriculture land, and family farms. The actual property taxes paid were estimated to be $\$ 741.0$ million. Property taxes under the school foundtion formula declined between 199899 and 1999-2000 (Table 109).

Table 109

## Iowa Property Tax Revenues Generated for the School Foundation Formula (In Millions)

| Year | Property <br> Taxes | Property Taxes <br> Less Credits |
| :--- | :---: | :---: |
| $1999-00$ | $\$ 859.3$ | $\$ 741.0$ |
| $1998-99$ | 866.9 | 751.9 |
| $1997-98$ | 821.3 | 704.8 |
| $1996-97$ | 798.2 | 701.8 |
| $1995-96$ | 853.4 | 757.0 |
| $1994-95$ | 822.0 | 725.6 |
| $1993-94$ | 793.5 | 696.7 |
| $1992-93$ | 781.1 | 684.3 |
| $1991-92$ | 757.0 | 670.4 |
| $1990-91$ | 741.0 | 651.2 |
| $1989-90$ | 718.3 | 632.5 |
| $1988-89$ | 705.4 | 619.6 |
| $1987-88$ | 721.0 | 601.9 |
| $1986-87$ | 751.7 | 636.4 |
| $1985-86$ | 724.3 | 612.5 |
| $1984-85$ | 700.4 | 597.5 |
| $1983-84$ | 680.2 | 563.2 |
| $1982-83$ | 664.0 | 543.6 |
| $1981-82$ | 635.6 | 518.9 |

Source: Department of Management, Program and Budget Summary.

## Income Surtaxes

Income surtaxes as a revenue source continue to increase. In 1990-2000, income surtaxes will total $\$ 38.2$ million which is a 12.7 percent increase over the prior year. Income surtaxes may be used to support the voted portion of the physical plant and equipment levy, asbestos, instructional support and educational improvement levies. The increase in growth is due to increased use in the physical plant and equipment levy and the instructional support levy. Since 1995-96, revenue from income surtaxes has increased from $\$ 20.4$ million to $\$ 38.2$ million in 1999-2000 (Table 110).

Table 110

| IOWA INCOME SURTAXES |  |  |
| :---: | :---: | :---: |
| Year | Income Surtax <br> in Millions | Percent <br> Increase |
| $1999-00$ | $\$ 38.2$ | $12.7 \%$ |
| $1998-99$ | 33.9 | 8.3 |
| $1997-98$ | 31.3 | 26.7 |
| $1996-97$ | 24.7 | 21.1 |
| $1995-96$ | 20.4 | 8.5 |
| $1994-95$ | 18.8 | 9.9 |
| $1993-94$ | 17.1 | 5.6 |
| $1992-93$ | 16.2 | 30.6 |
| $1991-92$ | 12.4 | 122.5 |
| $1990-91$ | 5.5 | 77.4 |
| $1989-90$ | 3.9 | 6.9 |
| $1988-89$ | 1.9 | 52.6 |
| $1987-88$ |  | $\mathbf{N A}$ |

Source: Annual Aid and Levy Worksheets.

## Total Elementary and Secondary Education Budgets

For the 1999-2000 school year, Iowa public school districts budgeted more than $\$ 3,300$ billion (Table 111). Regular Program cost, the basic funding for school districts comprised 63.3 percent of the budget for Iowa elementary and secondary schools. Since 1985-86, the Regular Program cost portion of the budget increased 65.4 percent compared to an increase of 185.2 percent for special education instructional programs.

The Education Excellence Program and Technology/School Improvement are the primary components of Miscellaneous State Categorical funds. Title I comprises the major source of revenue. Figures provided for miscellaneous revenue represent estimates from local school districts.

Table 111

## Iowa Elementary and Secondary Budget Detail 1985-86, 1998-99, and 1999-00

|  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

[^55]
[^0]:    It is the policy of the Iowa Department of Education not to discriminate on the basis of race, color, national origin, gender, disability, religion, creed, age or marital status in its programs or employment practices. If you have questions or grievances related to this policy, please contact the Bureau of Administration and School Improvement Services, Grimes State Office Building, Des Moines, Iowa 50319-0146, (515) 281-5811.

[^1]:    Source: lowa Department of Education, Bureau of Food and Nutrition, Claim Files.
    Notes: ${ }^{1}$ Enrollment categories are based on Certified Enrollments.
    ${ }^{2}$ Percentages are based on dividing free and reduced eligible students by the Basic Educational Data Survey head count taken on the third Friday in September of each school year.

[^2]:    Source: Iowa Department of Education, Public School Enrollment Projections.
    Notes: All enrollments are as of the third Friday in September. The public school enrollment projections are BASED UPON TRENDS OBSERVED IN THE NUMBER OF STUDENTS MOVING FROM GRADE TO GRADE. THE TREND, CALCULATED AS AN AVERAGE COHORT SURVIVAL RATIO, WAS USED TO ESTIMATE ENROLLMENTS FOR FIRST THROUGH TWELFTH GRADE. Kindergarten enrollments were estimated from an average ratio of kindergarten enrollments to cohorts BORN FIVE YEARS PRIOR.

[^3]:    Source: Iowa Department of Education, Basic Educational Data Survey, Enrollment Files.
    Note: Includes PK-grade 12 students.

[^4]:    Source: Iowa Department of Education, Basic Educational Data Survey, Limited English Proficient Student File. Note: Includes PK-Grade 12 LEP Students.

[^5]:    Source: Iowa Department of Education, Certified Enrollment Files.

[^6]:    Source: National Education Association (NEA) estimates working database as of 1/29/99.
    Notes: * Does not include Phase III funds. **Data Estimated by NEA. Ranked in descending order.

[^7]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.

[^8]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files

[^9]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.
    Note: *ONE SUPERINTENDENT'S SALARY WAS EXCLUDED DUE TO A RETIREMENT/RETURN SITUATION.

[^10]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff Files.
    Note: * Does not include Phase III funds.

[^11]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff File.
    Note: *Does not include Phase Ill funds.

[^12]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff File.
    Note: *Does not include Phase III funds. Includes AEA Teachers.

[^13]:    Source: Iowa Department of Education, Basic Educational Data Survey, Staff File.
    Note: *ADMINISTRATIVE STAFF INCLUDES ADMINISTRATIVE ASSISTANTS, ADMINISTRATORS, ASSISTANT DEAN/DIRECTORS, DIRECTORS, AND PRINCIPALS.

[^14]:    Source: Iowa Department of Education, Basic Educational Data Survey, curriculum file.
    Note: Waiver Provisions are available under special circumstances.

[^15]:    Source: Iowa Department of Education, Basic Educational Data Survey, curriculum files.
    Note: Estimated percents are based on the assumption that calculus is normally taken in grade 12.

[^16]:    Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum Files.
    Note: Estimated percents are based on the assumption that trigonometry is normally taken in grade 11.

[^17]:    Source: Iowa Department of Education, Basic Educational Data Survey, curriculum files.
    Note: Estimated percents are based on the assumption that chemistry is normally taken in grade 11.

[^18]:    Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum Files.
    Note: Estimated percents are based on the assumption that physics is normally taken in grade 12.

[^19]:    Source: Iowa Department of Education, Basic Educational Data Survey, Policies and Procedures files.
    Note: The data shown for a given school year reflect graduation requirements for the following school year.

[^20]:    Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

[^21]:    Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

[^22]:    Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

[^23]:    Source: Iowa Department of Education, Bureau of Planning, Research and Evaluation, Class Size Survey File, 1999.

[^24]:    Source: Iowa Department of Education, Basic Educational Data Survey, Curriculum and Enrollment files.
    Note: Percents are estimated with an assumption that computer-related courses are taken in grades 9-12.

[^25]:    Source: Iowa Department of Education, Certified Annual Financial Report and Certified Enrollment Files.

[^26]:    Source: Iowa Department of Education, Basic Educational Data Survey, Early Chlldhood File.

[^27]:    Source: Iowa Testing Programs, University of Iowa.
    Note: Baseline is midyear of 1965.

[^28]:    ${ }^{1}$ Iowa Testing Programs, August 1999.

[^29]:    Source: Iowa Testing Programs, University of Iowa.
    Note: The descriptions below indicate how the typical grade 4 student at each achievement level performs with respect to the ITBS Reading Comprehension test:

[^30]:    Source: Iowa Testing Programs, University of Iowa.
    Note: The descriptions below indicate how the typical grade 8 student at each achievement level performs with respect to the ITBS Reading Comprehension test:

[^31]:    Source: Iowa Testing Programs, University of lowa
    Note: See Figure 21 for a description of 11th grade achievement levels.

[^32]:    Source: American College Testing Program, ACT assessment results, Summary Report for Iowa.

[^33]:    Source: American College Testing Program, ACT assessment (1989-99) Results, Summary Report Iowa.
    Notes: *From 1989-1992, and 1994-1999 ACT News Releases.
    ** 1993 estimated percentage is based on Iowa Department of Education, Basic Educational Data Survey, Enrollment File.

[^34]:    Source: American College Testing Program, The High School Profile Report for Iowa.

[^35]:    Source: American College Testing Program, The High School Profile Report for Iowa.

[^36]:    Source: American College Testing Program, ACT Assessment Magnetic Tape; Iowa Department of Education Certified Enrollment File.

[^37]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP SCORE OF $1=$ CARRIES No RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXTREMELY WELL QUALIFIED.

[^38]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP SCORE OF $1=$ CARRIES NO RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXTREMELY WELL QUALIFIED.

[^39]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP SCORE OF $1=$ CARRIES NO RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXTREMELY WELL QUALIFIED.

[^40]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP score of $1=$ CARRIES No RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXTREMELY WELL QUALIFIED.

[^41]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP SCORE OF $1=$ CARRIES No RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXtremely well qualified.

[^42]:    Source: The College Board, Advanced Placement Program, Iowa and National Summary Reports.
    Note: AP SCORE OF $1=$ CARRIES NO RECOMMENDATION, $2=$ POSSIBLY QUALIFIED, $3=$ QUALIFIED, $4=$ wELL QUALIFIED 5 = EXTREMELY WELL QUALIFIED.

[^43]:    Source: The College Board, 1999 Profile of SAT Program Test Takers.
    Note: The Iowa participation rate in SAT for the class of 1999 was 5 percent.

[^44]:    Source: The College Board, 1999 Profile of SAT Program Test Takers.
    Note: The Iowa participation rate in SAT for the class of 1999 was 5 percent.

[^45]:    Source：Iowa Department of Education，Basic Educational Data Survey，Postsecondary Enrollment Options fle．
    Note：$\quad$＇Excluded from total enroluments are 132 freshmen and sophomores．

[^46]:    Source: Iowa Department of Education, Basic Educational Data Survey, Postsecondary Enrollment Options files.

[^47]:    Source: National Center for Education Statistics, Dropout Rates in the United States: 1997.
    Notes: Data on all states were not available.
    *EFFECTIVE WITH 1995-96 SCHOOL YEAR, LOUISIANA CHANGED ITS DROPOUT DATA COLLECTION FROM SCHOOL-LEVEL AGGREGATE COUNTS REPORTED TO DISTRICTS TO AN INDIVIDUAL, STUDENT-RECORD SYSTEM. THE INCREASE IN THE DROPOUT RATE IS DUE IN PART TO THE INCREASED ABILITY TO TRACK STUDENTS.

[^48]:    Source: Iowa Department of Education, Certified Annual Financial Reports.

[^49]:    Source: Iowa Department of Education, Certified Annual Financial Report.

[^50]:    Source: Iowa Department of Education, Certified Annual Financial Report.

[^51]:    Source: Iowa Department of Education, Certified Annual Financial Reports.

[^52]:    Source: Iowa Department of Education, Certified Annual Financial Report.

[^53]:    Source: Iowa Department of Education, Certified Annual Financial Report.

[^54]:    Source: Estimates of School Statistics, National Education Association, 1986-87 and 1997-98.
    Note: 1997-98 figures are estimated by NEA.

[^55]:    Source: Iowa Department of Management, School Budget Master File.
    Notes: For FY 86, The allocation of dollars to AEA Media and AEA Ed Services has been estimated.
    For FY 86, PPEL, 67.5 cent, playground, library and debt service levies have been reported as ONE TOTAL FIGURE.
    *Miscellaneous income is an estimated amount.

