State Trends, Issues, and Challenges Ahead

Dennis P. Jones

Presented to the

WICHE/NCHEMS Regional Policy Forum on
Economic Development, Workforce Development and Education

December 2, 2004
- Human Capital Drives Economies in the Information Age
- Improving Economies and Quality of Life Is Dependent on the Stock of Human Capital

A Policy Issue for All States
State Workforce and Economy

Who’s Entering the State’s Workforce?

Characteristics of In-Migrants

Entrants into the Workforce

The State Workforce and Economy

Characteristics of the Workforce

Economic Conditions

Who’s Leaving the State Workforce?

Characteristics of Out-Migrants

Retirees Leaving the Workforce

Net Gain/Loss

Net Gains/Losses
– Retirement
– Migration
Things to Know About the Workforce

- Incumbent Workforce
  - Demographics
  - Employment—Occupations

- Entrants
  - Demographics
  - Education

- Retirees
  - Demographics
  - Occupations

- In- and Out-Migrants
  - Occupations
The Incumbent Workforce

- For Most States, 80% of the Workforce of 2015 Is Already in the Workforce

- For Most States, Issues Will Be Those of:
  - Enhancing Skills of Current Workers
  - Increasing Productivity
  - Increasing Workplace Participation
  - Creating More High-Value Jobs for Existing Population
Educational Attainment of Population Age 25-64—North Dakota Residents Compared to U.S. Average and Top State, 2000 (Percent)

Source: U.S. Census Bureau, 2000 Census
Educational Attainment of Population Age 25-64—Colorado Residents Compared to U.S. Average and Top State, 2000 (Percent)

Source: U.S. Census Bureau, 2000 Census
### Percent Educational Attainment of Population Age 25-64 By Race/Ethnicity—Colorado, 2000

<table>
<thead>
<tr>
<th>Level</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than HS</td>
<td>5.5</td>
<td>13.3</td>
<td>11.5</td>
</tr>
<tr>
<td>High School</td>
<td>20.8</td>
<td>26.0</td>
<td>26.7</td>
</tr>
<tr>
<td>Some College</td>
<td>25.8</td>
<td>30.1</td>
<td>25.8</td>
</tr>
<tr>
<td>Associate</td>
<td>8.2</td>
<td>9.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>26.5</td>
<td>14.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Graduate/Prof.</td>
<td>13.2</td>
<td>6.8</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2000 Census
Difference Among the Two Largest Racial/Ethnic Groups in Percent of Population Age 25-64 with a Bachelor’s Degree or Higher, 2000

Source: U.S. Census Bureau’s Public Use Samples, based on 2000 Census
Percent of Population Age 25-64 with Less than a High School Diploma, 2000

Source: U.S. Census Bureau, 2000 Census
Percent of Population Age 18-24 with No High School Diploma

Source: U.S. Census Bureau, 2000 Census
Adults with a Bachelor’s Degree or Higher

Source: U.S. Census Bureau
Part-Time Undergraduate Enrollment as a Percent of Population Age 25-44, 2000

Source: NCES-IPEDS Fall 2000 Enrollments, U.S. Census Bureau
Part-Time Graduate/Professional Enrollment as a Percent of Population Age 25-44 with a Bachelor’s Degree

Source: NCES-IPEDS Fall 2000 Enrollments, U.S. Census Bureau
Percent of Total Gross State Product by Industry and Comparison to U.S.—North Dakota

Percent of Total Gross State Product by Industry and Comparison to the U.S.—Colorado

Percent Employment in Managerial and Professional Occupations

Source: U.S. Census Bureau
**Fastest Growing Occupations Requiring a Bachelor’s Degree or Higher—North Dakota, 2000-10**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation</th>
<th>Employment 2000</th>
<th>Employment 2010</th>
<th>Percent Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer Software Engineers, Applications</td>
<td>410</td>
<td>710</td>
<td>74</td>
</tr>
<tr>
<td>2</td>
<td>Computer Software Engineers, Systems Software</td>
<td>230</td>
<td>400</td>
<td>74</td>
</tr>
<tr>
<td>3</td>
<td>Network and Computer Systems Administrators</td>
<td>420</td>
<td>690</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Database Administrators</td>
<td>260</td>
<td>380</td>
<td>48</td>
</tr>
<tr>
<td>5</td>
<td>Network Systems and Data Communications Analysts</td>
<td>220</td>
<td>320</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>Computer Systems Analysts</td>
<td>530</td>
<td>730</td>
<td>38</td>
</tr>
<tr>
<td>7</td>
<td>Computer and Information Systems Managers</td>
<td>490</td>
<td>660</td>
<td>35</td>
</tr>
<tr>
<td>8</td>
<td>Sales Managers</td>
<td>620</td>
<td>830</td>
<td>32</td>
</tr>
<tr>
<td>9</td>
<td>Physician Assistants</td>
<td>230</td>
<td>300</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Advertising and Promotions Managers</td>
<td>190</td>
<td>240</td>
<td>26</td>
</tr>
<tr>
<td>11</td>
<td>Management Analysts</td>
<td>160</td>
<td>200</td>
<td>25</td>
</tr>
<tr>
<td>12</td>
<td>Public Relations Specialists</td>
<td>250</td>
<td>300</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Marketing Managers</td>
<td>380</td>
<td>460</td>
<td>21</td>
</tr>
<tr>
<td>14</td>
<td>Editors</td>
<td>270</td>
<td>320</td>
<td>20</td>
</tr>
<tr>
<td>15</td>
<td>Graphic Designers</td>
<td>280</td>
<td>340</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>Public Relations Managers</td>
<td>250</td>
<td>300</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>Securities, Commodities, and Financial Services Sales Agents</td>
<td>380</td>
<td>450</td>
<td>20</td>
</tr>
<tr>
<td>18</td>
<td>Commercial and Industrial Designers</td>
<td>70</td>
<td>90</td>
<td>19</td>
</tr>
<tr>
<td>19</td>
<td>Mental Health and Substance Abuse Social Workers</td>
<td>370</td>
<td>430</td>
<td>19</td>
</tr>
<tr>
<td>20</td>
<td>Mechanical Engineers</td>
<td>290</td>
<td>350</td>
<td>18</td>
</tr>
<tr>
<td>21</td>
<td>Medical and Public Health Social Workers</td>
<td>360</td>
<td>430</td>
<td>18</td>
</tr>
<tr>
<td>22</td>
<td>Personal Financial Advisors</td>
<td>180</td>
<td>210</td>
<td>18</td>
</tr>
<tr>
<td>23</td>
<td>Probation Officers and Correctional Treatment Specialists</td>
<td>150</td>
<td>180</td>
<td>17</td>
</tr>
<tr>
<td>24</td>
<td>Meeting and Convention Planners</td>
<td>70</td>
<td>80</td>
<td>16</td>
</tr>
<tr>
<td>25</td>
<td>Technical Writers</td>
<td>110</td>
<td>130</td>
<td>16</td>
</tr>
</tbody>
</table>

*Note: The national average percent change is 15.2 for the 2000-10 employment projection series.

Source: America's Career InfoNet 2004; North Dakota Department of Labor, Economic Data
## Fastest Growing Occupations Requiring a Bachelor’s Degree or Higher—Colorado, 2000-10

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation</th>
<th>Employment 2000</th>
<th>Employment 2010</th>
<th>Percent Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Computer Support Specialists</td>
<td>14,840</td>
<td>35,130</td>
<td>137</td>
</tr>
<tr>
<td>2.</td>
<td>Computer Software Engineers, Systems Software</td>
<td>9,590</td>
<td>21,610</td>
<td>125</td>
</tr>
<tr>
<td>3.</td>
<td>Computer Software Engineers, Applications</td>
<td>14,760</td>
<td>33,020</td>
<td>124</td>
</tr>
<tr>
<td>4.</td>
<td>Desktop Publishers</td>
<td>470</td>
<td>1,010</td>
<td>115</td>
</tr>
<tr>
<td>5.</td>
<td>Network and Computer Systems Administrators</td>
<td>7,230</td>
<td>14,730</td>
<td>104</td>
</tr>
<tr>
<td>6.</td>
<td>Network Systems and Data Communications Analysts</td>
<td>4,220</td>
<td>8,550</td>
<td>103</td>
</tr>
<tr>
<td>7.</td>
<td>Mechanical Door Repairers</td>
<td>610</td>
<td>1,180</td>
<td>93</td>
</tr>
<tr>
<td>8.</td>
<td>Floor Sanders and Finishers</td>
<td>560</td>
<td>1,050</td>
<td>87</td>
</tr>
<tr>
<td>9.</td>
<td>Database Administrators</td>
<td>2,690</td>
<td>4,920</td>
<td>83</td>
</tr>
<tr>
<td>10.</td>
<td>Computer Systems Analysts</td>
<td>16,190</td>
<td>29,020</td>
<td>79</td>
</tr>
<tr>
<td>11.</td>
<td>Pile-Driven Operators</td>
<td>120</td>
<td>220</td>
<td>75</td>
</tr>
<tr>
<td>12.</td>
<td>Construction Laborers</td>
<td>18,020</td>
<td>30,850</td>
<td>71</td>
</tr>
<tr>
<td>13.</td>
<td>Helpers-Carpenters</td>
<td>2,370</td>
<td>4,020</td>
<td>70</td>
</tr>
<tr>
<td>15.</td>
<td>Crane and Tower Operators</td>
<td>1,100</td>
<td>1,820</td>
<td>65</td>
</tr>
<tr>
<td>16.</td>
<td>Personal and Home Care Aides</td>
<td>5,540</td>
<td>9,140</td>
<td>65</td>
</tr>
<tr>
<td>17.</td>
<td>Social and Human Service Assistants</td>
<td>3,160</td>
<td>5,220</td>
<td>65</td>
</tr>
<tr>
<td>18.</td>
<td>Security Guards</td>
<td>14,740</td>
<td>24,100</td>
<td>64</td>
</tr>
<tr>
<td>19.</td>
<td>Telecommunications Line Installers and Repairers</td>
<td>2,790</td>
<td>4,500</td>
<td>62</td>
</tr>
<tr>
<td>20.</td>
<td>Carpenters</td>
<td>22,190</td>
<td>35,690</td>
<td>61</td>
</tr>
<tr>
<td>21.</td>
<td>Airfield Operations Specialists</td>
<td>50</td>
<td>80</td>
<td>59</td>
</tr>
<tr>
<td>22.</td>
<td>Plasterers and Stucco Masons</td>
<td>1,330</td>
<td>2,100</td>
<td>58</td>
</tr>
<tr>
<td>23.</td>
<td>Sheet Metal Workers</td>
<td>3,010</td>
<td>4,760</td>
<td>58</td>
</tr>
<tr>
<td>24.</td>
<td>Carpet Installers</td>
<td>730</td>
<td>1,160</td>
<td>57</td>
</tr>
<tr>
<td>25.</td>
<td>Construction Managers</td>
<td>6,600</td>
<td>10,360</td>
<td>57</td>
</tr>
</tbody>
</table>

*Note: The national average percent change is 15.2 for the 2000-10 employment projection series.

Source: America's Career InfoNet 2004; Colorado Department of Labor and Employment, Labor Market Information
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<tr>
<th>Rank</th>
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<th>2000 Employment</th>
<th>Average Annual Job Openings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Retail Salespersons</td>
<td>10,920</td>
<td>550</td>
</tr>
<tr>
<td>2.</td>
<td>Cashiers, Except Gaming</td>
<td>8,860</td>
<td>510</td>
</tr>
<tr>
<td>3.</td>
<td>Combined Food Preparation and Serving Workers, Including Fast Food</td>
<td>6,070</td>
<td>510</td>
</tr>
<tr>
<td>4.</td>
<td>Waiters and Waitresses</td>
<td>5,730</td>
<td>360</td>
</tr>
<tr>
<td>5.</td>
<td>Registered Nurses</td>
<td>6,280</td>
<td>210</td>
</tr>
<tr>
<td>6.</td>
<td>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</td>
<td>7,370</td>
<td>190</td>
</tr>
<tr>
<td>7.</td>
<td>Nursing Aides, Orderlies, and Attendants</td>
<td>5,690</td>
<td>180</td>
</tr>
<tr>
<td>8.</td>
<td>Customer Service Representatives</td>
<td>3,960</td>
<td>170</td>
</tr>
<tr>
<td>9.</td>
<td>Farmers and Ranchers</td>
<td>30,300</td>
<td>170</td>
</tr>
<tr>
<td>10.</td>
<td>Truck Drivers, Heavy and Tractor-Trailer</td>
<td>6,380</td>
<td>170</td>
</tr>
<tr>
<td>11.</td>
<td>Office Clerks, General</td>
<td>6,020</td>
<td>160</td>
</tr>
<tr>
<td>12.</td>
<td>Food Preparation Workers</td>
<td>3,140</td>
<td>150</td>
</tr>
<tr>
<td>13.</td>
<td>General and Operations Managers</td>
<td>6,010</td>
<td>150</td>
</tr>
<tr>
<td>14.</td>
<td>Stock Clerks and Order Fillers</td>
<td>3,860</td>
<td>140</td>
</tr>
<tr>
<td>15.</td>
<td>Elementary School Teachers, Except Special Education</td>
<td>5,540</td>
<td>130</td>
</tr>
<tr>
<td>16.</td>
<td>Bookkeeping, Accounting, and Auditing Clerks</td>
<td>6,060</td>
<td>120</td>
</tr>
<tr>
<td>17.</td>
<td>Laborers and Freight, Stock, and Material Movers, Hand</td>
<td>3,390</td>
<td>120</td>
</tr>
<tr>
<td>18.</td>
<td>Maids and Housekeeping Cleaners</td>
<td>3,390</td>
<td>120</td>
</tr>
<tr>
<td>19.</td>
<td>Computer Support Specialists</td>
<td>1,330</td>
<td>110</td>
</tr>
<tr>
<td>20.</td>
<td>Counter Attendants, Cafeteria, Food Concession, and Coffee Shop</td>
<td>1,300</td>
<td>110</td>
</tr>
<tr>
<td>21.</td>
<td>Personal and Home Care Aides</td>
<td>1,790</td>
<td>110</td>
</tr>
<tr>
<td>22.</td>
<td>Secretaries, Except Legal, Medical, and Executive</td>
<td>6,360</td>
<td>110</td>
</tr>
<tr>
<td>23.</td>
<td>Bartenders</td>
<td>2,230</td>
<td>100</td>
</tr>
<tr>
<td>24.</td>
<td>Child Care Workers</td>
<td>1,730</td>
<td>100</td>
</tr>
<tr>
<td>25.</td>
<td>Sales Reps., Wholesale &amp; Manufacturing, Except Tech./Scientific Products</td>
<td>2,990</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note: Openings due to growth and net replacements.

Source: America's Career InfoNet 2004; North Dakota Department of Labor, Economic Data
## Occupations with the Most Openings Requiring a Bachelor’s Degree or Higher—Colorado, 2000-10

<table>
<thead>
<tr>
<th>Rank</th>
<th>Occupation</th>
<th>2000 Employment</th>
<th>Average Annual Job Openings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Retail Salespersons</td>
<td>85,390</td>
<td>5,720</td>
</tr>
<tr>
<td>2.</td>
<td>Waiters and Waitresses</td>
<td>47,330</td>
<td>4,150</td>
</tr>
<tr>
<td>3.</td>
<td>Cashiers, Except Gaming</td>
<td>52,180</td>
<td>3,920</td>
</tr>
<tr>
<td>5.</td>
<td>Office Clerks, General</td>
<td>58,640</td>
<td>3,000</td>
</tr>
<tr>
<td>6.</td>
<td>Customer Service Representatives</td>
<td>34,940</td>
<td>2,290</td>
</tr>
<tr>
<td>7.</td>
<td>Computer Support Specialists</td>
<td>14,840</td>
<td>2,090</td>
</tr>
<tr>
<td>8.</td>
<td>Computer Software Engineers, Applications</td>
<td>14,760</td>
<td>1,920</td>
</tr>
<tr>
<td>9.</td>
<td>Laborers and Freight, Stock, and Material Movers, Hand</td>
<td>28,970</td>
<td>1,770</td>
</tr>
<tr>
<td>10.</td>
<td>General and Operations Managers</td>
<td>37,070</td>
<td>1,760</td>
</tr>
<tr>
<td>11.</td>
<td>Carpenters</td>
<td>22,190</td>
<td>1,730</td>
</tr>
<tr>
<td>12.</td>
<td>Bookkeeping, Accounting, and Auditing Clerks</td>
<td>37,760</td>
<td>1,540</td>
</tr>
<tr>
<td>13.</td>
<td>Janitors and Cleaners, Except Maids and Housekeeping Cleaners</td>
<td>35,070</td>
<td>1,500</td>
</tr>
<tr>
<td>14.</td>
<td>Construction Laborers</td>
<td>18,020</td>
<td>1,450</td>
</tr>
<tr>
<td>15.</td>
<td>Computer Systems Analysts</td>
<td>16,190</td>
<td>1,430</td>
</tr>
<tr>
<td>16.</td>
<td>First-Line Supervisors/Mgrs., Construction Trades &amp; Extraction Workers</td>
<td>20,850</td>
<td>1,430</td>
</tr>
<tr>
<td>17.</td>
<td>Stock Clerks and Order Fillers</td>
<td>22,490</td>
<td>1,350</td>
</tr>
<tr>
<td>18.</td>
<td>Security Guards</td>
<td>14,740</td>
<td>1,340</td>
</tr>
<tr>
<td>19.</td>
<td>Maids and Housekeeping Cleaners</td>
<td>26,600</td>
<td>1,300</td>
</tr>
<tr>
<td>20.</td>
<td>Registered Nurses</td>
<td>28,340</td>
<td>1,300</td>
</tr>
<tr>
<td>21.</td>
<td>Computer Software Engineers, Systems Software</td>
<td>9,590</td>
<td>1,270</td>
</tr>
<tr>
<td>22.</td>
<td>Cooks, Restaurant</td>
<td>20,100</td>
<td>1,270</td>
</tr>
<tr>
<td>23.</td>
<td>First-Line Supervisors/Managers of Retail Sales Workers</td>
<td>32,580</td>
<td>1,250</td>
</tr>
<tr>
<td>24.</td>
<td>Sales Reps., Wholesale &amp; Manufacturing, Except Tech/Scientific Products</td>
<td>24,960</td>
<td>1,180</td>
</tr>
<tr>
<td>25.</td>
<td>Truck Drivers, Heavy and Tractor-Trailer</td>
<td>24,250</td>
<td>1,180</td>
</tr>
</tbody>
</table>

*Note: Openings due to growth and net replacements.
Source: America's Career InfoNet 2004; Colorado Department of Labor and Employment, Labor Market Information
Difference in Median Earnings Between a High School Diploma and an Associate Degree, 2000

Source: U.S. Census Bureau’s Public Use Samples, based on 2000 Census
Difference in Median Earnings Between a High School Diploma and a Bachelor’s Degree, 2000

Source: U.S. Census Bureau’s Public Use Samples, based on 2000 Census
Workforce Entrants and Retirees
Projections of Working Age Population (Ages 18-64)—Percent Change, 2000-25

Source: Knocking at the College Door, Projections of High School Graduates by State, Income, and Race/Ethnicity
Percent of Workforce (Ages 25-64) Who Will Potentially Retire in the Next 10 Years (Ages 55-64), 2000

Source: U.S. Census Bureau, 2000 Census
Incoming Workforce (Ages 8-17) as a Percent of Potential Retirees (Ages 55-64), 2000

Source: U.S. Census Bureau, 2000 Census
Percent of Incoming Workforce (Ages 8-17)
Who Are Minorities, 2000

Source: U.S. Census Bureau, 2000 Census
Occupations of Idaho Population Age 55-64 (Those Leaving the Workforce by 2010) Relative to Entire Workforce, 2000 (Percent)

Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files
The Education Pipeline
Key Transition Points in the Education Pipeline

- Complete High School
- Enter College
- Finish College
- Enter the Workplace
Percent Loss at Each Stage of Transition

- 9th to 12th Grade
- High School Graduate to College
- College Entrance to Graduation
- College Graduates

Percent Loss:
- 100%
- 90%
- 80%
- 70%
- 60%
- 50%
- 40%
- 30%
- 20%
- 10%
- 0%

States and Percent Loss:
- Massachusetts: 26
- Iowa: 20
- Rhode Island: 22
- Connecticut: 29
- New York: 14
- New Jersey: 19
- North Carolina: 23
- South Carolina: 21
- Alabama: 20
- Alaska: 38
- Hawaii: 41
- South Dakota: 24
- North Dakota: 20
- South Dakota: 21
- North Dakota: 22
- South Dakota: 23
- North Dakota: 24
- South Dakota: 25
- North Dakota: 26
- South Dakota: 27
- North Dakota: 28
- South Dakota: 29
- North Dakota: 30
- South Dakota: 31
- North Dakota: 32
- South Dakota: 33
- North Dakota: 34
- South Dakota: 35
- North Dakota: 36
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- North Dakota: 96
- South Dakota: 97
- North Dakota: 98
- South Dakota: 99
- North Dakota: 100

Note: The image contains a detailed graph showing the percent loss at each stage of transition for different states, with each state represented by a bar graph indicating the percentage of students who drop out at each stage.
High School Graduation Rates—Public High School Graduates as a Percent of 9th Graders Four Years Earlier, 2000

Source: Tom Mortenson, Postsecondary Opportunity
Percent Change in High School Graduates, 2002-18

College-Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2000

Source: Tom Mortenson, Postsecondary Opportunity
Percent of First-Time Freshmen Who Attend College Within Their Reported State of Residence, Fall 2002

Source: NCES-IPEDS Fall 2002 Residency and Migration File
Import/Export Ratio of First-Time Freshmen (\(<1=\text{Exporter}, >1=\text{Importer}\), Fall 2002

Source: NCES-IPEDS Residency and Migration Survey
Degrees and Certificates Awarded by Level, 2002-03 (Percent)

Source: NCES, IPEDS 2002-03 Completions File
Annual Credentials and Degrees Awarded at Two-Year Colleges (Two-Year and Less)

Per 1,000 Adults Age 18-34 with Only a High School Diploma

Source: NCES-IPEDS Completions Survey, U.S. Census Bureau
Three-Year Graduation Rates at Public Two-Year Colleges (Percent)

Source: NCES, IPEDS 2001 Graduation Rate File
Annual Bachelor’s Degrees Awarded

Per 1,000 Adults Age 18-34 with Only a High School Diploma

Source: NCES-IPEDS Completions Survey, U.S. Census Bureau
Six-Year Graduation Rates at Public Four-Year Colleges (Percent)

Source: NCES & IPEDS Graduation Rate Survey
Projected Change* in Percent of Population Age 25-64 with Less than a High School Diploma, 2000-20

*Projected change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Projected Change* in Percent of Population Age 25-64 with an Associate Degree or Higher, 2000-20

*Projected change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Projected Change* in Percent of Population Age 25-64 with a Bachelor’s Degree or Higher, 2000-20

*Projected change is based on 2000 educational attainment by race/ethnicity and the projected changes in the population age 25-64 by race/ethnicity.

Projected Change* in Personal Income Per Capita, 2000-20 (In 2000 $)

*Projected change in personal income is based on the annual personal income by age group (15 years and older) and race/ethnicity in 2000 and the population projections by age group and race/ethnicity in 2020.

Migration
North Dakota Net Migration of Residents with College Degrees, 1995-2000

Source: U.S. Census Bureau's Public Use Microdata Samples (Based on 2000 Census)
North Dakota Net Migration of Residents with College Degrees, 1995-2000

- Other Sales & Related Workers: 232
- Vehicle & Mobile Equip. Mechanics, Installers, Repairers: 143
- Nursing, Psychiatric, & Home Health Aides: 113
- Food & Beverage Serving Workers: 92
- Other Production Occupations: 77
- First-Line Enlisted Military Supervisor/Managers: 70
- Material Moving Workers: 63
- Religious Workers: 61
- Sales Representatives, Wholesale & Manufacturing: 58
- Other Protective Service Workers: 57
- Other Protective Service Workers: -179
- Counseling, Social Workers, Other Community & Social Svcs.: -190
- First-Line Enlisted Military Supervisor/Managers: -221
- Other Production Occupations: -265
- Sales Representatives, Services: -267
- Financial Specialists: -275
- Business Operations Specialists: -292
- Postsecondary Teachers: -307
- Other Management Occupations: -344
- Health Diagnosing & Treating Practitioners: -803

Source: U.S. Census Bureau's Public Use Microdata Samples (Based on 2000 Census)
**Colorado Net Migration of Residents with College Degrees, 1995-2000**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1995</th>
<th>2000</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Specialists</td>
<td>2,651</td>
<td>5,112</td>
<td>2,461</td>
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<tr>
<td>Engineers</td>
<td>2,317</td>
<td>2,317</td>
<td>0</td>
</tr>
<tr>
<td>Primary, Secondary, &amp; Special Education Teachers</td>
<td>2,651</td>
<td>1,894</td>
<td>-757</td>
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<tr>
<td>Other Management Occupations</td>
<td>2,317</td>
<td>2,317</td>
<td>0</td>
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<tr>
<td>Information &amp; Record Clerks</td>
<td>2,178</td>
<td>1,576</td>
<td>-602</td>
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<tr>
<td>Health Diagnosing &amp; Treating Practitioners</td>
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<td>1,894</td>
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<tr>
<td>Financial Specialists</td>
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<tr>
<td>Business Operations Specialists</td>
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<td>1,365</td>
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<tr>
<td>Retail Sales</td>
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<td>1,350</td>
<td>-5</td>
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<tr>
<td>Supervisors, Sales Workers</td>
<td>1,350</td>
<td>1,350</td>
<td>0</td>
</tr>
</tbody>
</table>

Ages 22-29

-32 Supervisors, Transportation & Material Moving Workers
-39 Media & Communication Equipment Workers
-42 Rail Transportation
-50 Life Scientists
-66 Assemblers & Fabricators
-88 Occupational & Physical Therapist Assistants & Aides
-103 Vehicle & Mobile Equipment Mechanics, Installers, & Repairers
-106 Supervisors of Installation, Maintenance, & Repair
-172 Military Officer Special & Tactical Operations Leaders/Managers
-1,069 Air Transportation

Source: U.S. Census Bureau's Public Use Microdata Samples (Based on 2000 Census)
Colorado Net Migration of Residents with College Degrees, 1995-2000

Source: U.S. Census Bureau’s Public Use Microdata Samples (Based on 2000 Census)
States’ Ability to Produce Graduates vs. Ability to Keep and Attract Graduates

**Student Pipeline** (Of 100 9th Graders—the Number Graduating from High School on time, Going Directly to College, Returning Their Second Year, and Completing College within 150 Percent of Degree Time)
States’ Ability to Produce Graduates vs. Ability to Keep and Attract Graduates

**Student Pipeline** (Of 100 9th Graders—the Number Graduating from High School on time, Going Directly to College, Returning Their Second Year, and Completing College within 150 Percent of Degree Time)
Implications for Higher Education

- DIFFERS BY STATE

- In Some States, the Greatest Need Is to Produce More Graduates to Fill Available Jobs
  - California
  - Colorado
  - Washington
Implications for Higher Education (cont.)

- In Other States, the Need Is to Create Jobs to Employ the Graduates Being Produced
  - Wyoming
  - Montana
  - North Dakota
  - Idaho
Where Degree Production Is the Priority, the Primary Focus Must Be on:

- College Entrance (Colorado, Wyoming, Idaho)
- College Completion (Montana, North Dakota)

Can’t All Be Blamed on Secondary Schools.
Where Job Creation Is the Priority, the Role of Higher Education Is More Complex.

- Fast-Response Workforce Training
- Entrepreneurship Education
- Research/Technology Transfer
- Contributing to Improvements in Quality of Life (Cultural Events, Quality of Public Schools, etc.)

Some Things Beyond the Control of Higher Education

*Competitive Salaries*