Retention and the Educational Pipeline: 
Increasing a State’s Educational Capital with Fewer Students

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National Center for Higher Education Management Systems
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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

Net Gain/Loss

Retirement Ages

Net Gain/Loss
Points of Intervention

- High School Graduation
  - Youth
  - Adults
- College Entrance
  - Participation Rates
  - Increase Imports
  - Reduce Exports
- College Completion
- Retention After College
- Education of Incumbent Workforce
Projections of High School Graduates to 2018
By Race/Ethnicity—Kansas

White (25,220 to 18,746)
Hispanic (1,323 to 6,027)
Black (1,844 to 1,862)
Asian/Pacific Islander (702 to 1,070)
American Indian/Alaska Native (271 to 553)

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—Montana

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—Nebraska

- White (17,293 to 14,015)
- Hispanic (712 to 3,989)
- Black (766 to 1,099)
- Asian/Pacific Islander (287 to 630)
- American Indian/Alaska Native (129 to 191)

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—New Mexico

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—North Dakota

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—South Dakota

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—Wisconsin

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
Projections of High School Graduates to 2018
By Race/Ethnicity—Wyoming

White (5,572 to 3,898)
Hispanic (277 to 389)
Black (53 to 87)
Asian/Pacific Islander (63 to 62)
American Indian/Alaska Native (98 to 123)

Source: WICHE, Projections of High School Graduates (Knocking at the College Door)
## Educational Pipeline Loss Rate, 2002

Of 100 9th Graders…

<table>
<thead>
<tr>
<th>States</th>
<th>Students Who Didn’t Graduate from High School</th>
<th>High School Graduates Who Didn’t Go to College</th>
<th>College Students Who Didn’t Graduate within 150% of Time</th>
<th>College Graduates</th>
<th>% Age 25-44 with Bachelor’s Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>24</td>
<td>25</td>
<td>23</td>
<td>29</td>
<td>38.8</td>
</tr>
<tr>
<td>ND</td>
<td>17</td>
<td>26</td>
<td>32</td>
<td>25</td>
<td>28.9</td>
</tr>
<tr>
<td>WI</td>
<td>21</td>
<td>32</td>
<td>22</td>
<td>25</td>
<td>27.6</td>
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<tr>
<td>NE</td>
<td>22</td>
<td>31</td>
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<td>SD</td>
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<td>23</td>
<td>21</td>
<td>26.4</td>
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<tr>
<td>WY</td>
<td>27</td>
<td>34</td>
<td>18</td>
<td>20</td>
<td>25.5</td>
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<td>25</td>
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<td>25.4</td>
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<tr>
<td>US</td>
<td>32</td>
<td>28</td>
<td>21</td>
<td>18</td>
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</tr>
<tr>
<td>MT</td>
<td>23</td>
<td>36</td>
<td>25</td>
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<td>21.6</td>
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<tr>
<td>NM</td>
<td>40</td>
<td>26</td>
<td>24</td>
<td>10</td>
<td>21.2</td>
</tr>
</tbody>
</table>

Source: NCES Common Core Data, WICHE, NCES Residency and Migration Survey, NCES Graduation Rate Survey
High School Graduation Rates—Public High School Graduates as a Percent of 9th Graders Four Years Earlier, 2000

Source: Tom Mortenson, Postsecondary Opportunity
Percent of Whites and Asians vs. Hispanics, African-Americans, and Native Americans at Each Stage of the Educational Pipeline, 2002

Kansas

Source: U.S. Census Bureau, National Center for Education Statistics
Percent of Whites and Asians vs. Hispanics, African-Americans, and Native Americans at Each Stage of the Educational Pipeline, 2002

Nebraska

[Bar chart showing percent of Whites and Asians vs. Hispanics, African-Americans, and Native Americans at each stage of the educational pipeline for Nebraska. The stages include 18-Year-Olds, High School Graduates, First-Time Freshmen, All Other Undergraduates, and Completers. The data for Nebraska is represented by bars with different colors for each group. The sources are the U.S. Census Bureau and National Center for Education Statistics.]
Percent of Whites and Asians vs. Hispanics, African-Americans, and Native Americans at Each Stage of the Educational Pipeline, 2002

New Mexico

Source: U.S. Census Bureau, National Center for Education Statistics
Percent of Whites and Asians vs. Hispanics, African-Americans, and Native Americans at Each Stage of the Educational Pipeline, 2002

Wisconsin

Source: U.S. Census Bureau, National Center for Education Statistics
Percent of Population Age 18-24 with No High School Diploma

Source: U.S. Census Bureau, 2000
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
College-Going Rates of Recent High School Graduates, 2000

<table>
<thead>
<tr>
<th>State</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Dakota</td>
<td>69.4</td>
</tr>
<tr>
<td>Kansas</td>
<td>67.5</td>
</tr>
<tr>
<td>South Dakota</td>
<td>64.0</td>
</tr>
<tr>
<td>Nebraska</td>
<td>59.3</td>
</tr>
<tr>
<td>New Mexico</td>
<td>58.9</td>
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<tr>
<td>Wisconsin</td>
<td>57.2</td>
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<tr>
<td>United States</td>
<td>56.7</td>
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<tr>
<td>Montana</td>
<td>54.4</td>
</tr>
<tr>
<td>Wyoming</td>
<td>52.2</td>
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</tbody>
</table>

Source: NCES Common Core Data and Fall Residency and Migration File
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
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—Kansas

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Net Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Research</td>
<td>1,094</td>
</tr>
<tr>
<td>Public Baccalaureate/Masters</td>
<td>-101</td>
</tr>
<tr>
<td>Public Associate</td>
<td>118</td>
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<tr>
<td>Public Other</td>
<td>-90</td>
</tr>
<tr>
<td>Private Non-Profit Research</td>
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<tr>
<td>Private Non-Profit Bacc./Masters</td>
<td>-90</td>
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<tr>
<td>Private Non-Profit Associate</td>
<td>177</td>
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<tr>
<td>Private Non-Profit Other</td>
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<tr>
<td>Proprietary Total</td>
<td>-587</td>
</tr>
<tr>
<td>All Institutions</td>
<td>853</td>
</tr>
</tbody>
</table>

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—Montana

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—Nebraska

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—New Mexico

- All Institutions
- Proprietary Total
- Private Non-Profit Bacc./Masters
- Private Non-Profit Associate
- Private Non-Profit Research
- Public Baccalaureate/Masters
- Public Associate
- Public Other
- Public Research

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—North Dakota

![bar chart showing net imports by type of institution]

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—South Dakota

- All Institutions: -212
- Proprietary Total: -117
- Private Non-Profit Research: 116
- Private Non-Profit Bacc./Masters: -92
- Private Non-Profit Associate: -94
- Private Non-Profit Other: -9
- Public Research: 310
- Public Baccalaureate/Masters: -238
- Public Associate: -163
- Public Other: 75

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—Wisconsin

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Net Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Research</td>
<td>-296</td>
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<tr>
<td>Public Baccalaureate/Masters</td>
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<tr>
<td>Public Associate</td>
<td>-292</td>
</tr>
<tr>
<td>Public Other</td>
<td>-292</td>
</tr>
<tr>
<td>Private Non-Profit Research</td>
<td>-18</td>
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<tr>
<td>Private Non-Profit Bacc./Masters</td>
<td>-86</td>
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<tr>
<td>Private Non-Profit Associate</td>
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<tr>
<td>Private Non-Profit Other</td>
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<tr>
<td>Proprietary Total</td>
<td>-288</td>
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<tr>
<td>All Institutions</td>
<td>235</td>
</tr>
</tbody>
</table>

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Time Freshmen Net Imports by Type of Institution, Fall 2002—Wyoming

- Public Research: -267
- Public Baccalaureate/Masters: 154
- Public Associate: -58
- Public Other: -77
- Private Non-Profit Research: -249
- Private Non-Profit Bacc./Masters: -48
- Private Non-Profit Associate: -38
- Private Non-Profit Other: -38
- Proprietary Total: 1,654
- All Institutions: 1,440

Source: NCES, IPEDS Fall 2002 Residence and Migration File
First-Year Retention Rates at Four-Year Institutions, 2002

- Wisconsin: 80.9%
- Wyoming: 78.0%
- Nebraska: 76.2%
- United States: 73.6%
- North Dakota: 71.5%
- New Mexico: 70.9%
- South Dakota: 69.7%
- Kansas: 69.5%
- Montana: 67.3%

Source: ACT Institutional Survey
First-Year Retention Rates at Two-Year Institutions, 2002

Source: ACT Institutional Survey
Graduation Rates for Research Institutions, 2002

- Wisconsin: 67.1%
- United States: 62.2%
- Nebraska: 54.4%
- Wyoming: 54.3%
- Kansas: 53.8%
- South Dakota: 51.0%
- North Dakota: 48.8%
- New Mexico: 45.7%
- Montana: 43.1%

Source: NCES, IPEDS 2002 Graduation Rates
Graduation Rates for Other Four-Year Institutions, 2002

<table>
<thead>
<tr>
<th>State</th>
<th>Graduation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin</td>
<td>52.1</td>
</tr>
<tr>
<td>United States</td>
<td>48.2</td>
</tr>
<tr>
<td>Nebraska</td>
<td>47.2</td>
</tr>
<tr>
<td>Kansas</td>
<td>44.3</td>
</tr>
<tr>
<td>South Dakota</td>
<td>42.0</td>
</tr>
<tr>
<td>Montana</td>
<td>39.7</td>
</tr>
<tr>
<td>North Dakota</td>
<td>37.0</td>
</tr>
<tr>
<td>New Mexico</td>
<td>31.1</td>
</tr>
<tr>
<td>Wyoming</td>
<td>No Other Four-Year Institutions</td>
</tr>
</tbody>
</table>

Source: NCES, IPEDS 2002 Graduation Rates
Graduation Rates for Two-Year Institutions, 2002

Source: NCES, IPEDS 2002 Graduation Rates
Part-Time Undergraduate Enrollment as a Percent of Population Age 25-44, 2000

Source: NCES-IPEDS, U.S. Census Bureau
### Projected Growth of Population Age 25-44 By Race/Ethnicity, 2000-20

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Kansas</th>
<th>Montana</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>-39,708</td>
<td>-13,259</td>
</tr>
<tr>
<td>African-American</td>
<td>6,196</td>
<td>3,997</td>
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<tr>
<td>Hispanic/Latino</td>
<td>2,152</td>
<td>80</td>
</tr>
<tr>
<td>Native American</td>
<td>4,686</td>
<td>6,745</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1,122</td>
<td>986</td>
</tr>
<tr>
<td>Total</td>
<td>27,796</td>
<td>-1,451</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
### Projected Growth of Population Age 25-44 By Race/Ethnicity, 2000-20

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Nebraska</th>
<th>New Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>-25,692</td>
<td>-17,869</td>
</tr>
<tr>
<td>African-American</td>
<td>3,050</td>
<td>359</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>1,881</td>
<td>18,589</td>
</tr>
<tr>
<td>Native American</td>
<td>9,181</td>
<td>85,975</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>4,869</td>
<td>1,835</td>
</tr>
<tr>
<td>Total</td>
<td>-6,711</td>
<td>88,889</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
Projected Growth of Population Age 25-44
By Race/Ethnicity, 2000-20

North Dakota

South Dakota

White
African-American
Hispanic/Latino
Native American
Asian/Pacific Islander
Total

Source: U.S. Census Bureau
### Projected Growth of Population Age 25-44 By Race/Ethnicity, 2000-20

<table>
<thead>
<tr>
<th></th>
<th>Wisconsin</th>
<th>Wyoming</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>-161,566</td>
<td>9,685</td>
</tr>
<tr>
<td>African-American</td>
<td>24,224</td>
<td>375</td>
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<tr>
<td>Hispanic/Latino</td>
<td>20,325</td>
<td>8,088</td>
</tr>
<tr>
<td>Native American</td>
<td>2,968</td>
<td>2,884</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>18,804</td>
<td>835</td>
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<tr>
<td>Total</td>
<td>-95,245</td>
<td>21,867</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau
Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>Total</th>
<th>Less than High School</th>
<th>High School</th>
<th>Some College</th>
<th>Associate</th>
<th>Bachelor’s</th>
<th>Graduate/Professional</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>22- to 29-Year-Olds</td>
<td>6,758</td>
<td>4,537</td>
<td>-295</td>
<td>-617</td>
<td>-3,431</td>
<td>532</td>
<td>7,484</td>
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<tr>
<td>30- to 64-Year-Olds</td>
<td>9,392</td>
<td>2,061</td>
<td>959</td>
<td>241</td>
<td>-517</td>
<td>964</td>
<td>13,100</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

- Less than High School: 383
- High School: -475
- Some College: -738
- Associate: -240
- Bachelor's: -4,886
- Graduate/Professional: -644

Total: -6,600

30- to 64-Year-Olds

- Less than High School: 790
- High School: 3,794
- Some College: 1,073
- Associate: 106
- Bachelor's: 360
- Graduate/Professional: 1,211

Total: 7,334

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Nebraska

Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds
- Less than High School: 4,243
- High School: 2,191
- Some College: 478
- Associate: -653
- Bachelor’s: -3,169
- Graduate/Professional: 1,812
- Total: -4,000

30- to 64-Year-Olds
- Less than High School: 4,745
- High School: 185
- Some College: -985
- Associate: 184
- Bachelor’s: -348
- Graduate/Professional: -2,716
- Total: -4,000

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

- Less than High School: 1,895
- High School: 689
- Some College: -162
- Associate: -1,849
- Bachelor’s: 464
- Graduate/Professional: -1,694

30- to 64-Year-Olds

- Less than High School: 5,060
- High School: 2,714
- Some College: 810
- Associate: 501
- Bachelor’s: 861
- Graduate/Professional: 1,131
- Total: 11,077

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
North Dakota

Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

Less than High School: -298
High School: -329
Some College: -1,158
Associate: -902
Bachelor’s: -5,812
Graduate/Professional: -1,091
Total: -9,590

30- to 64-Year-Olds

Less than High School: 205
High School: -1,443
Some College: -2,374
Associate: -2,343
Bachelor’s: -2,398
Graduate/Professional: -2,543
Total: -8,779

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Net In-Migration by Degree Level and Age Group

South Dakota

22- to 29-Year-Olds

- Less than High School: -8,770
- High School: -1,426
- Some College: -2,069
- Associate: -452
- Bachelor’s: -4,265
- Graduate/Professional: -8,770
- Total: -232

30- to 64-Year-Olds

- Less than High School: 1,220
- High School: 1,336
- Some College: 727
- Associate: -257
- Bachelor’s: -978
- Graduate/Professional: -353
- Total: -4,265

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

- Less than High School: 6,492
- High School: 4,824
- Some College: 3,740
- Associate: 486
- Bachelor’s: 2,054
- Graduate/Professional: -13,263

30- to 64-Year-Olds

- Less than High School: 9,418
- High School: 9,283
- Some College: 6,911
- Associate: 518
- Bachelor’s: 4,306
- Graduate/Professional: 527
- Total: 30,963

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Wyoming

Net In-Migration by Degree Level and Age Group

22- to 29-Year-Olds

Less than High School: -2,316
High School: 538
Some College: -190
Associate: -1,579
Bachelor’s: 169
Graduate/Professional: 76
Total: -3,302

30- to 64-Year-Olds

Less than High School: -186
High School: 611
Some College: 127
Associate: -101
Bachelor’s: -1,581
Graduate/Professional: -484
Total: -1,614

Source: U.S. Census Bureau, 2000 Census; 5% Public Use Microdata Sample (PUMS) Files
Net Migration of Residents Age 22-29 with a College Degree (Associate or Higher), 1995-2000

Source: U.S. Census Bureau, Public Use Microdata Samples, 2000
Associate Degrees Awarded per 100 High School Graduates

Three Years Earlier, 2002

Source: NCES-IPEDS Completions Survey, WICHE
All Credentials Awarded (Two-Year and Less) at Two-Year Colleges as a Percent of Enrollment, 2002

Source: NCES-IPEDS Completions Survey, Enrollment Survey
Bachelor’s Degrees Awarded per 100 High School Graduates
Six Years Earlier, 2002

Source: NCES-IPEDS Completions Survey, WICHE
Bachelor’s Degrees Awarded as a Percent of All Undergraduates, 2002

Source: NCES-IPEDS Completions Survey, Enrollment Survey
**Additional Undergraduate Enrollment**

If States Perform Like the Top States on High School Graduation and College-Going and the Participation of 25- to 49-Year-Olds

<table>
<thead>
<tr>
<th>State</th>
<th>High School Graduation and College-Going</th>
<th>Participation of 25- to 49-Year-Olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin</td>
<td></td>
<td>106,371</td>
</tr>
<tr>
<td>Kansas</td>
<td></td>
<td>47,978</td>
</tr>
<tr>
<td>Nebraska</td>
<td></td>
<td>31,852</td>
</tr>
<tr>
<td>New Mexico</td>
<td></td>
<td>17,756</td>
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<tr>
<td>Montana</td>
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<td>16,563</td>
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<tr>
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<td>16,049</td>
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<tr>
<td>North Dakota</td>
<td></td>
<td>15,267</td>
</tr>
<tr>
<td>Wyoming</td>
<td></td>
<td>8,993</td>
</tr>
</tbody>
</table>

Source: NCES Common Core Data, NCES IPEDS Residency and Migration and Fall Enrollment Files, U.S. Census Bureau
Percentage Change in Undergraduate Enrollment
If States Perform Like the Top States on High School Graduation and College-Going and the Participation of 25- to 49-Year-Olds

Source: NCES Common Core Data, NCES IPEDS Residency and Migration and Fall Enrollment Files, U.S. Census Bureau