What Can Pennsylvania Learn From the World’s Leading School Systems?

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Attainment: The Last 70 Years

Figure 4. Percentage of persons 25 through 29 years old, by highest level of educational attainment: Selected years, 1940 through 2012

- High school completion or higher
- Less than high school completion
- Bachelor’s or higher degree
Income Distribution: The Last Half Century

**Mean (Average) Household Income By Quintile and Top 5%**

<table>
<thead>
<tr>
<th>Household Segment</th>
<th>2012 Mean Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 5%</td>
<td>$318,052</td>
</tr>
<tr>
<td>Top Quintile</td>
<td>$181,905</td>
</tr>
<tr>
<td>2nd Quintile</td>
<td>$82,098</td>
</tr>
<tr>
<td>Middle Quintile</td>
<td>$51,179</td>
</tr>
<tr>
<td>4th Quintile</td>
<td>$29,696</td>
</tr>
<tr>
<td>Bottom Quintile</td>
<td>$11,490</td>
</tr>
</tbody>
</table>

Source: Census Bureau

Data from 1967-2011
Race Between Education and the Technology
Goldin and Katz

• From Mid-19th Century, US paces the rest of the world in attainment
  ▪ 19th Century: universal primary school education
  ▪ Early 20th Century: universal secondary school education
  ▪ Mid-20th Century: access to postsecondary education

• Sustained growth of American economy; most even distribution of income in industrialized world

• Attainment growth stops in the 1970s

• Productivity growth slows, family income flattens, distribution of income becomes least equal
80’s, 90’s and 00’s: Global Economic Change

- Low wage competition
  - Low skill
  - High skill
  - All skill levels

- Automation of jobs involving routine work

- Vast extinction of low-skill, routine work jobs in high-wage countries
How the US Responded — Reform Agenda Since 1970’s

- More money (more than 250% growth in last 20 years)
- Lower class size
- School competition (charters and vouchers)
- Tough test-based teacher-accountability systems
- Standards based on complex skills, matching tests
What We Got For It

PER PUPIL SPENDING AND NAEP 4TH GRADE READING SCORES 1971 TO 2002

Our Competitors Had a Different Analysis

- Did not double down on the old model (cheap teachers; low standards)
- That model designed to produce majority of graduates with little more than an 8th grade level of literacy
- Knew the jobs available to them would rapidly decline
- Needed to provide to virtually all a kind and quality of education until then available only to their elites—for not more money than the old model
- That required a whole new model
The New Rules of the Game

- Not quality or access and equity, but quality and access and equity

- Old system sorted for quality, then provided access to the most highly qualified

- Old blue collar model based on cheap teachers from lower range of high school grads

- New model requires expensive professionals from higher range of high school grads

- Cannot get them without professional model of school organization and management
### US Rankings on PISA

<table>
<thead>
<tr>
<th>Year</th>
<th>Reading</th>
<th>Mathematics</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>15</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>2003</td>
<td>18</td>
<td>28</td>
<td>22</td>
</tr>
<tr>
<td>2006</td>
<td>NR</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>2009</td>
<td>17</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>2012</td>
<td>24</td>
<td>36</td>
<td>28</td>
</tr>
</tbody>
</table>
US Results on PIAAC (ETS Analysis)

• OECD survey of math, reading & problem solving

• 16 to 34-year-olds
  o Reading: Only Spain and Italy lower
  o Numeracy: Last, with Italy and Spain
  o Problem solving: Last again

• US scores declined since last PIAAC survey
US Strategies: Which Do PISA Support?

- More money?
- Lower class size?
- School competition (charters and vouchers)?
- Tough test-based teacher-accountability systems?
- Standards based on complex skills, matching tests?
Which Are Supported By The PISA Data?

- More money
- Lower class size
- School competition (charters and vouchers)
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The Only One Supported By the PISA Data

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Education Reform Agenda of the Top-Performing Countries

- More $ behind hard to educate than easy to educate
- Strong support for young children
- Strong, coherent instructional systems
  - Standards, curriculum, examinations
  - No more than 3 high stakes (for students, not teachers) exams
  - Exams at key “gateways”
Education Reform Agenda of the Top-Performing Countries

- High quality teachers arriving at the school house door
  - Recruit from top ¼ of high school grads
  - Stringent admissions process
  - Mastery of content at high level (including elementary)
  - Mastery of craft (at least one year)
  - Research skills and emphasis on diagnosis and prescription
  - Teacher education done in research universities
  - High licensing standards/No emergency certificates
Education Reform Agenda of the Top-Performing Countries

• Professional school organization and management
  ○ Aggressive career ladders (teaching, management)
  ○ Comp based on advancement up ladder, not seniority or credits
  ○ Much more time for teachers to work together in groups to:
    ○ Develop engaging lessons, research their effectiveness
    ○ Develop proving questions for students
    ○ Critique each others’ practice
    ○ Mentor one another—hold each other accountable
    ○ Principals trained to create environment for discipline impr’t
Education Reform Agenda of the Top-Performing Countries

- Constantly raise the lowest performers
  - Use data on performance to identify low-performing schools
  - Send inspection teams to advise and prescribe
  - Pair low—performing schools with top principals
  - Send top teachers to low-performing schools
  - Leaders in low-performing schools to intern in top-performers
  - Make this kind of service a key to rising on the career ladders
The Obvious Question

If nothing we have tried in forty years has improved system performance as measured by achievement and equity of access, and a growing number of our competitors have not only caught up to us but, in ever-larger numbers are exceeding our performance, then why aren’t we working overtime to figure out how they did it, so we can match their performance?
Two Answers

- We are “exceptional.”
- “It can’t be done here.”
“We are Exceptional”

- Those nations only educate an elite; we educate everyone.
- They are homogeneous; we are uniquely diverse.
- Their cultures are different; nothing they do can be transferred.
- The US would be competitive with the top performers if our lowest income students were not counted.
“It Can’t Be Done Here”

- Gross inequities in finance can’t be fixed because Americans will never give up local control
- We can’t build strong state instructional systems for the same reason
- Eliminating poorly performing schools of education is politically impossible
- We don’t have enough money to buy everybody off
Let’s Be Honest

- One nation after another is outperforming us on student performance, equity and cost
- Nothing we’ve done has worked
- No strategy we have bet on—except student performance standards—is used by the top performers
- We’ve run out of excuses
- Economic tensions are almost certain to drive this country apart unless we find a way to radically improve the performance of our education system
- A blue collar model of the teaching profession based on cheap teachers who stay in teaching only a few years will not work.
Isn’t it time for us to adopt a bit of humility, drop reforms for which there is no evidence, and replace our out-of-date system with a modern one, based on what is working in the top-performing countries?