

Building Highly Skilled Teachers and Education Leaders



by Robert L. King, President
Kentucky Council on Postsecondary Education
September 6, 2013

Research shows that the quality of teachers and principals has the greatest influence on student performance.

“Teaching quality is recognized as the most powerful school-based factor in student learning. Quality teaching outweighs students’ social and economic background in accounting for differences in student achievement.”

- Alliance for Excellent Education

Source: “A Systematic Approach to Building a World-Class Teaching Profession: The Role of Induction.”

“Principals play a major role in developing a ‘professional community’ of teachers who guide one another in improving instruction.”

- The Wallace Foundation

Source: “The School Principal as Leader: Guiding Schools to Better Teaching and Learning.”



A Global Comparison

Programme for International Student Assessment (PISA) 2009 Results

Rank	Reading		Rank	Math	
1	China: Shanghai	556	1	China: Shanghai	600
2	Korea	539	2	Singapore	562
3	Finland	536	3	Hong Kong	555
4	Hong Kong	533	4	Korea	546
5	Singapore	526	5	Chinese Taipei	543
6	Canada	524	6	Finland	541
7	New Zealand	521	7	Liechtenstein	536
8	Japan	520	8	Switzerland	534
9	Australia	515	9	Japan	529
10	Netherlands	508	10	Canada	527
17	United States	500		<i>PISA average</i>	496
	<i>PISA average</i>	493	31	United States	487

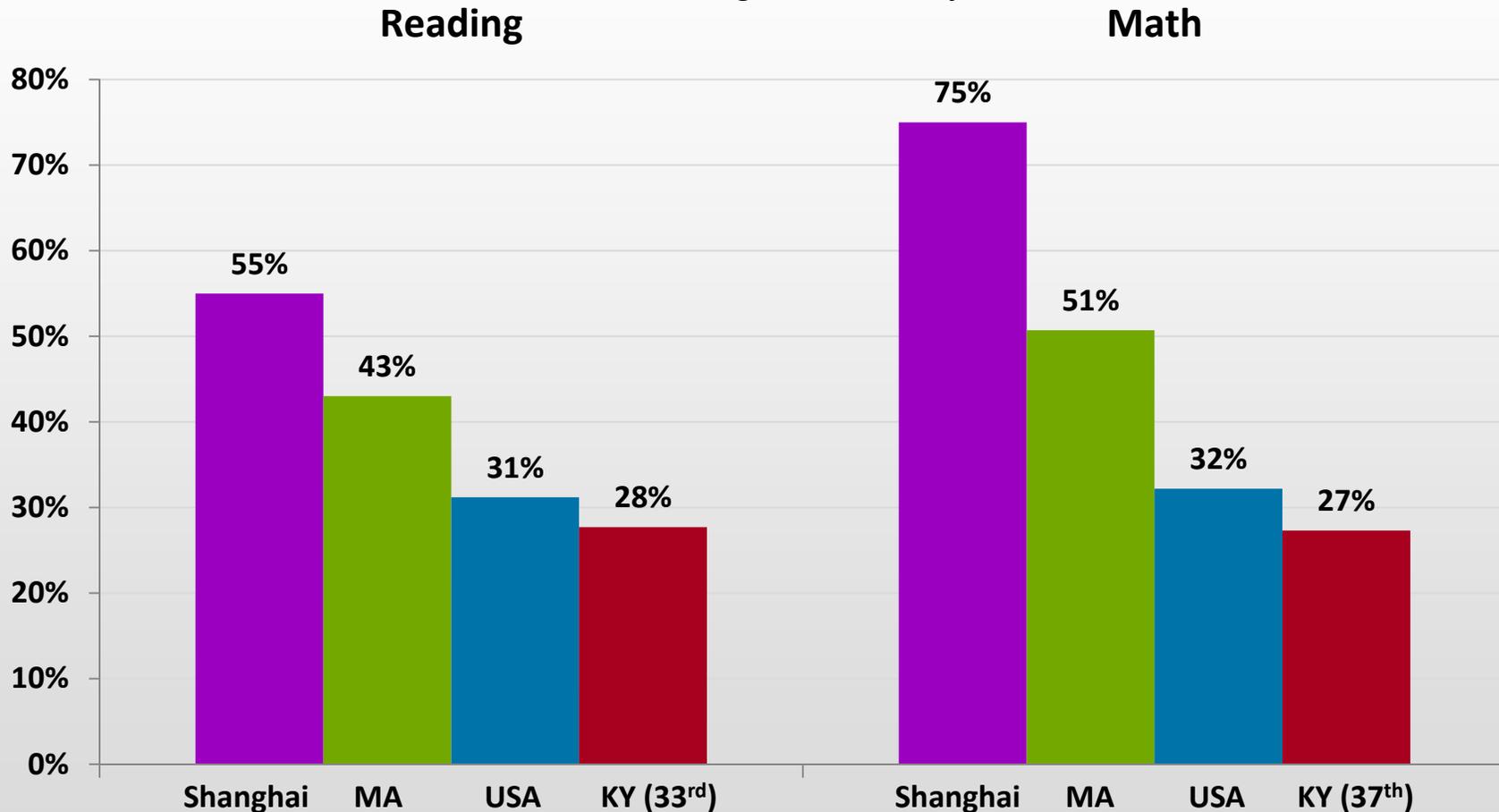
Source: Top performing countries in reading, mathematics and science, in rank order, from the Executive Summary of the PISA secondary education test results: <http://www.oecd.org/dataoecd/34/60/46619703.pdf>.



International Comparison of Proficiency Rates

Based on crosswalks of PISA, NAEP and TIMSS test results

Shanghai (top performing country), Massachusetts (top performing U.S. state),
U.S. Average and Kentucky



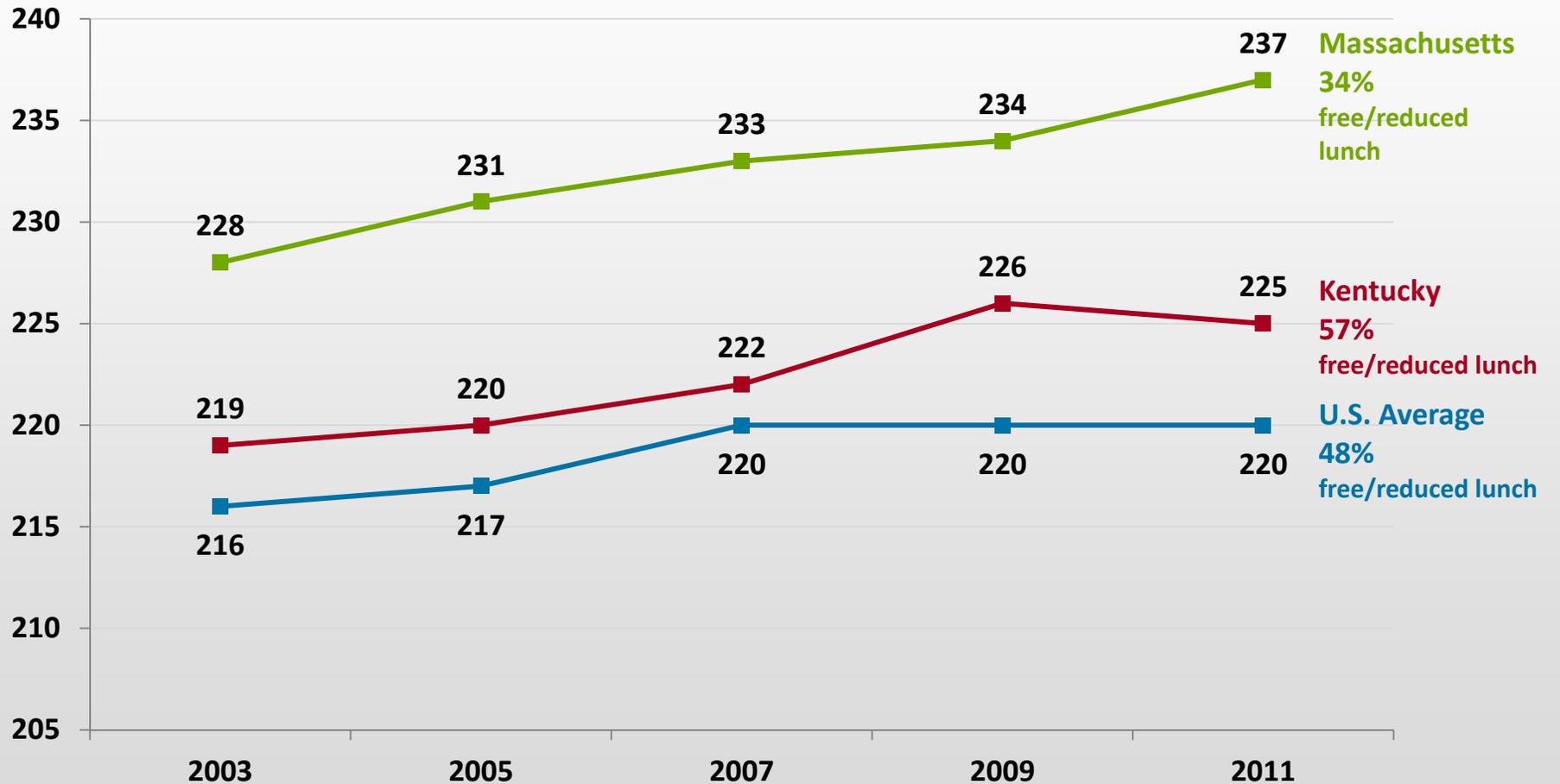
Source: *Globally Challenged: Are U.S. Students Ready to Compete?* Paul E. Peterson, Ludger Woessmann, Eric A. Hanushek and Carlos X. Lastra-Anadón. http://www.hks.harvard.edu/pepa/PDF/Papers/PEPG11-03_GloballyChallenged.pdf



Average NAEP Scores for 4th Grade Reading

2003-2011, Public School Students

Massachusetts (highest NAEP state), Kentucky and U.S. Average



Source: National Center for Education Statistics.

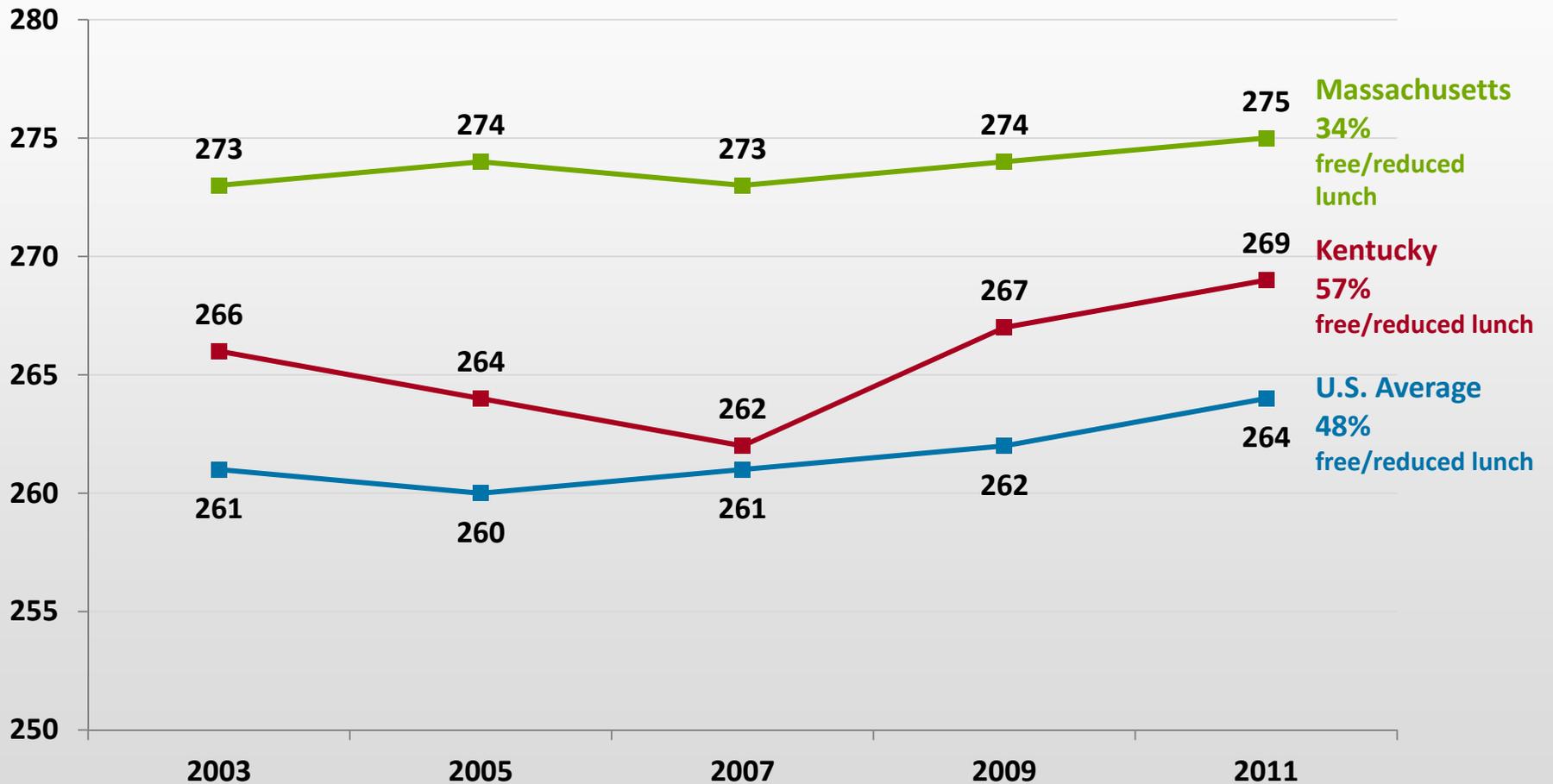


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Average NAEP Scores for 8th Grade Reading

2003-2011, Public School Students

Massachusetts (highest NAEP state), Kentucky and U.S. Average



Source: National Center for Education Statistics.

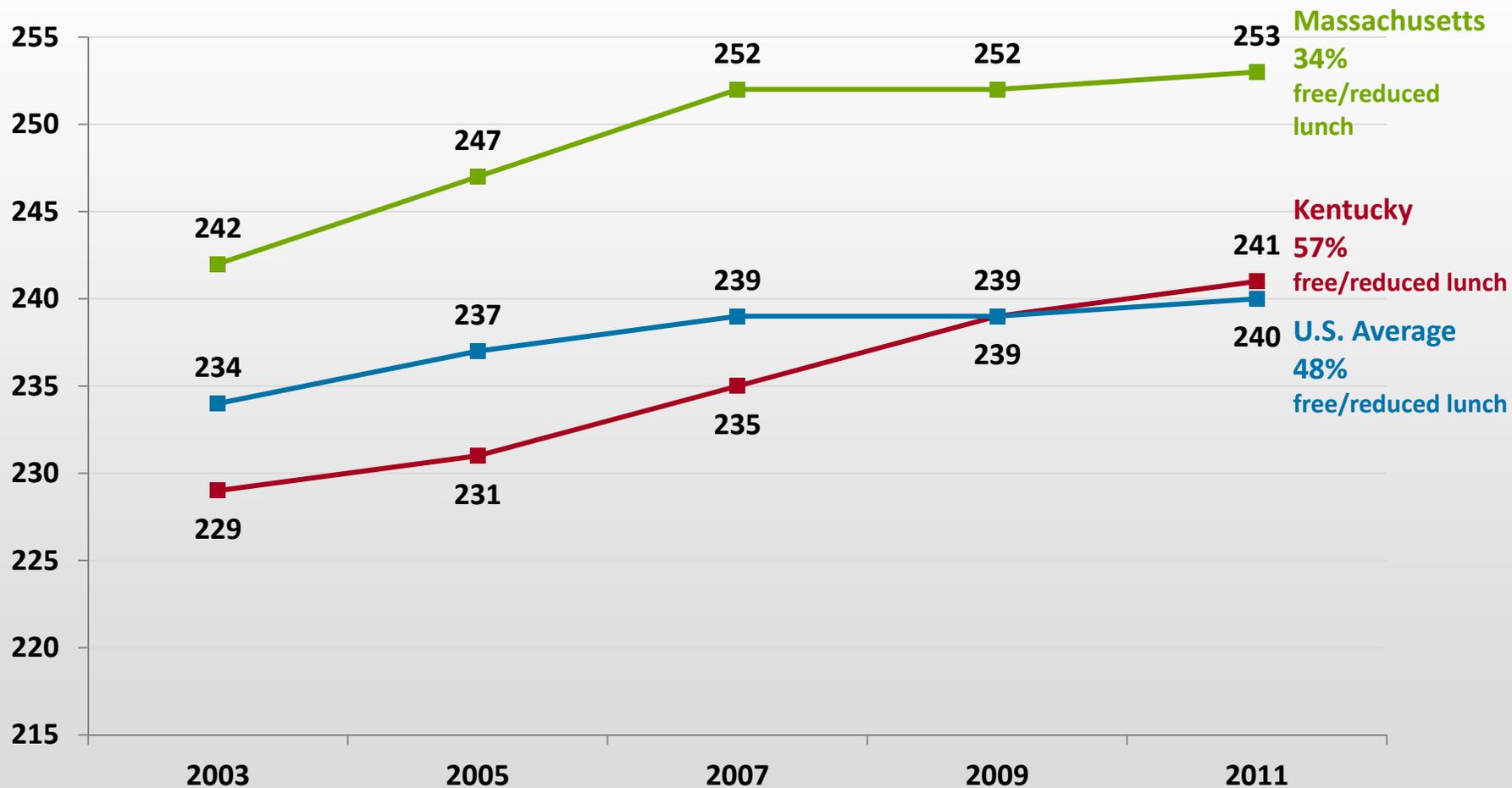


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Average NAEP Scores for 4th Grade Mathematics

2003-2011, Public School Students

Massachusetts (highest NAEP state), Kentucky and U.S. Average



Source: National Center for Education Statistics.

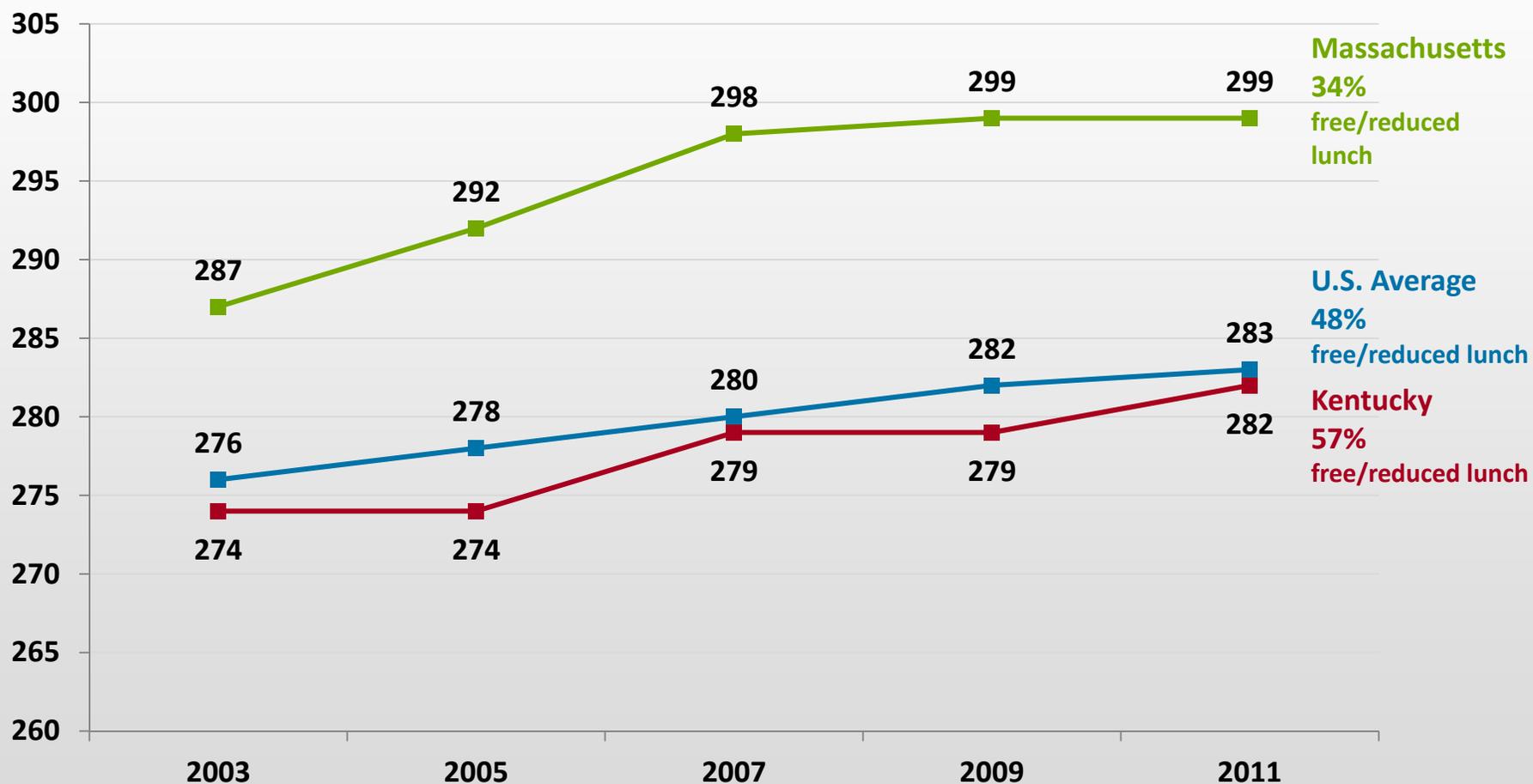


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Average NAEP Scores for 8th Grade Mathematics

2003-2011, Public School Students

Massachusetts (highest NAEP state), Kentucky and U.S. Average



Source: National Center for Education Statistics.



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Why does this matter?

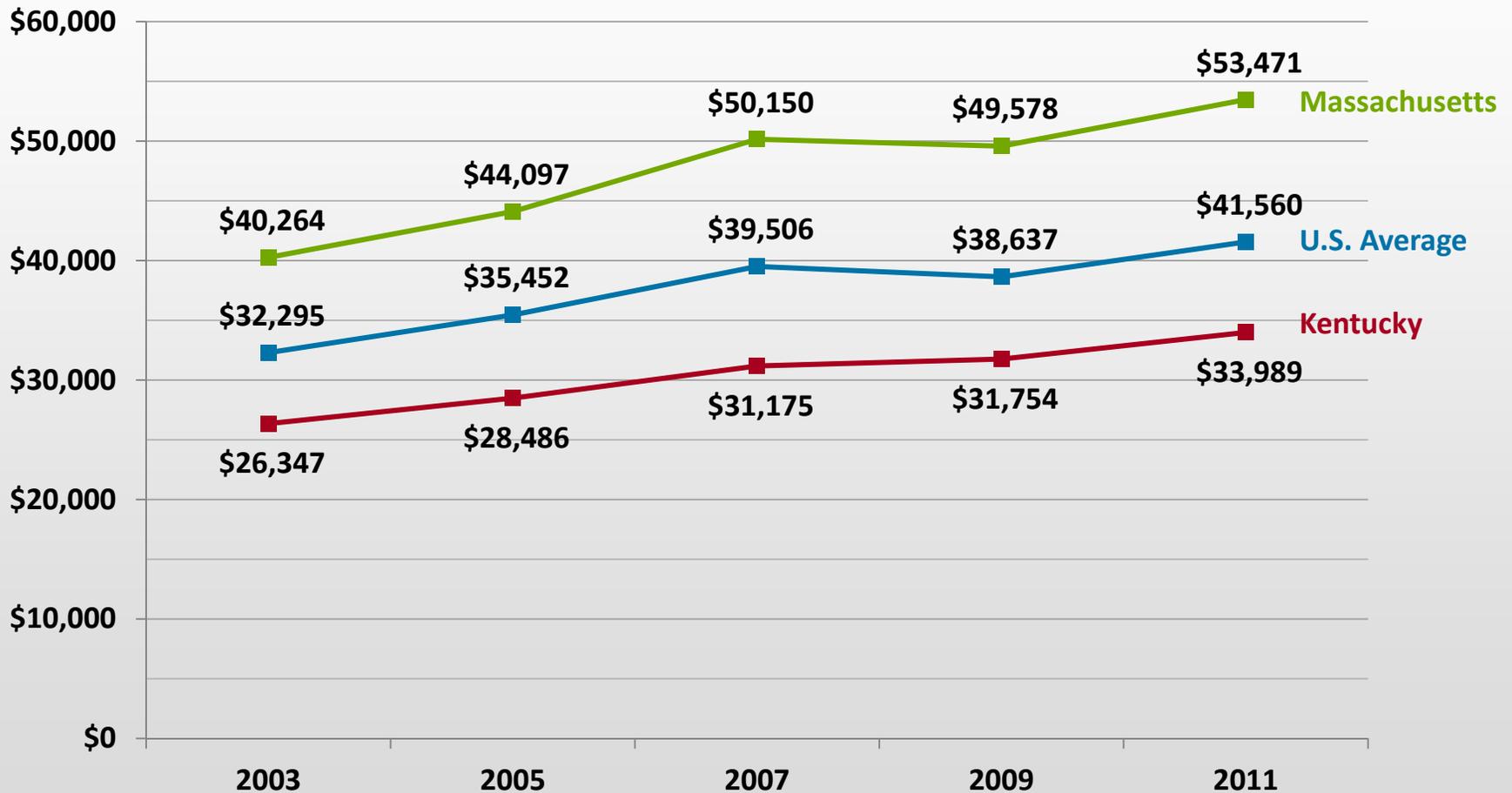


Educational attainment impacts the economy.

Per Capita Income

2003-2011

Massachusetts (highest NAEP state), Kentucky and U.S. Average



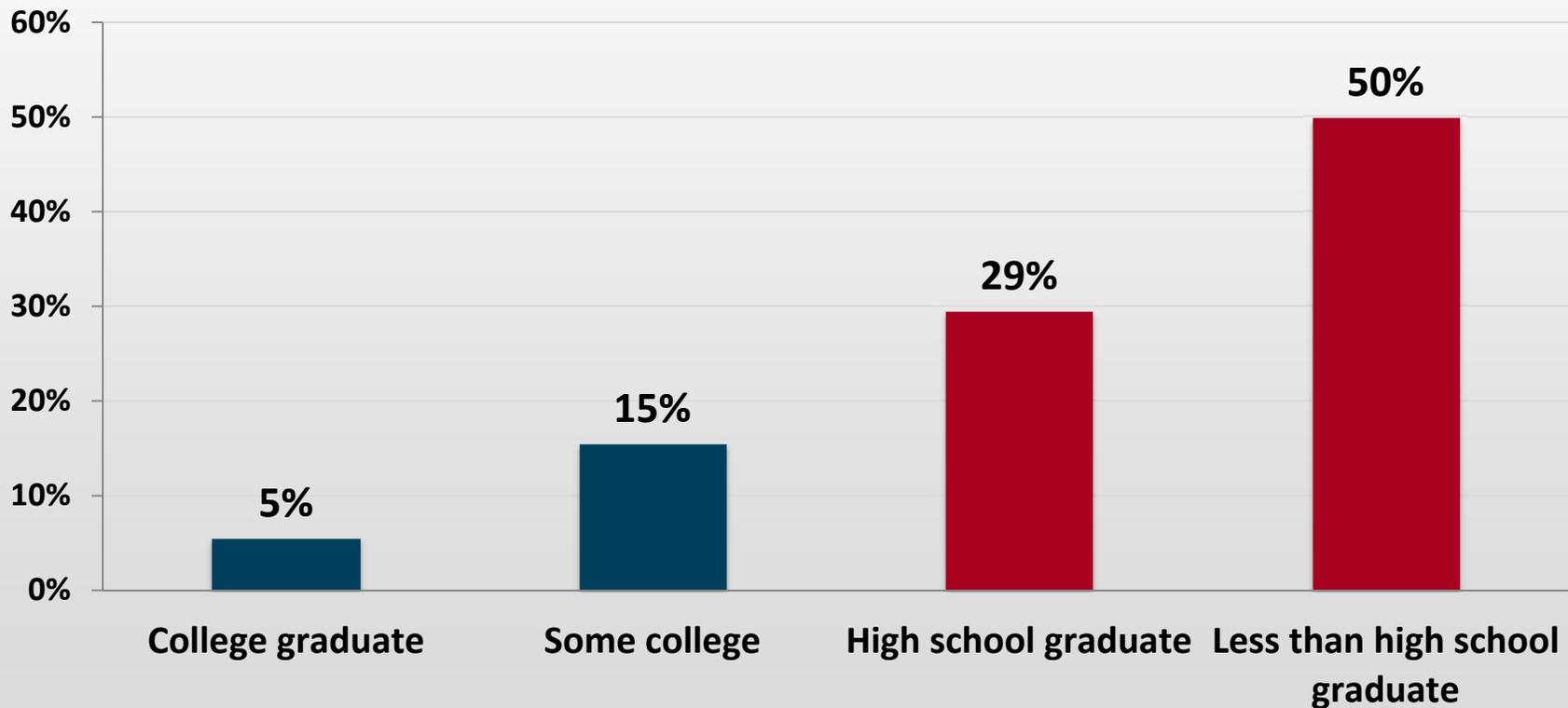
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis. Released Mar 2013.



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Educational attainment correlates with incarceration rates.

Characteristics of convicted offenders, FFY 2007-08
(Inmates in U.S. state and federal correctional facilities)



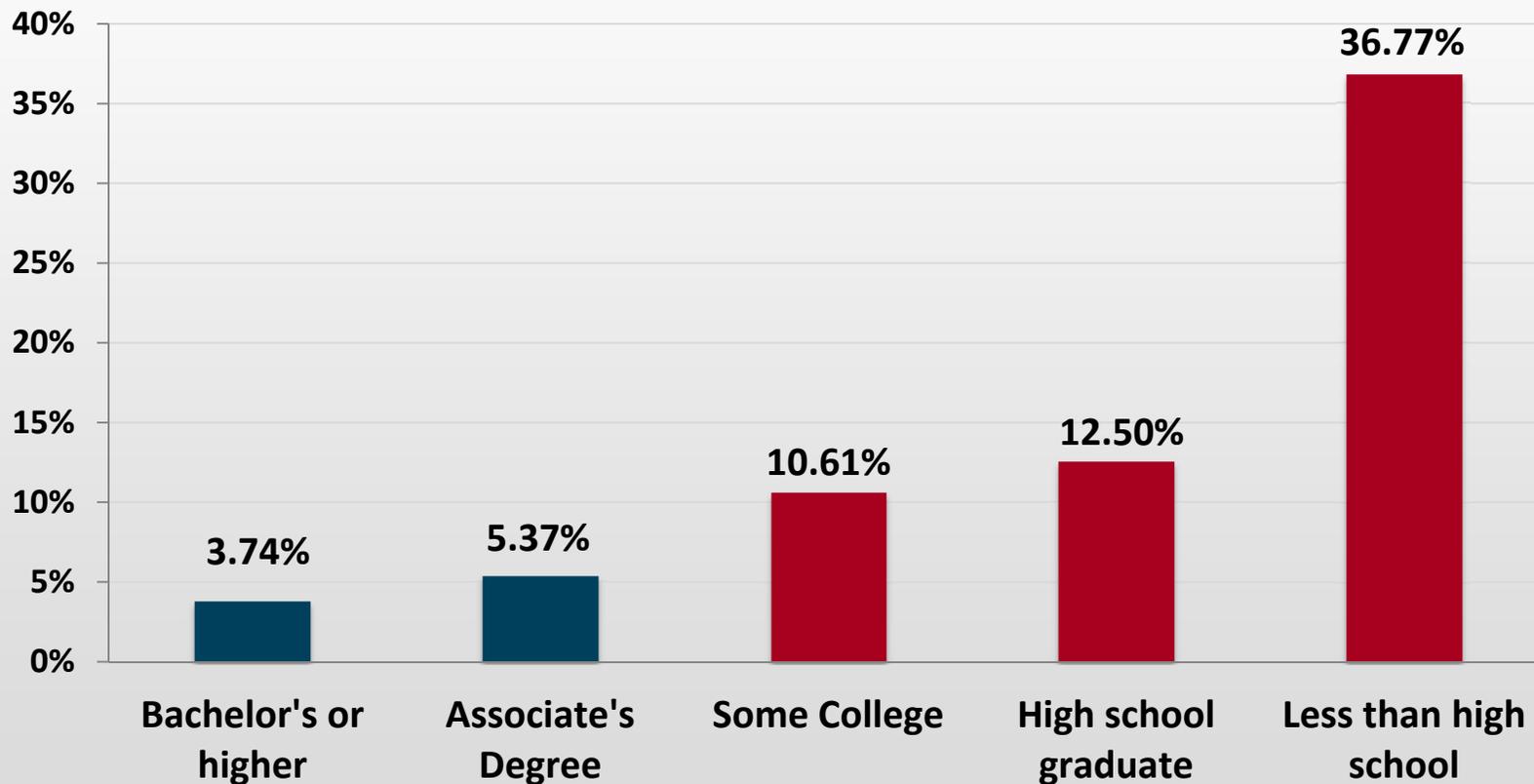
Source: Bureau of Justice Statistics. Federal Justice Statistics, Statistical Tables, November 2010.



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Educational attainment correlates with the need for public assistance.

Percentage of Kentucky Population on Medicaid by Education Levels



Source: March 2012 Current Population Supplement, Current Population Survey (CPS)

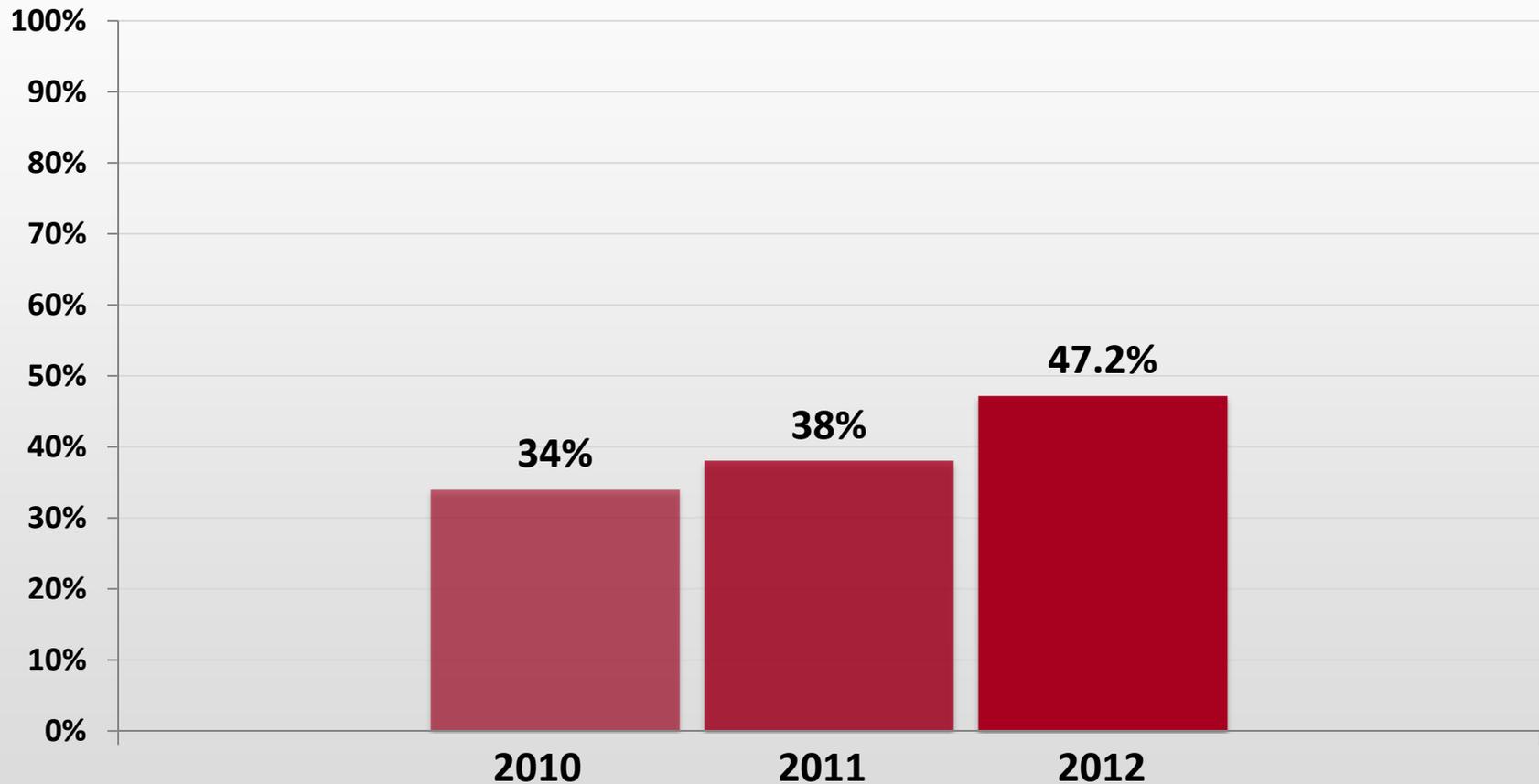


Kentucky is improving.



The number of high school graduates ready for college has steadily been increasing.

Kentucky's College and Career Readiness Success



Source: Dodd, Karen. "Stocktake Summary for College and Career Readiness Delivery Plan." Kentucky Department of Education. Oct 2012.



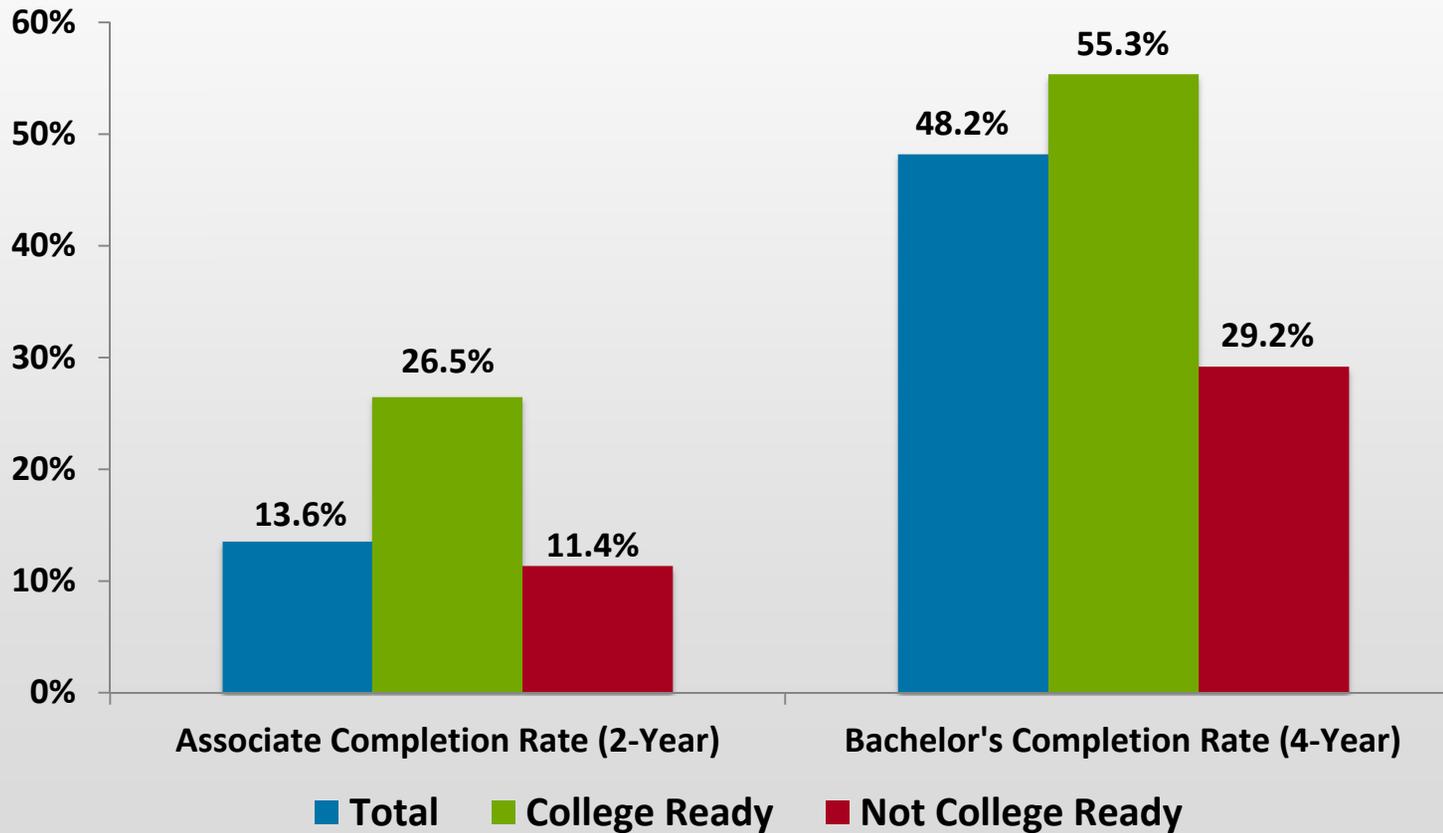
But we have still have quite a way to go....



Kentucky's Graduation Rate Gaps

Underprepared Students

System completion rates of full-time, first-time associate and baccalaureate students who entered a Kentucky public or independent university and completed a degree at any in-state public or independent institution, by college readiness at entry.



Source: CPE Comprehensive Database.



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With these issues in mind, what will the Vanguard project address?

Elevating the effectiveness, stature, professionalism and compensation of teachers and building principals.

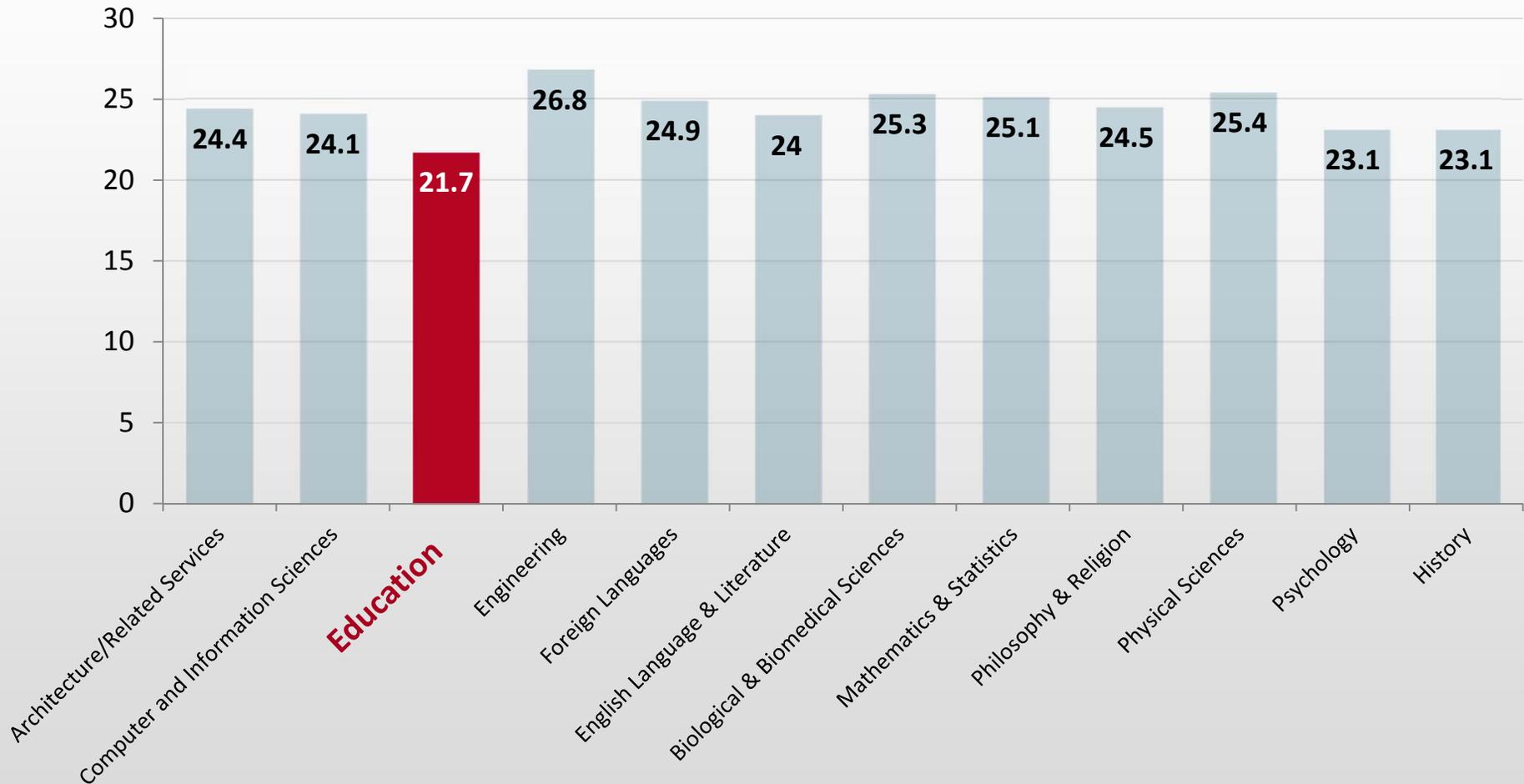


- In the countries where students perform the best academically, teachers typically come from the **top 25 percentile** of students.
- The teaching profession is **prestigious**, and schools of education are **selective**.
- In the United States, teachers tend to be the lowest academic performers (bottom third), especially in elementary education.



ACT Scores by Major

Fall 2011 Juniors & Seniors at KY 4-Year Public Institutions

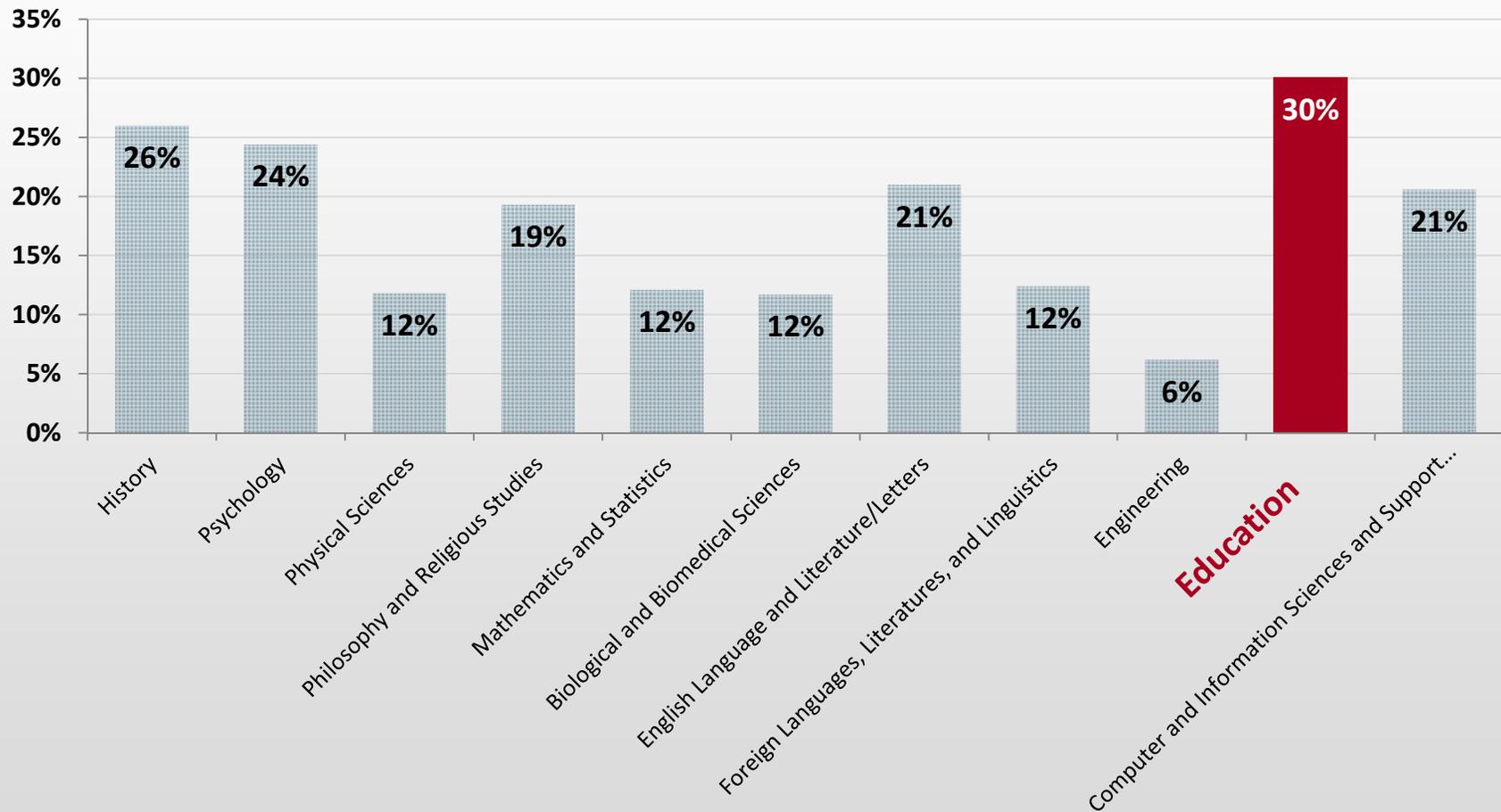


Source: Kentucky Council on Postsecondary Education Comprehensive Database System.



Underprepared Students in One or More Subject Areas

Fall 2011 Junior and Senior Status Students at Kentucky 4-Year Public Institutions



Source: Kentucky Council on Postsecondary Education Comprehensive Database System.



Difference in Beginning Teacher PD Need vs. Receipt

Professional Development Area	% Indicating a Need in 2013
Differentiating instruction	72.4
Special education (Disabilities)	65.5
Closing the achievement gap	69.6
Special education (Gifted/Talented)	62.6
Reading strategies	54.6
Methods of teaching	49.8
Student assessment	52.1
Classroom management techniques	51.3
Integrating technology into instruction	50.8
Your content area	40.4
English language learners	43.6

Source: 2013 TELL Kentucky: Creating Supportive School Conditions for Enhancing Teacher Effectiveness.

Data extract: Beginning Teachers (1-3 Years).



Frequency of Mentoring Activities Reported by New Teachers

Mentoring Area	Never/Sometimes
Observing my mentor's teaching	93%
Analyzing student work	69%
Reviewing results of students' assessments	70%
Aligning my lesson planning with state/local curriculum	63%
Developing lesson plans	64%
Addressing student or classroom behavioral issues	61%
Reflecting on the effectiveness of my teaching	61%
Being observed teaching by my mentor	88%

Source: 2013 TELL Kentucky: Creating Supportive School Conditions for Enhancing Teacher Effectiveness.

Data extract: *Beginning Teachers (1-3 Years)*; Excluded categories: "At least once a week" and "Almost daily."



The Impact of Course Rigor

2013 Graduating Class Public High School Students

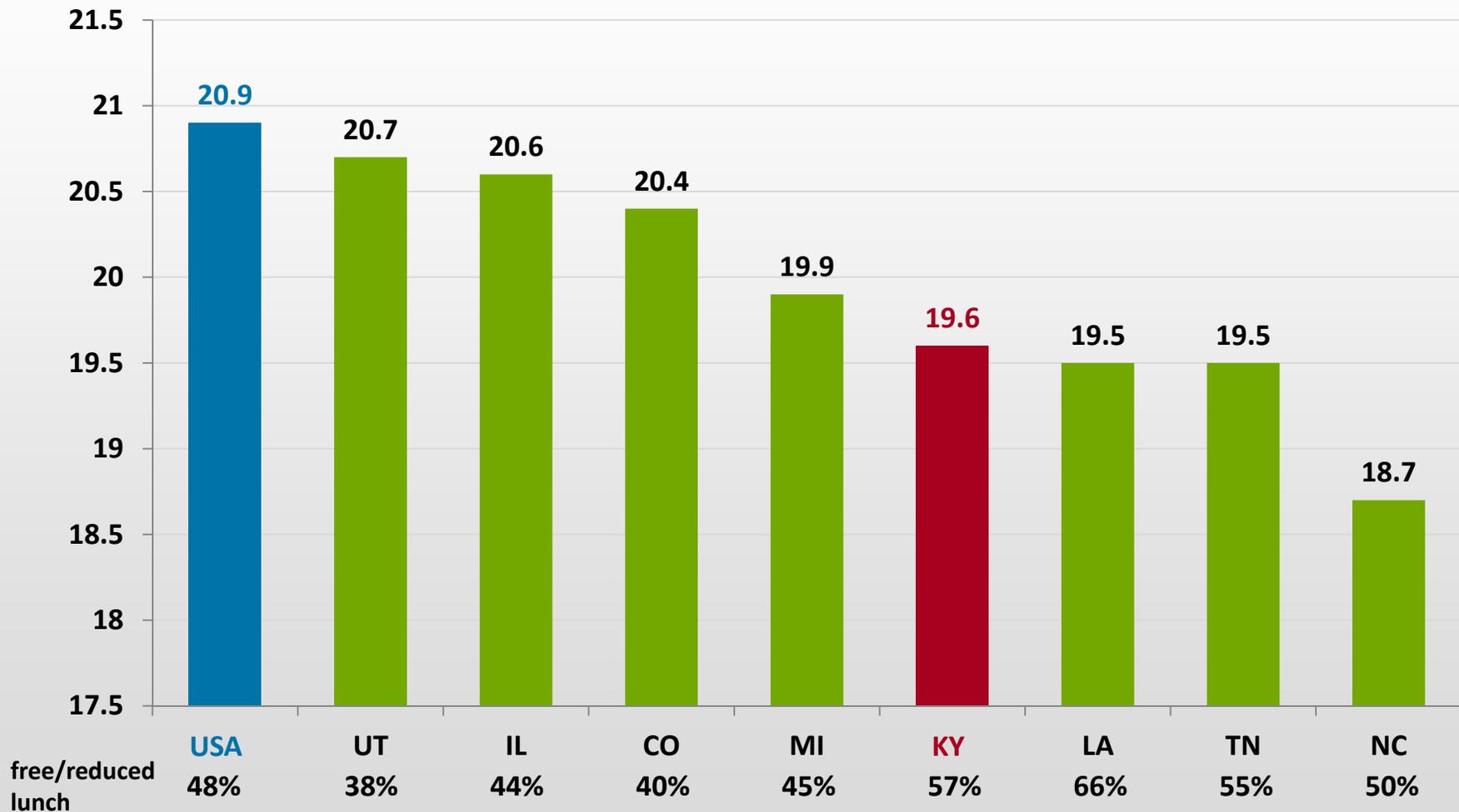
Course Pattern	Kentucky		National	
	% Taking Pattern	Avg ACT	% Taking Pattern	Avg ACT
Eng. 9, Eng. 10, Eng. 11, Eng. 12 and Other English	14%	21.2	21%	21.6
Alg. 1, Alg. 2, Geometry, Trig and Calculus	3%	21.4	6%	23.8
US History, World History, Amer. Gov., Other History	3%	20.2	3%	22.2
Gen. Sci., Biology, Chemistry, Physics	30%	20.3	43%	21.9

Source: 2013 ACT State and National Scores: Kentucky – Public High Schools Report, p. 24.



2013 ACT Composite Scores

States Testing 100% of High School Graduates



Sources: 2013 ACT State and National Scores (ACT.org). National Center for Education Statistics. 2010-11 data.



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Performance Overview

Council on Postsecondary Education
Frankfort, Kentucky
September 6, 2013

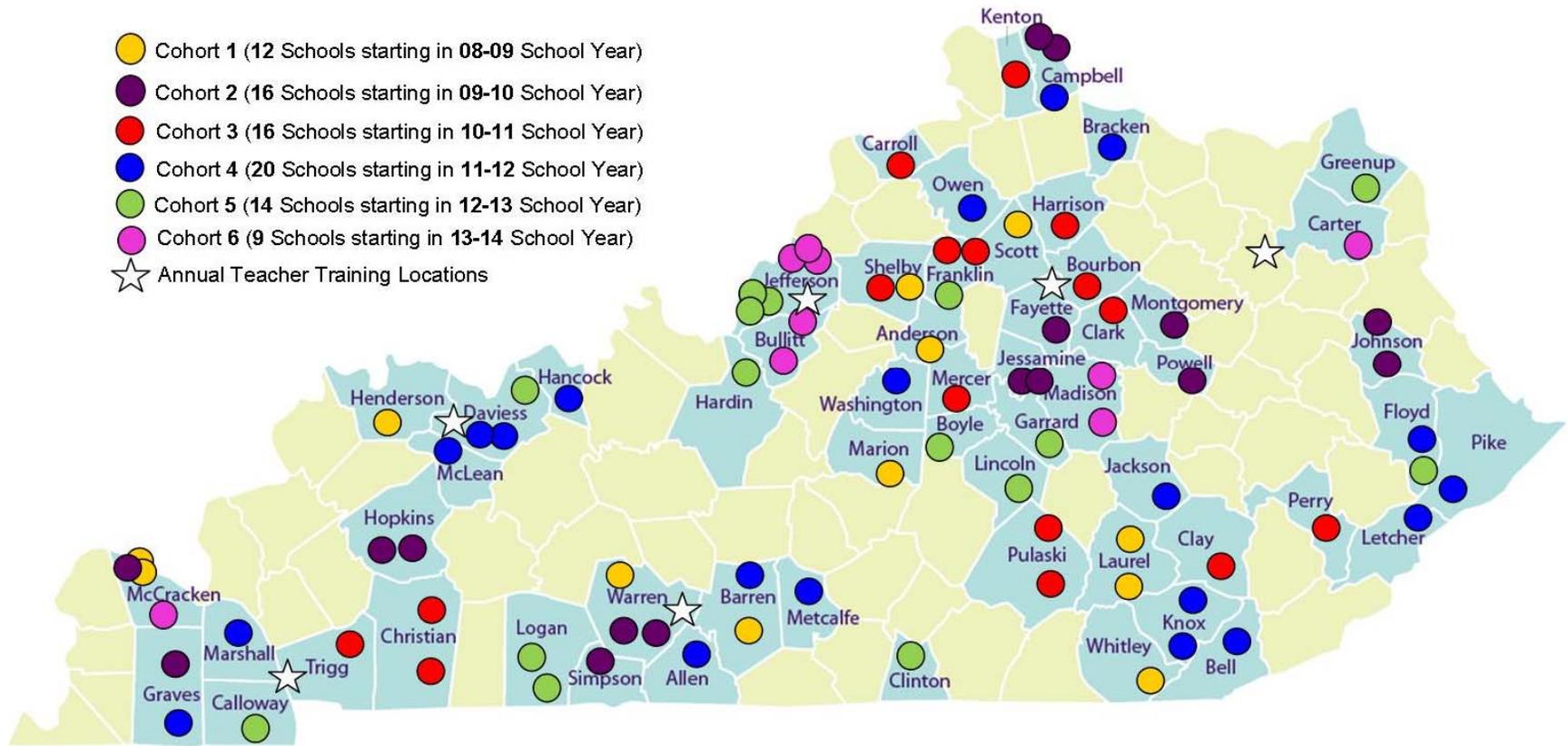




Participating High Schools

Accelerating learning in math, science and English

- Cohort 1 (12 Schools starting in 08-09 School Year)
- Cohort 2 (16 Schools starting in 09-10 School Year)
- Cohort 3 (16 Schools starting in 10-11 School Year)
- Cohort 4 (20 Schools starting in 11-12 School Year)
- Cohort 5 (14 Schools starting in 12-13 School Year)
- Cohort 6 (9 Schools starting in 13-14 School Year)
- ☆ Annual Teacher Training Locations





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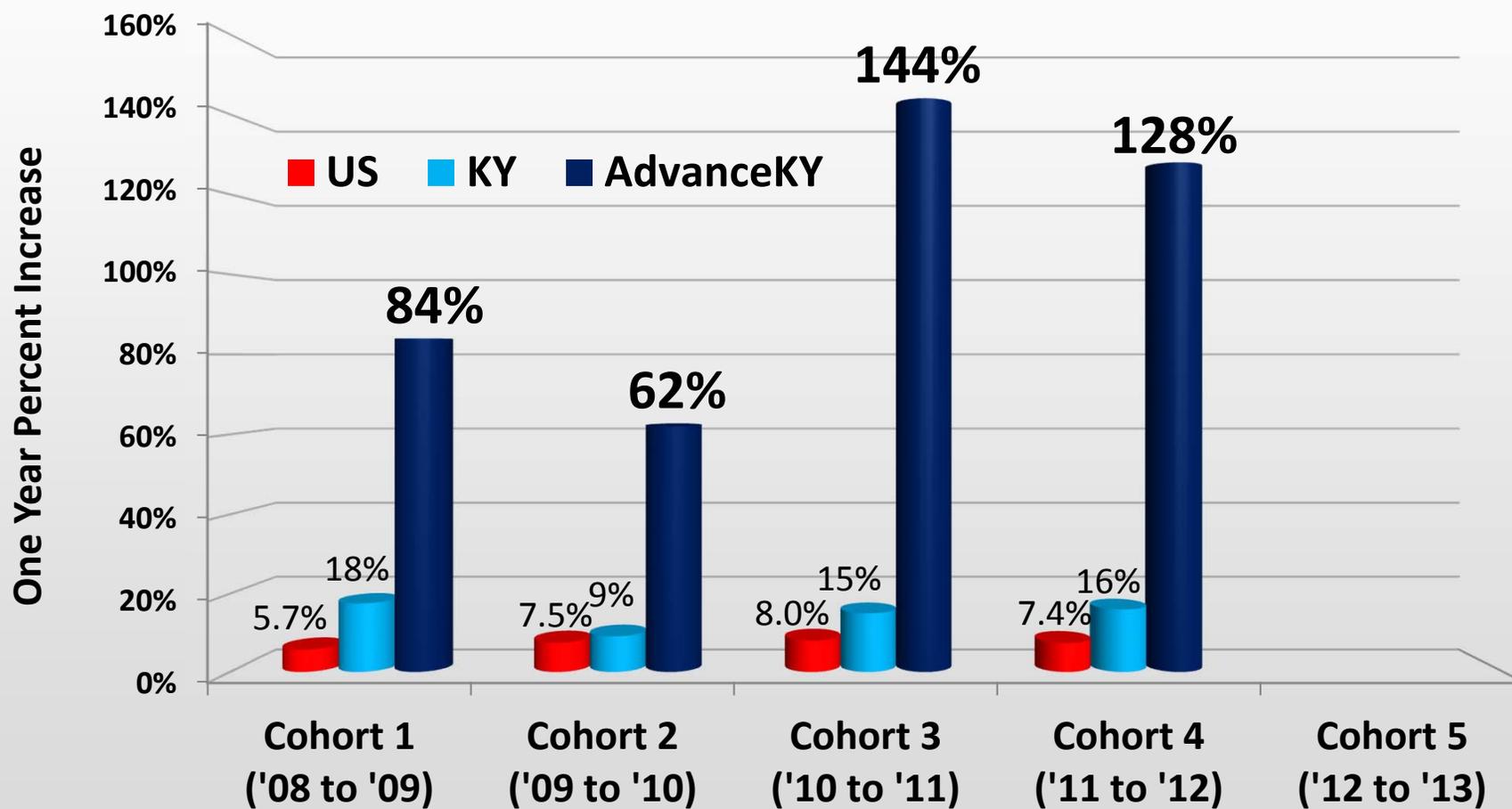
Elements of Success

AP* Teacher Training and Incentive Program

* Advanced Placement, AP and Pre-AP are registered trademarks of College Board.



First-Year Percent Increase in AP MSE QS Compared to KY and US

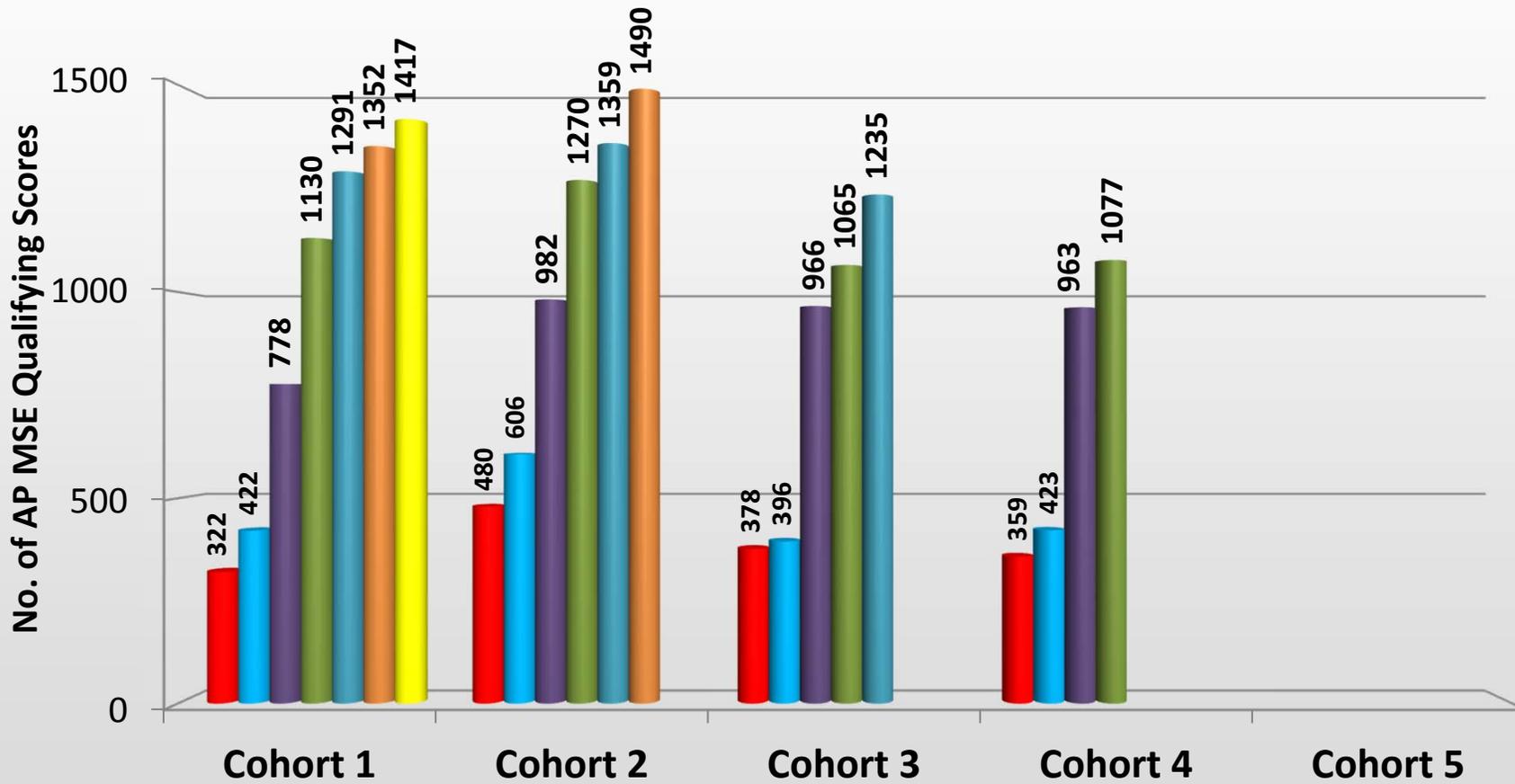


Source: College Board



Performance Trends

Number of AP MSE QS Per Year by Cohort



Source: College Board

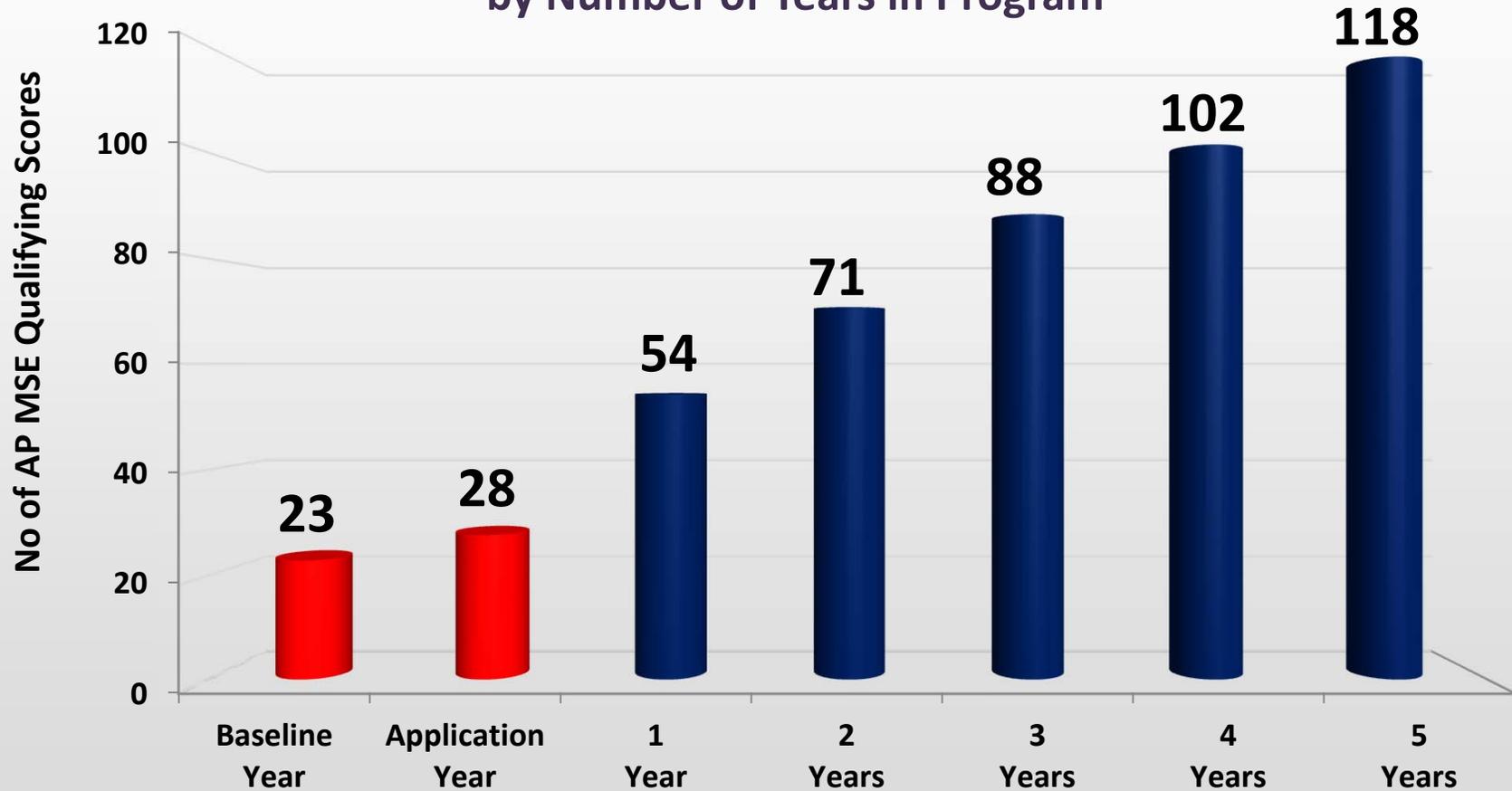
■ Baseline Year ■ Application Year ■ Year 1 ■ Year 2 ■ Year 3 ■ Year 4 ■ Year 5





Performance Trends

Average Annual AP MSE QS Per School
by Number of Years in Program



Source: College Board



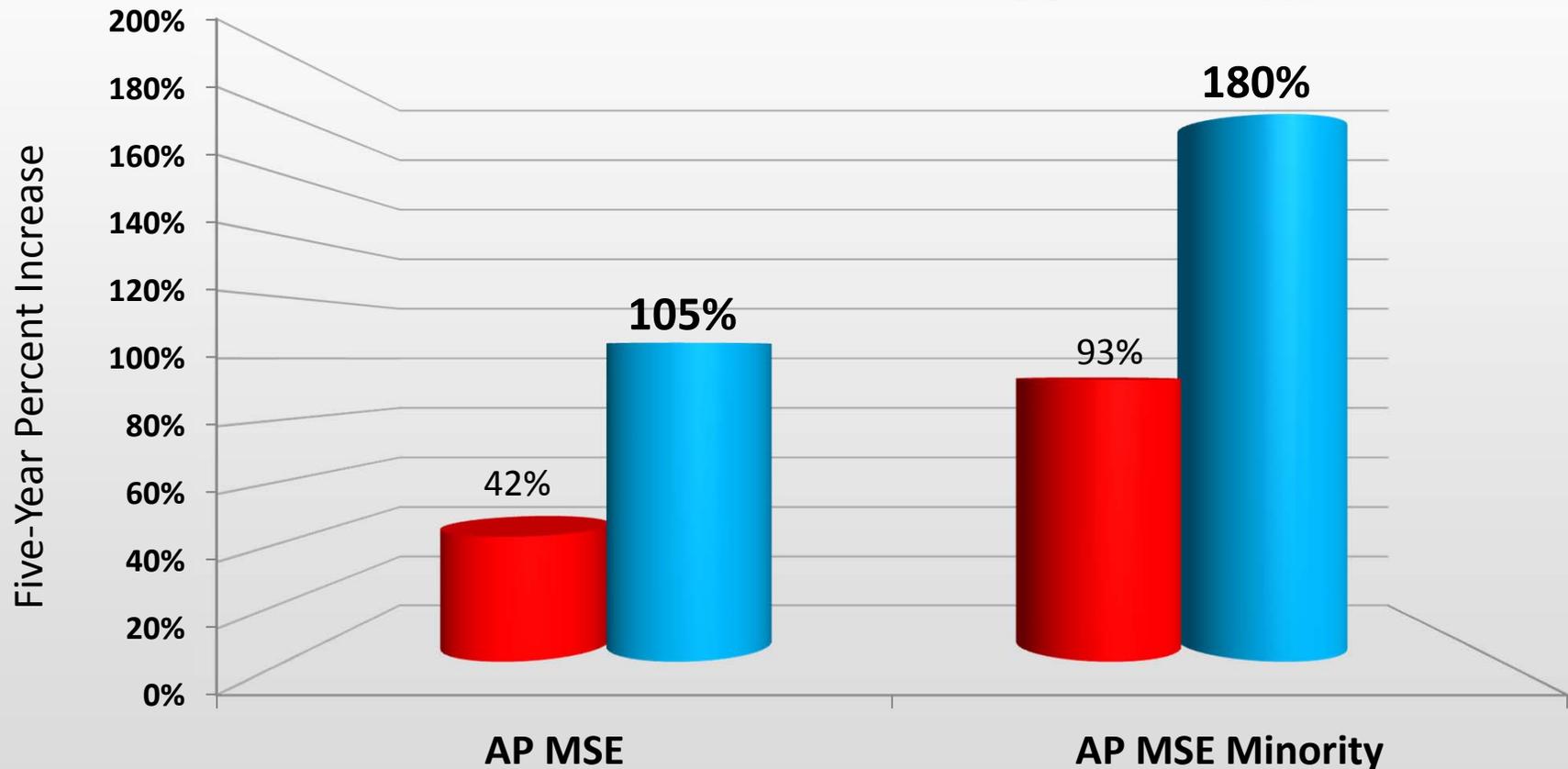
EMBARGOED
until 9-24-13



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KY Five-Year Percent Increase in AP MSE QS Compared to US

■ US ■ KY



MSE QS = Advanced Placement Math, Science, English Qualifying Scores

Source: College Board



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Teacher Corp

From 2008/09 to 2013/14	High Schools	Enrollments	AP Teachers*	Pre-AP Teachers
	88	60,000+	600+	3,000

* Approximately 200 of these teachers also are AdvanceKY contractors who:

- Serve as mentors to other teachers
- Conduct regional study sessions
- Serve as Regional Content Advisors
- Conduct AP teacher training
- Conduct Pre-AP teacher training
- Serve as College Board consultants/readers





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Longitudinal Research

- AdvanceKentucky and the KY Center for Education and Workforce Statistics have developed an annual longitudinal research effort.
- In the initial analyses underway in Summer 2013 to follow:
 - Cohort 1 for three years in college
 - Cohort 2 for two year in college
 - Cohort 3 for one year in college



**We will not realize the full potential of
the Common Core Standards unless
we significantly improve the capabilities of
our teachers and principals.**

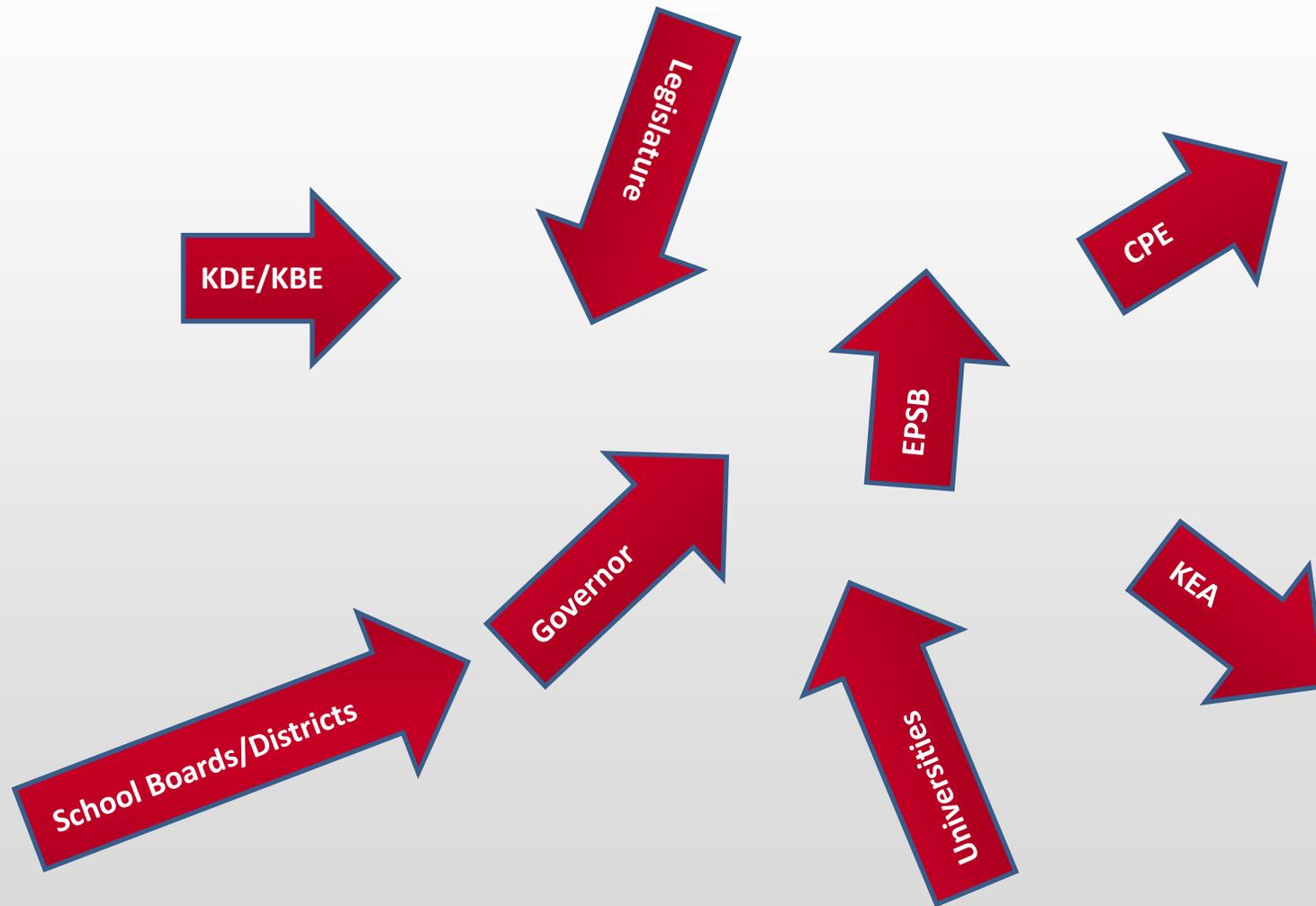


We don't run the schools, but we do decide

- ✓ **Who is admitted to teacher education programs.**
- ✓ **How they are trained.**
- ✓ **What skills are necessary to graduate.**



**We can either approach progress as sectors,
doing their own thing....**



... or approach progress as a system.



Kentucky has chosen to approach progress as a system.

Progress Areas:

- ✓ Recruitment
- ✓ Selectivity
- ✓ Training
- ✓ Certification
- ✓ Induction
- ✓ Career Ladder
- ✓ Professional Development
- ✓ Compensation



The Role of Those in Higher Education

- **Develop an aggressive marketing campaign to recruit high-performing students into teaching. Elevate selectivity.**
- **Redesign teacher training:**
 - Elementary teachers need to at least minor in the subjects they will be teaching.
 - Middle and high school educators need content- specific pedagogy.
 - Align our curriculum to address the TELL Survey and the models of instruction utilized by the schools we serve.
- **Engage the whole university, not just the schools of education.**
- **Increase clinical experiences.**
- **Add a full year of residency at a “teaching hospital” school (earning a Master’s degree).**
- **Rethink the internal economics at the campus.**



The Role of Those Structuring Our Public Schools

- Create career ladders for teachers, from “residents” to “master teachers” or administrators.
- Develop mastery-based advancement for students.
- New deployment of teachers in master teacher led teams.
- Provide enhanced compensation opportunities tied to the steps on the career ladder.
- Require elementary school teachers to specialize in either English and social studies OR mathematics and science.
- Rethink courses and operations by developing Districts of Innovation (KRS 156.108 and 160.107).



The Role of Those Granting Licensure and Administering Regulations

- **Develop more rigorous licensure exams.**
- **Create regulatory structures that support statewide career ladders.**
- **Establish new, more rigorous criteria to approve teacher and principal training programs based on performance criteria and global best practices.**
- **Rethink the criteria for permanent licensure (tenure).**



The Role of Those Providing Professional Development

- **Improve professional development for school leaders to emphasize academic leadership. Use National Institute for School Leadership (NISL) training.**
- **Involve Kentucky colleges and universities in the design and provision of research-proven, high-quality, effective professional development.**
- **Encourage growth of the Kentucky Partnership Academies and Regional Content Leadership Networks. Currently housed at three universities, the goal is to expand this network.**



Kentucky's Next Steps

We are on the verge of soliciting at least one university and as many school districts as would be necessary to commit to hire the graduates from these significantly enhanced programs.

- All participants will commit to institute the type changes set forth above, coordinating both internally and externally.
- Supported by the three state agencies: KDE (K-12), CPE (Higher Education), and EPSB (the professional standards board) to secure the necessary regulatory, statutory and financial changes.



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