

# Nevada Legislative Committee on Education



## **What it Will Take For Nevada To Compete With The Best Education Systems in the World**

**Marc Tucker  
National Center on Education and the Economy**

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Agenda Item IV B (EDUCATION)  
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# PART 1



## *WHERE WE STAND*

# The Bad News (Well, Not Really News...)



- **Nevada —**
  - 46<sup>th</sup> in per-pupil finding overall; high poverty districts receive 71 cents on the \$ for every dollar that goes to wealthy districts
  - High school graduation rate, college enrollment rates, far below nation average; in bottom fifth on NAEP
  - Only 11% of students meet all 4 ACT college and career ready benchmarks, one third the national average
  - Out of half a million students, fewer than 20,000 were CTE concentrators

# And the Good News...



- **Nevada —**
  - Changes in governance
  - Important pieces of needed instructional system being put in place
  - Early childhood education system being strengthened
  - Initiatives to strengthen teacher quality
  - Why did I focus on these initiatives? You'll see..

# NCEE Community College Research



- 2 ½ years of research on what it takes to succeed in 1<sup>st</sup> year of typical Community College
- Looked at eight of the most popular CC programs, covering 80% of the programs of study
- Analyzed reading level of most popular textbooks and topics covered in 1<sup>st</sup> year math
- Talked with instructors

# NCEE Community College Research



- Reading level of texts at 12<sup>th</sup> grade level
- Typical high school text now at 7<sup>th</sup>-8<sup>th</sup> grade level
- “College Math” is Algebra I, and many cannot do it
- High school grads command of middle school math very shaky and instructors report their writing is weak
- ACT told us that predictions for college success pretty much the same for 4- year colleges as for 2-year colleges

# The Truth About College Readiness

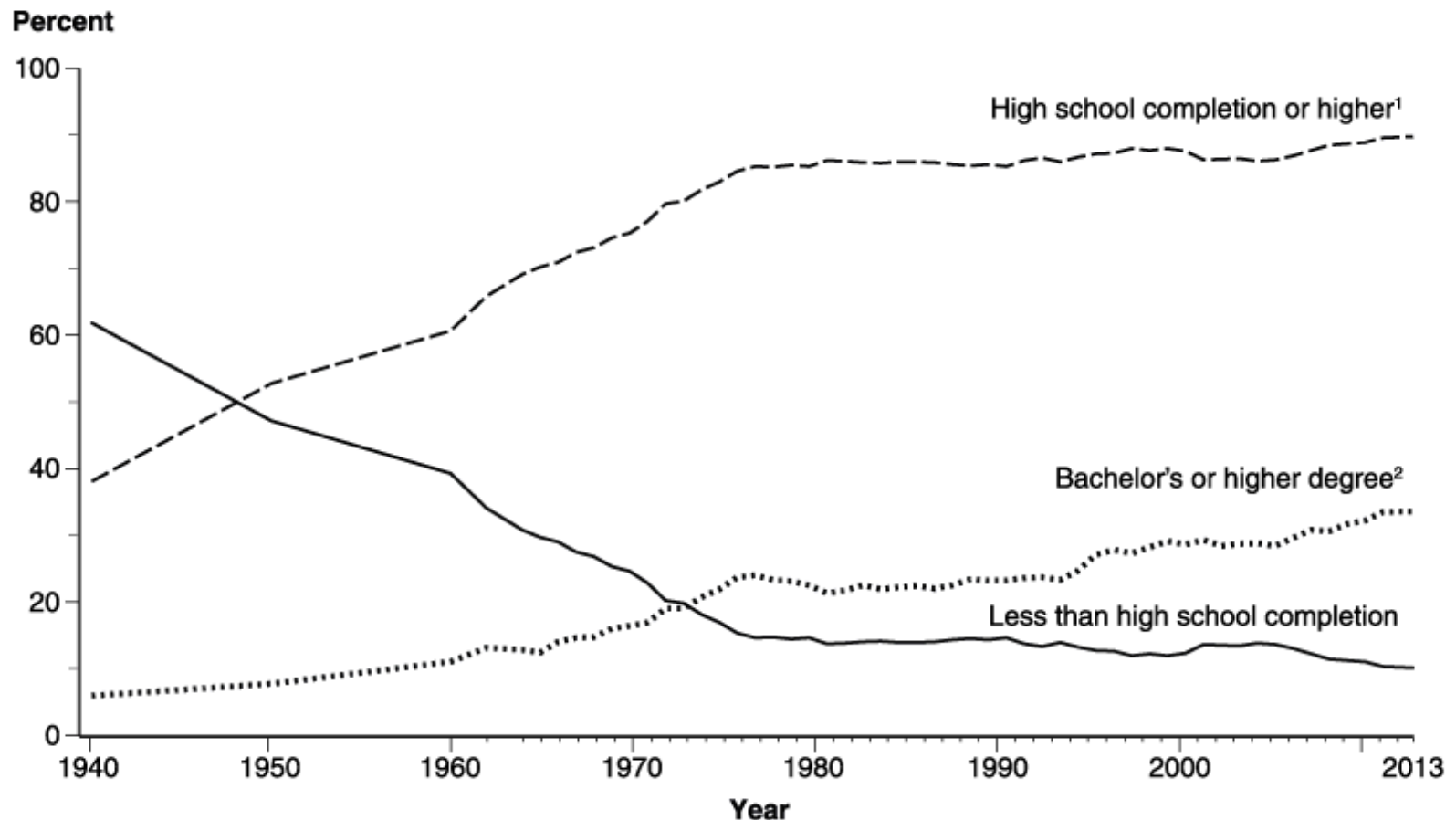


- Most college-bound high school grads are not going to college—they are enrolling in very expensive high schools
- A large fraction are not ready for that high school program
- Either way, they are not ready either for college or work
- HOW DID WE GET HERE?
- HOW DOES THAT PICTURE COMPARE TO OTHER COUNTRIES' SYSTEMS?

# 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 2013



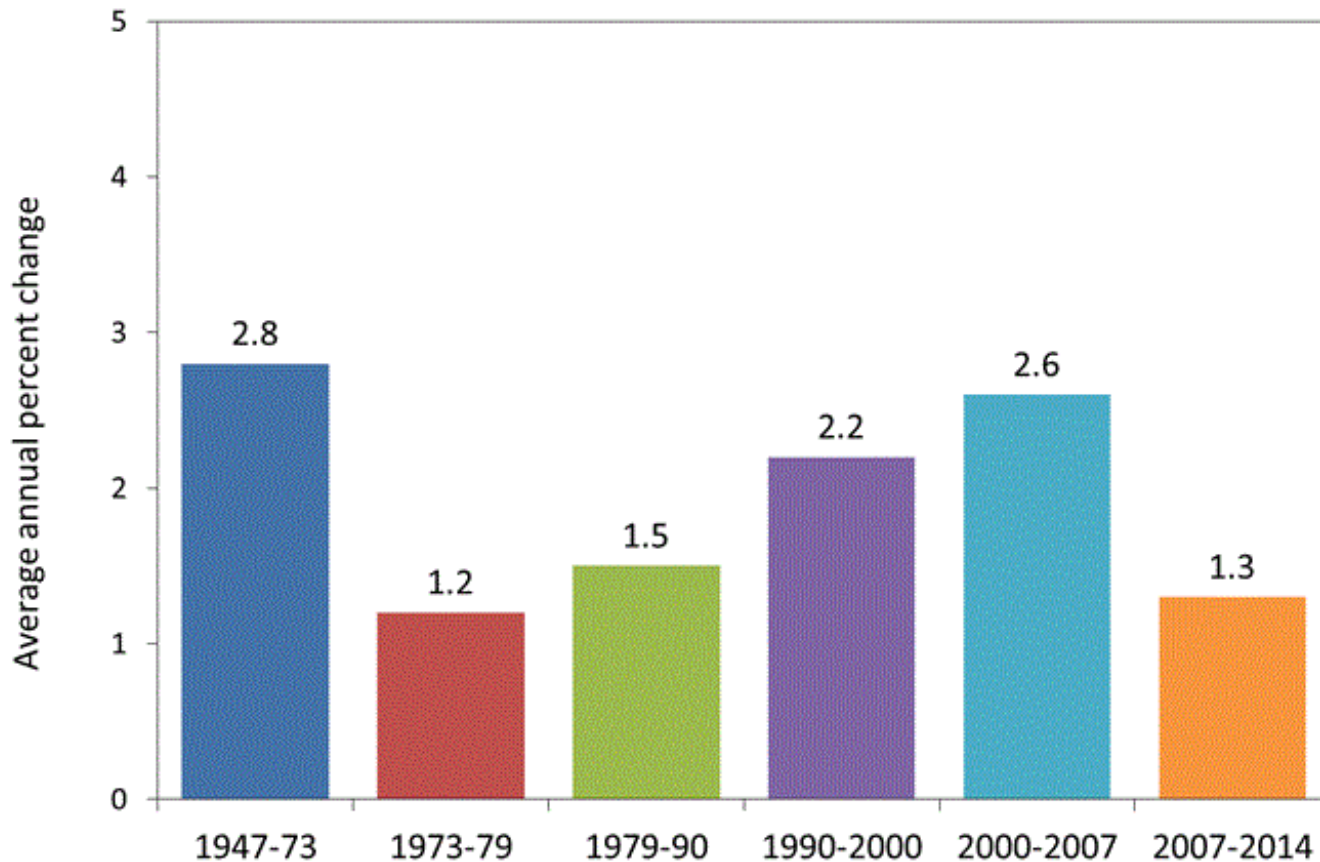
Source: US Department of Education, NCES, 2014



# Labor Productivity: The Last 65 Years



Productivity change in the nonfarm business sector, 1947-2014

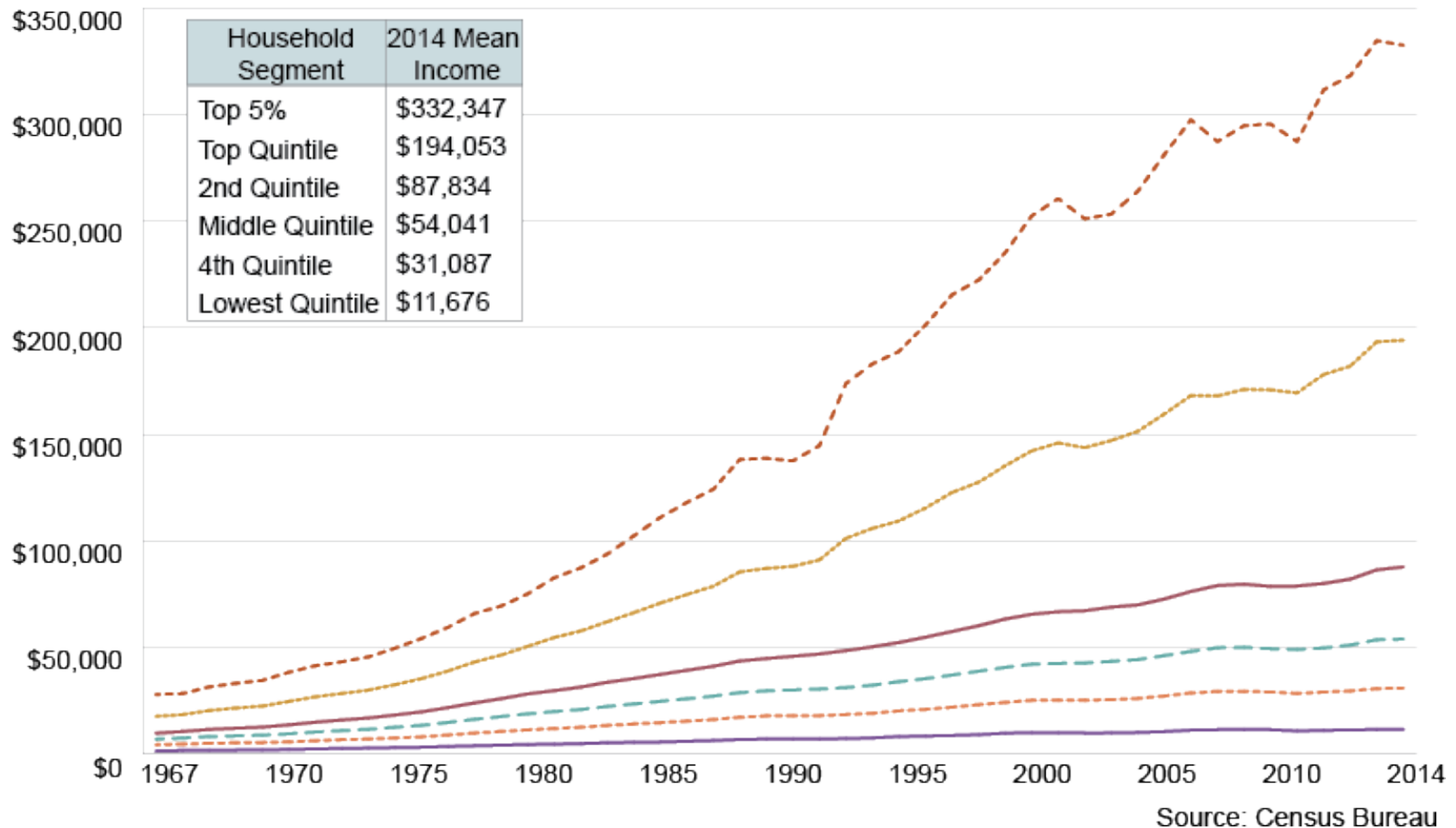


Source: U.S. Bureau of Labor Statistics

# Income Distribution: The Last Half Century



Mean (Average) Household Income by Quintile and Top 5%



# *Race Between Education and Technology*

## Goldin and Katz



- From Mid-19th Century, US paces the rest of the world in attainment
  - 19<sup>th</sup> Century: universal primary school education
  - Early 20<sup>th</sup> Century: universal secondary school education
  - Mid-20<sup>th</sup> 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

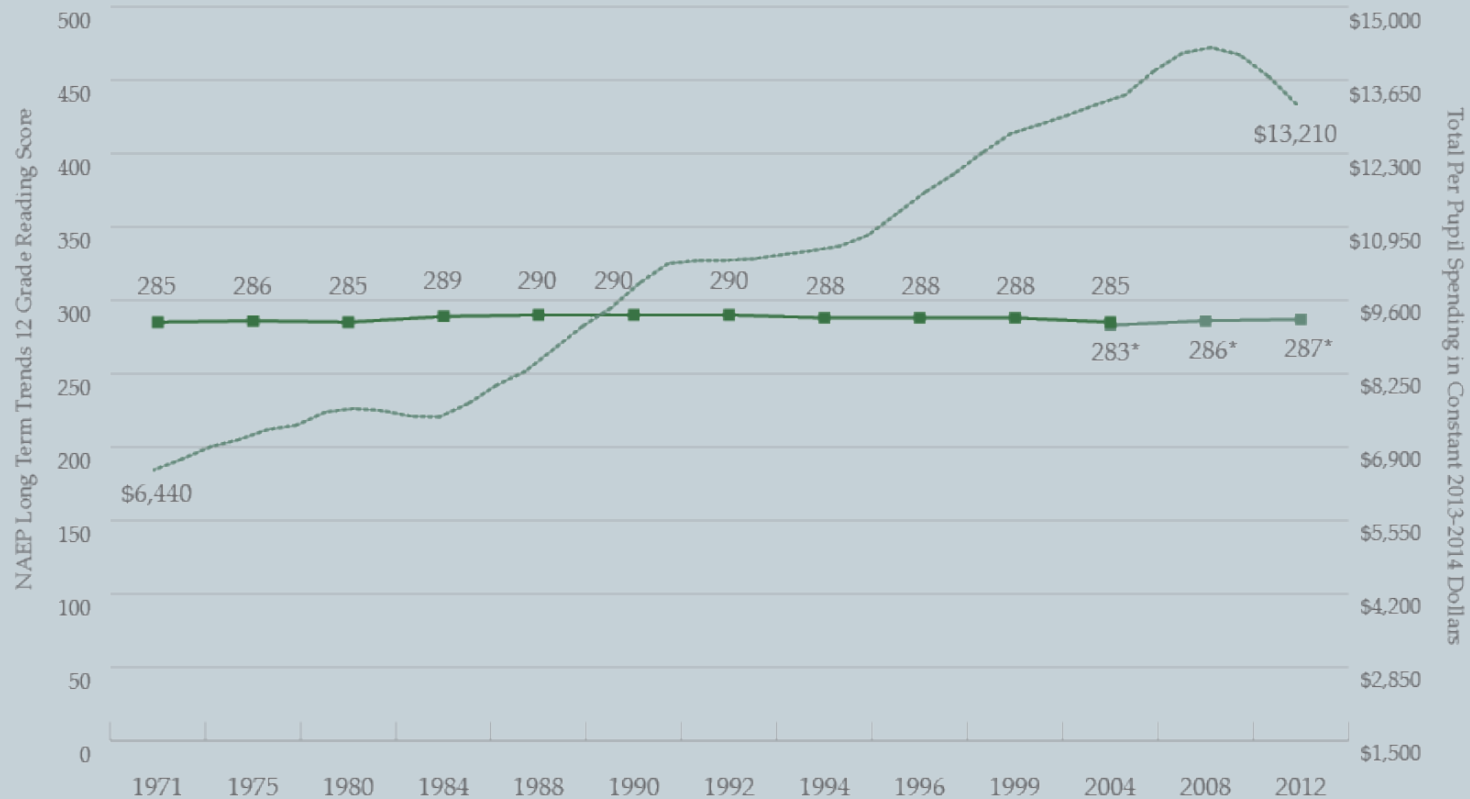


- More money (more than 250% growth in last 20 years)
- Lower class size
- School competition (charters and vouchers)
- Technology
- Tough test-based teacher-accountability systems

# What We Spent; What We Got For It



## Per Pupil Spending and NAEP 12 Grade Reading Scores, 1971 to 2012



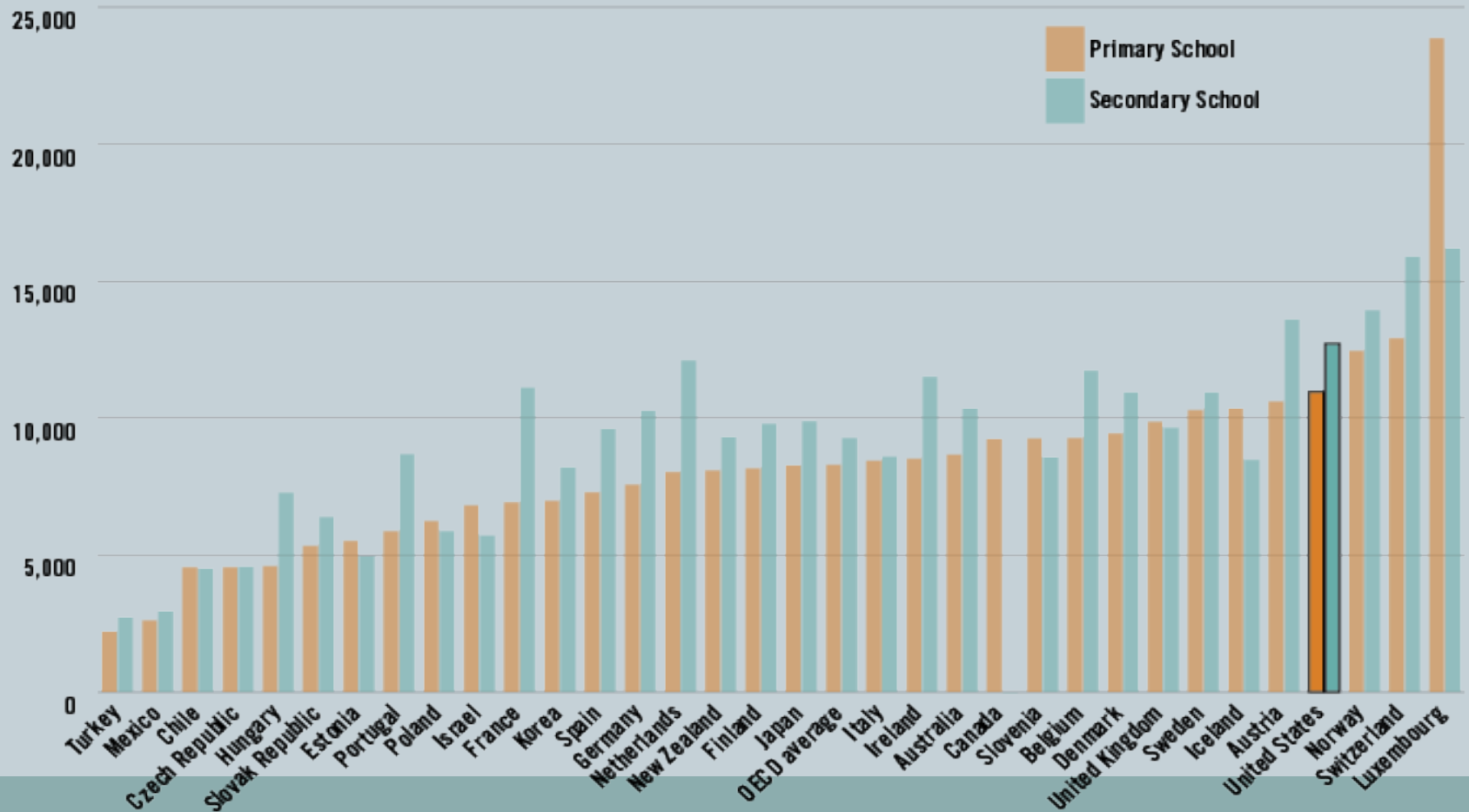
\*Revised assessment format

Sources: The Nation's Report Card "NAEP 2012 Long-Term Trends in Academic Progress"  
NCES Digest of Education Statistics 2014

# Spending Per Student

## Per Pupil Expenditure by Country, 2011

Primary and secondary education, all services



Source: OECD Education At a Glance

# Other Countries' Performance Zooms Past Ours



## US Rankings on PISA

|           | Reading | Mathematics | Science |
|-----------|---------|-------------|---------|
| 2000 (32) | 15      | 19          | 14      |
| 2003 (41) | 18      | 28          | 22      |
| 2006 (57) | NR      | 34          | 28      |
| 2009 (65) | 17      | 30          | 22      |
| 2012 (65) | 24      | 36          | 28      |
| 2015 (70) | 15      | 35          | 18      |



# U.S. Workforce Skills (PIAAC\*)



- OECD survey of the skills of all U.S. workers
  - Reading: Average
  - Numeracy: Near the bottom with Ireland, Spain & Italy
  - Digital Problem Solving: Dead Last
- ETS analysis of 16 to 34-year-olds in survey
  - At or near the bottom in reading, numeracy & problem solving
- U.S. scores *declined* since last PIAAC survey

\*Program for the International Assessment of Adult Competencies, OECD

# How Did Our Competitors Do It?



- Did not double down on our model (inexpensive teachers; low standards)
- That model designed to produce majority of graduates with little more than an 8<sup>th</sup> 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 no more money than the old model
- That required a whole new model

# HOW THE TOP PERFORMERS GOT TO THE TOP



## *THE 9 BUILDING BLOCKS FOR A WORLD-CLASS STATE EDUCATION SYSTEM*

# Education Reform Agenda of Top Performing Countries



1. *Strong supports for children and their families*
  - ✓ Preschools, early childhood education
  - ✓ Day care
  - ✓ Child allowances, dental and medical care
  - ✓ Services integration for low-income, vulnerable families

# Education Reform Agenda of the Top-Performing Countries



## *2. More resources for students who are harder to educate*

- ✓ More teachers for schools serving low-income and minority students
- ✓ In some countries, the best teachers for schools serving disadvantaged students
- ✓ Equitable distribution of funds among schools

# Education Reform Agenda of the Top-Performing Countries



## 3. *World-class, highly coherent instructional systems*

- ✓ Internationally benchmarked student performance standards
- ✓ Matching curriculum frameworks
- ✓ State course syllabi based on frameworks
- ✓ High quality, essay-type exams based on syllabi

# Education Reform Agenda of the Top-Performing Countries



## 4. *Qualification systems with multiple no-dead-end pathways for students to achieve those qualifications*

- ✓ No high school diploma
- ✓ Requirements at end of each stage match the requirements for beginning next stage
- ✓ No dead ends, many opportunities to change direction, combine qualifications

# Education Reform Agenda of the Top-Performing Countries



## *5. Abundant supply of highly qualified teachers*

- ✓ Recruit most teachers from top half of college-going high school graduates
- ✓ Moving teacher ed into research universities
- ✓ Entrance requirements those of selective research universities
- ✓ Elementary teachers specialize
- ✓ Tough content, pedagogy, research req'ts



# Education Reform Agenda of the Top-Performing Countries



- 6. Schools organized and managed to attract high quality candidates into teaching and to enable them to do their very best work*
- ✓ Y-shaped career ladder for teachers and school leaders—strong incentives for teachers to get better and better at the work
  - ✓ More time working together in teams to improve school performance, less teaching
  - ✓ Strong continuous improvement system

# Education Reform Agenda of the Top-Performing Countries



## 7. *An effective system of career and technical education and training*

- ✓ Built on very high level of student academic performance
- ✓ Strong apprentice component
- ✓ Strong employer involvement
- ✓ Highly qualified instructors, modern equipment
- ✓ No dead ends

# Education Reform Agenda of the Top-Performing Countries

## 8. *Leadership development system that develops leaders who can manage such systems effectively*

- ✓ This is recent development, most systems catching up on this
- ✓ Only those who have been fine teachers, team leaders and coaches can go on to leadership positions
- ✓ Pool groomed, opportunities for growth and mentoring provided; must have experience in low-income and minority schools

# Education Reform Agenda of the Top-Performing Countries



## 9. *Coherent governance system capable of implementing effective systems at scale*

- ✓ Roles at each level clear and complementary
- ✓ Clear where the buck stops
- ✓ Built on professional model
- ✓ System sets the rules, provide resources, professionals have professional discretion
- ✓ Accountability runs up and down

# The Excuses



- 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
- We can’t get rid of even the worst schools of education  
because they all have elected reps in the legislature
- We don’t have enough money to buy everybody off

# Can Nevada Do It?



- **Singapore in 1965**
  - Mostly adults illiterate
  - Economy a wreck
  - Only handful with a college education
- **Shanghai in 1978**
  - Schools had been closed for 10 years
  - Appalling poverty



# WHAT'S AT STAKE FOR NEVADA



- Countries all over the world—some of them developing countries—are doing a better job than Nevada is doing at providing their young people with basic skills, getting them ready for college and giving them the skills they need to make a living in a highly complex, technologically complex world
- The work that Nevada's high school graduates are qualified to do is increasingly being done by intelligent machines —cheaper and better

# WHAT'S AT STAKE FOR NEVADA



- If you want to compete and enable your people to live a rewarding life, you will have to do a much better job of educating them; you will have to match the accomplishments of the top performers
- If you want to do that, then you will need to understand how they got there, adapt their policies and practices for use in Nevada, and then implement them
- We can help you do that