Setting productive, attainable educational goals for North Carolina

June 15, 2018
Takeaways

• Technological change has demanded, and will continue to demand, higher skilled labor
• North Carolina’s postsecondary attainment gap (across various definitions) is 11-15 percentage points
• North Carolina’s postsecondary attainment (associate+) increased by 7 percentage points over the past decade
• Stating the obvious: postsecondary enrollment at age 19 is a predictor of postsecondary attainment at age 26
• P12 goals should consider measures of hard and soft skills
• Achievement gaps measured at age 5 have proven difficult to narrow during K12, confirming the need for age 0-4 programming and measures
Education and the economy
Economic benefits of a better-educated workforce

Contributions to GDP per capita growth, 1970-2007

Source: Frey and Osborne (2017) & analysis by Ball State University
Growing importance of social skills in the labor force

Cumulative Changes in Employment Share by Occupation Task Intensity
1980 to 2012

Early thoughts on goal setting
Early thoughts on goal setting

• Start at the end and work back

• Consider:
  – Age range(s)
  – Credential types
  – Growth feasibility
  – Existing gaps by income, race/ethnicity, geography
  – Time to goal
State-level goals versus current state-level attainment

State postsecondary attainment goals and actual attainment, 2016

Sources: Goals compiled by the Lumina Foundation (HCM Strategists, Strategy Labs); ECONorthwest analysis of ACS PUMS data; Georgetown CEW.
North Carolina postsecondary attainment (associate+) by age, 2016

Source: ECONorthwest analysis of ACS PUMS
North Carolina postsecondary attainment (associate+) by age, 2016

Ages 25-34: recent graduates
AA+ attainment: 43%

Ages 35-64: adult workforce
AA+ attainment: 42%

Source: ECONorthwest analysis of ACS PUMS
North Carolina postsecondary attainment, by age and race/ethnicity, 2016

Source: ECONorthwest analysis of ACS PUMS
Postsecondary attainment (associate+) by NC region and race/ethnicity, 2016

Source: ECONorthwest analysis of ACS PUMS
## Postsecondary attainment (associate+), 2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>North Carolina</th>
<th>Older (35-64)</th>
<th>All (25-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Younger (25-34)</td>
<td>43%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Top state</td>
<td>58%</td>
<td>52%</td>
<td>53%</td>
</tr>
<tr>
<td>Difference</td>
<td>-15</td>
<td>-10</td>
<td>-11</td>
</tr>
</tbody>
</table>

## Lumina Foundation’s Stronger Nation Nation (certificate+), 2016

<table>
<thead>
<tr>
<th>Age Group</th>
<th>All (25-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina</td>
<td>47%</td>
</tr>
<tr>
<td>Lumina national goal</td>
<td>60%</td>
</tr>
<tr>
<td>Difference</td>
<td>-13</td>
</tr>
</tbody>
</table>

Source: ECONorthwest analysis of ACS PUMS
What’s feasible?
Change in attainment (associate+) by state, 2006-2016, ages 25-34

Source: ECONorthwest analysis of ACS PUMS
What’s feasible?
Change in attainment (associate+) by state, 2006-2016, ages 35-64

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What’s feasible?
Change in attainment (associate+) by state, 2006-2016, ages 25-64

Source: ECONorthwest analysis of ACS PUMS
Potential attainment goals for North Carolina

<table>
<thead>
<tr>
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<th>Younger (25-34)</th>
<th>Older (35-64)</th>
<th>All (25-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>+11 pp</td>
<td>+8 pp</td>
<td>+9 pp</td>
</tr>
<tr>
<td>Stretch</td>
<td>+13 pp</td>
<td>+10 pp</td>
<td>+11 pp</td>
</tr>
<tr>
<td>Ambitious</td>
<td>?</td>
<td>?</td>
<td>+13 pp</td>
</tr>
</tbody>
</table>
Other measures that track progress toward the goal
Age 19 enrollment versus age 26 attainment for the cohorts born in 1988-90 (averaged), by state

Source: ECONorthwest analysis of ACS PUMS
North Carolina postsecondary enrollment, by age, 2016

Source: ECONorthwest analysis of ACS PUMS
NC enrollment, by age, compared with a top-performing state and neighboring states, 2016

Source: ECONorthwest analysis of ACS PUMS
8th grade NAEP performance versus age 26 attainment for the cohorts born in 1988-90 (averaged), by state

Source: ECONorthwest analysis of ACS PUMS and NCES NAEP data
K12 indicators: academic achievement, attendance, graduation

- No disciplinary incidents in grades 6-8
- Steady attendance in 9th grade
- On-time HS graduation
- Postsecondary enrollment
- Postsecondary outcomes

Not proficient in elementary reading
Not proficient in elementary math

No on-time HS graduation

Source: ECONorthwest analysis of ODE and NSC data
Achievement gaps measured at age 5 have proven difficult to narrow during K12.

Source: White House Council of Economic Advisors (December 2014) The Economics of Early Childhood Investments. Figure 3, page 13.
Analysis to come
Example questions answered by modeling

• What will happen through 2030 if we do nothing?
• How much would high school graduation rates have to improve to reach the postsecondary attainment goal by 2030?
• To what extent can the state increase overall attainment while reducing disparities across specified populations given anticipated upper bounds on postsecondary enrollment growth?
Modeling activities

• Develop a baseline attainment forecast (current conditions/policy)
• Set targets for system performance needed to achieve the goal
• Evaluate contributions of subpopulation attainment to the goal
Example of goal-reaching approach to modeling:
Establish the ultimate goal and identify conditions necessary to achieve this goal (conditions can be independent of the means used to achieve the goal)

Postsecondary attainment by age

- **Goal**
- **Baseline (certificates+)**
- **Alternative trajectory (certificates+)**

![Graph showing postsecondary attainment by age with two trajectories: Baseline and Alternative trajectory. The goal is represented as a horizontal line at 60%.]