



Illinois Education Research Council

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Jennifer B. Presley
Director

Kentucky P-16 Council
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Frankfort, Kentucky



Our Mission

To provide objective and reliable evidence for Illinois P-16 education policy and program development.





About the Illinois Education Research Council

- Established in 2000 to bridge the knowledge gap across educational sectors in Illinois
- Housed at Southern Illinois University Edwardsville
- Linked to policy community—high-profile Advisory Board
- Modest permanent base state funding. Allows multi-year projects and permanent staffing (augmented with grants)
- Independence to present uncomfortable results



Topics to be covered today:

- Teacher Quality in Illinois
- The High School Class of 2002
- Linking TQI to College Readiness

Karen J. DeAngelis

Yuqin Gong

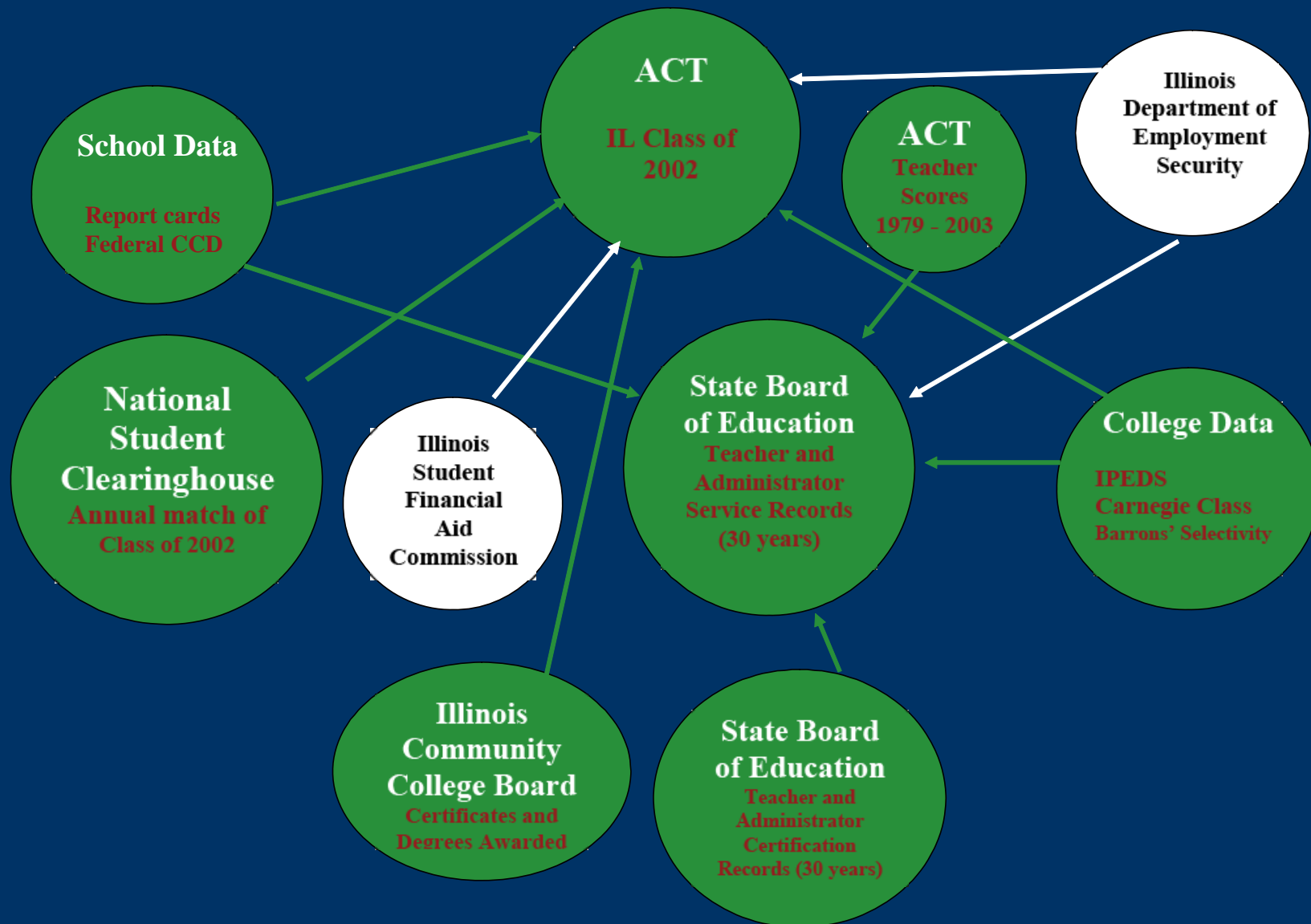
Jennifer B. Presley

Bradford R. White





The Research Data Map





Teacher Quality in Illinois



What the research tells us about teacher quality and student outcomes

- **Selectivity of teacher's baccalaureate college**
 - *proxy for teacher's academic performance*
- **Years of teaching experience**
- **Teacher test scores**
 - *particularly for at-risk students*
- **Advanced subject-specific degrees**
 - *evidence limited to high school math and science*
- **Subject-specific teacher certification**
 - *evidence strongest for high school math*



Opportunity Knocks: Having Access to the Data

- **State Teacher Service Records and Teacher Certification Information System—140,000 teachers in public schools in 2002-2003**
- **ACT, Inc.**
- **Barron's Guide**
- **Common Core of Data (NCES)**
- **Illinois School Report Cards**





Creating the Teacher Quality Index (TQI)

Teacher Characteristics Averaged at the School Level

- Teachers' Average ACT Composite Scores
- Teachers' Average ACT English Scores
- % of Teachers Failing Basic Skills Test on First Attempt
- % of Teachers with Emergency/Provisional Certification
- Teachers' Average College Competitiveness Ranking
- % of Teachers with 3 or Fewer Years' Experience

TQI

(Principal Components Analysis)

Our “independence” made it safer for us to use sensitive measures



For Context: NCLB vs TQI

- NCLB defines a ‘Highly Qualified’ teacher as one who
 - a) Holds a bachelor’s degree
 - b) Is certified, and
 - c) Passed a content examination (In Illinois, for secondary 6-12 certification this is discipline specific, for elementary K-8 it is a single test)
- The IERC measures include teachers’ own basic academic skills, but lack a measure of out-of-field teaching.





What the Average School Looks Like, by TQI Component and School TQI Quartile

TQI Component	Lowest Quartile		Middle-Low Quartile	Middle-High Quartile	Highest Quartile
	0-10%	11-25%			
Teachers' average ACT composite score	18.2	19.6	20.6	21.6	23.1
Teachers' average ACT English Score	18.4	19.9	21.2	22.3	23.7
% of teachers who failed the Basic Skills Test on first attempt	16%	6%	2.5%	1%	0.6%
% if teachers with emergency or provisional credentials	10%	3%	1%	0.7%	0.4%
Teachers' average undergraduate college competitiveness ranking	2.8	2.9	3.0	3.1	3.3
% of teachers with 3 or fewer years of teaching experience	18%	19%	18%	17%	16.5%
Average School TQI	-2.1	-0.8	-0.1	0.4	1.1

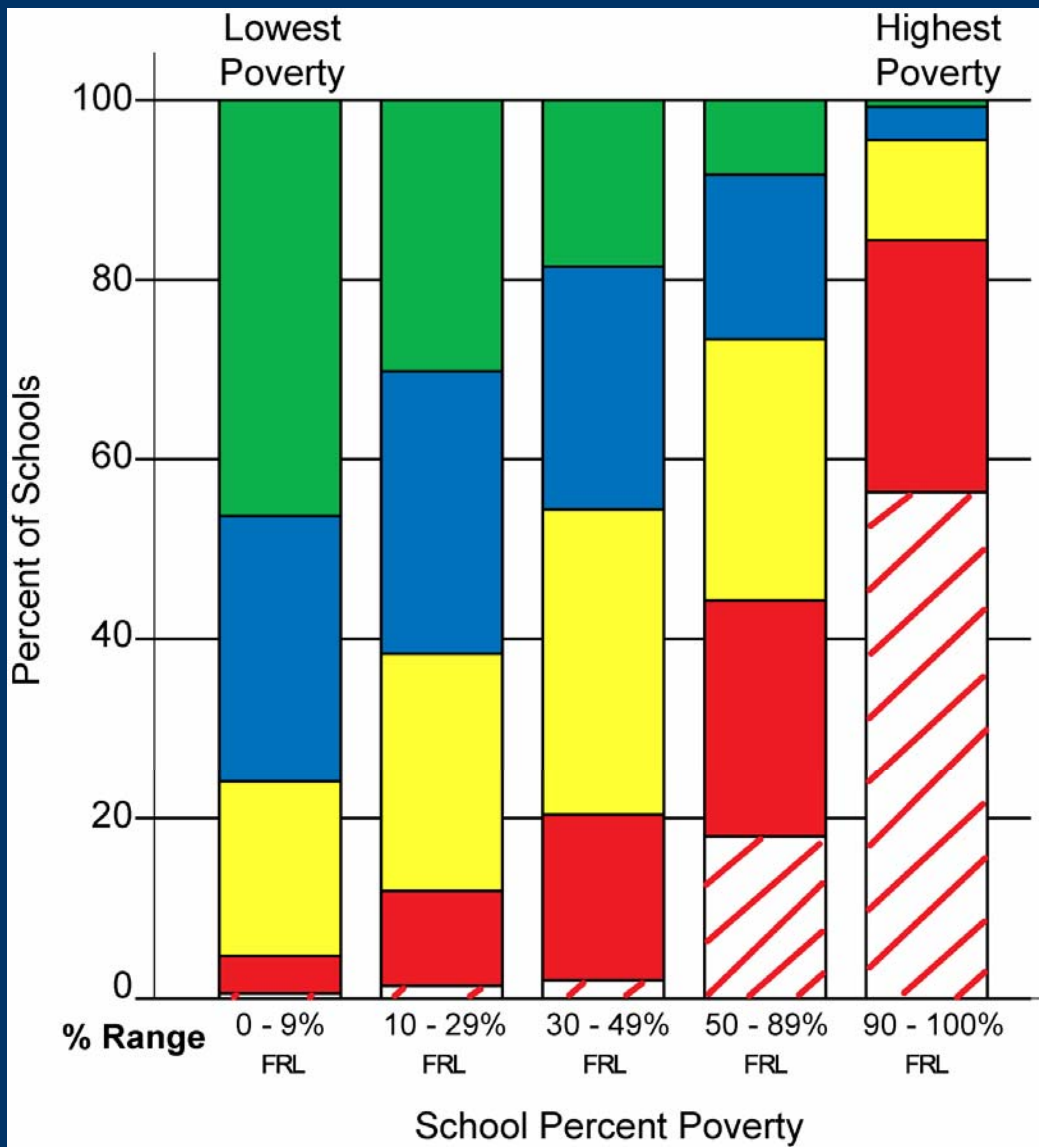
- The Teacher Quality Index was designed to have a statewide mean of 0.0 and a standard deviation of 1.0.*



What does the
distribution of TQI look
like by school **percent
poverty** and **percent
minority**?



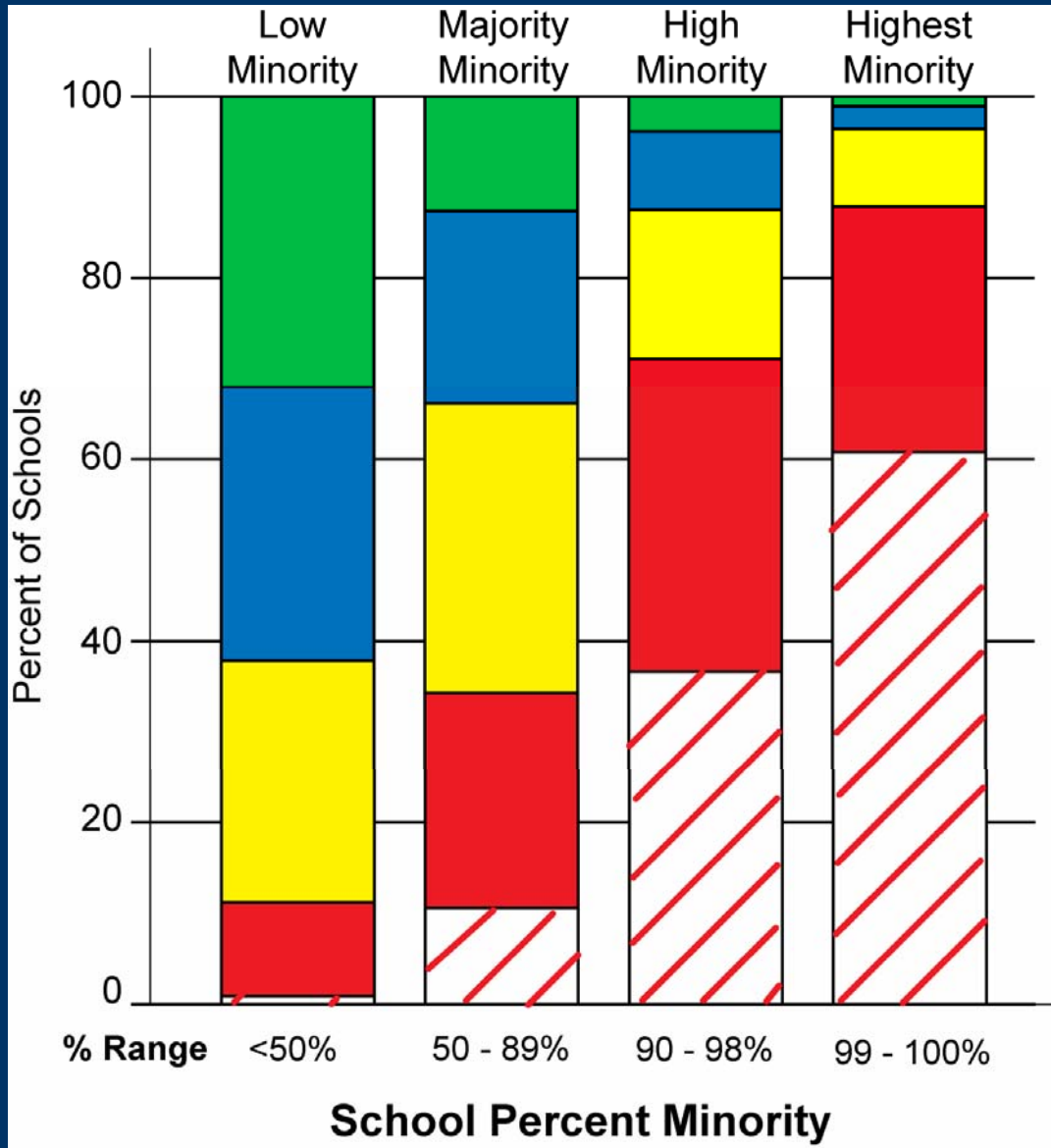
Distribution of School TQI by School Percent Poverty



- *TQI distribution is related to school poverty levels.*
- *The differences continue across all poverty groupings.*



Distribution of School TQI by School Percent Minority



- *The higher the school percent minority (especially above 50%) the lower the school TQI.*





Average School TQI by School Percent Minority Plus Percent Poverty

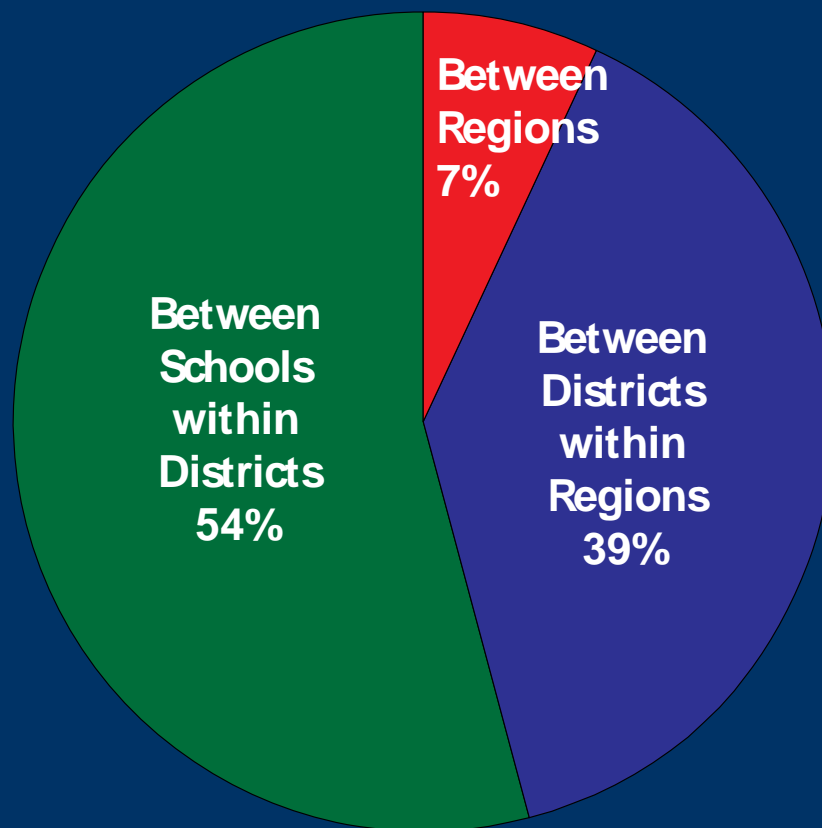
Minority Category	Poverty Category					Total
	Lowest Poverty 0 - 9% FRL	10 - 29% FRL	30 - 49% FRL	50 - 89% FRL	Highest Poverty 90 - 100% FRL	
Low minority	0.58	0.34	0.13	-0.04	—	0.35
Majority minority	-0.03	0.13	-0.09	-0.34	-0.65	-0.23
High minority	—	—	-0.93	-0.88	-1.37	-1.08
Highest minority	—	—	—	-1.40	-1.69	-1.60
Total	0.57	0.32	0.08	-0.48	-1.51	0.00

—= fewer than 10 schools

- **Low-minority/low-poverty schools have the highest TQIs.**
- **Highest-minority/highest-poverty schools have the lowest TQIs.**



What Contributes to the Variation in TQIs?

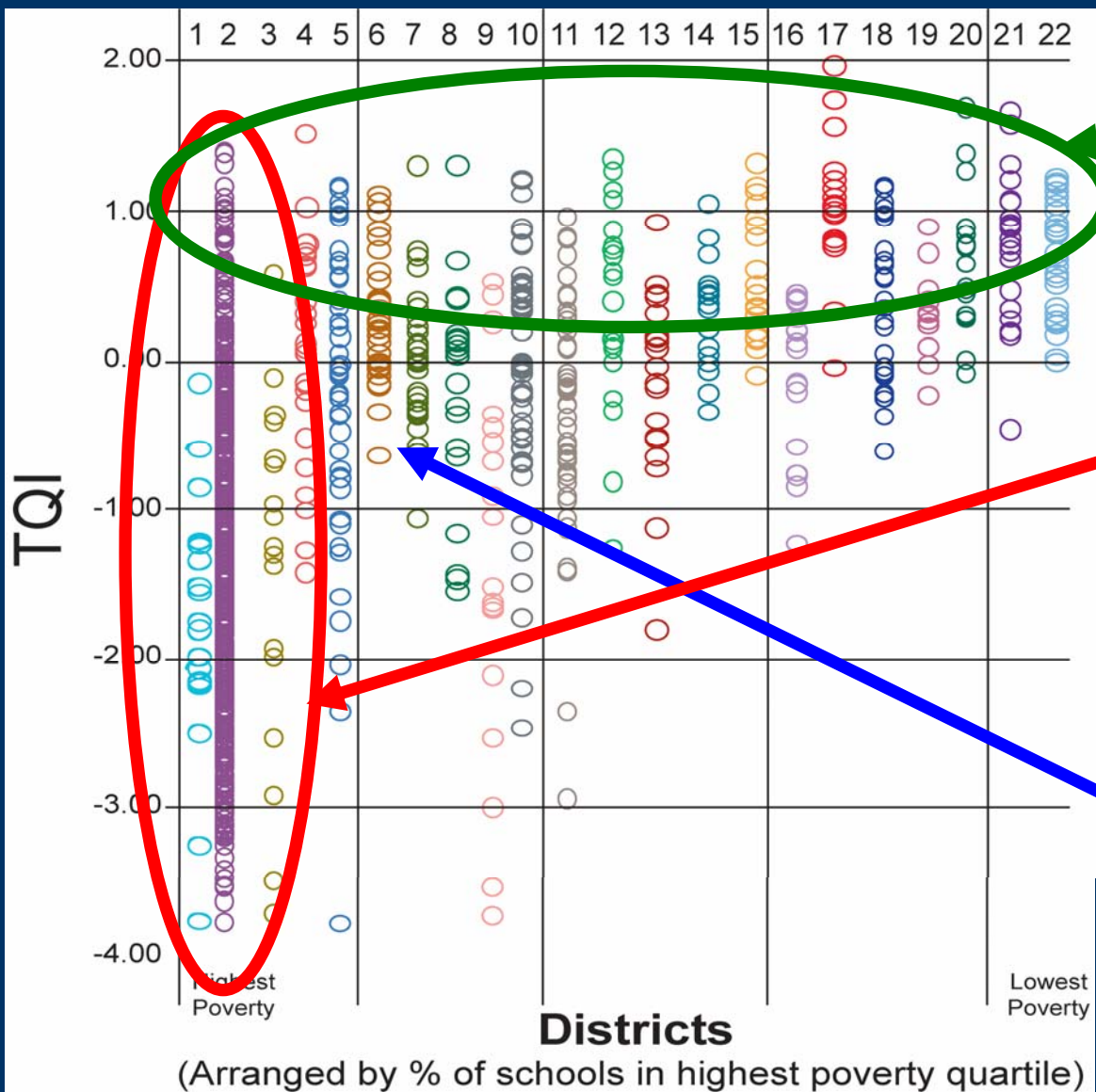


- *Differences between schools within the same district is the biggest contributor to variation in TQI scores—and it is not just our mega-district of Chicago that is driving this finding.*



Within-District School TQI Distribution

(districts with 10,000+ students, elementary and middle schools only)



- There are some above-average TQI schools in almost all districts.
- The “TQI spread” is generally larger in districts with higher concentrations of high-poverty schools –
- but some districts buck this trend.

Four outlier schools in districts 1 and 2 with TQIs lower than -4.00 are not shown on the chart.



**Is the TQI related to
school performance
outcomes?**



Statewide School Performance by TQI

Elementary Schools

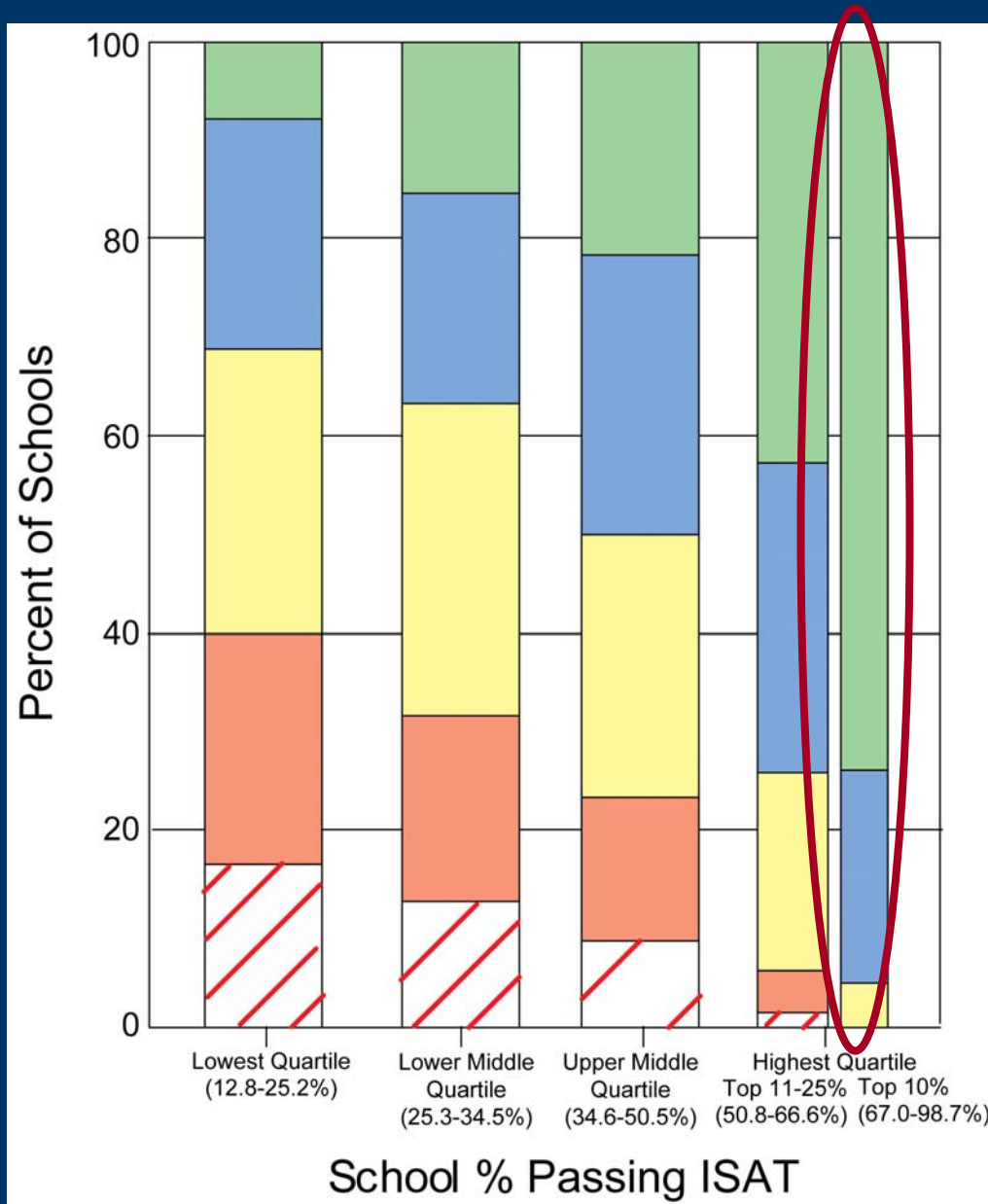
High Schools

TQI Quartile	Percent Meeting/Exceeding ISAT Standard		Percent Meeting/Exceeding PSAE Standard	
	Lowest Poverty (<10%) Low Minority (<50%) LL	Highest Poverty (≥ 90%) Highest Minority (≥ 99%) HH	Lowest Poverty (<10%) Low Minority (<50%) LL	Highest Poverty (≥ 50%) Highest Minority (≥ 90%) HH
Highest	84%	– (N=2)	66%	– (N=1)
Middle High	80%	– (N=2)	60%	25%
Middle Low	79%	37%	58%	18%
Lowest 11-25%	78%	30%	– (N=1)	10%
Lowest 10%	– (N=4)	30%	– (N=0)	11%
Point change	6	7	8	14
Percent change	8%	23%	14%	127%

- *TQI matters most for high-poverty/high-minority high schools.*



Distribution of Chicago-Quartile TQIs by Chicago Elementary School Achievement Quartile



- *Most top performing Chicago elementary schools have school TQIs in the top Chicago quartile – and nearly all have TQIs in the top half.*



Summary of Findings So Far

- TQI is distributed unequally by school percent poverty and percent minority.
- **Districts have an important role in teacher quality distribution.**
- TQI matters.
 - *And it matters most for high-poverty/high minority high schools.*





Priorities for Changing the Distribution of Teacher Quality

- Within-district hiring, retention and transfer policies are critical levers for the distribution of teacher quality.
- Rigorous program entry and training, and in-service content and pedagogical continuing education.
- Funding schools so that teachers have clean, safe and well-supplied educational environments in which to work.
- Bringing transformational building and district instructional leaders to low-performing schools.





College Readiness and the Illinois High School Class of 2002 – A brief introduction





The Data

- All 113,660 public high school students in the Illinois Class of 2002. All took ACT in 11th grade so we have scores and background information.
- National Student Clearinghouse enrollment data each year.
- Plan to follow the Class for six years. We now have the fourth year's data from NSC for AY 2005-2006.





Illinois College Readiness Index

	Self-Reported High School GPA			
	≤ 2.4	2.5-2.9	3.0-3.4	3.5-4.0
ACT < 20	Not/Least Ready	Minimally Ready	Somewhat Ready	
20-22	Minimally Ready	Somewhat Ready	More Ready	
23-25	Somewhat Ready	More Ready		Most Ready
26+		More Ready	Most Ready	



Distribution of the Class of 2002 by College Readiness

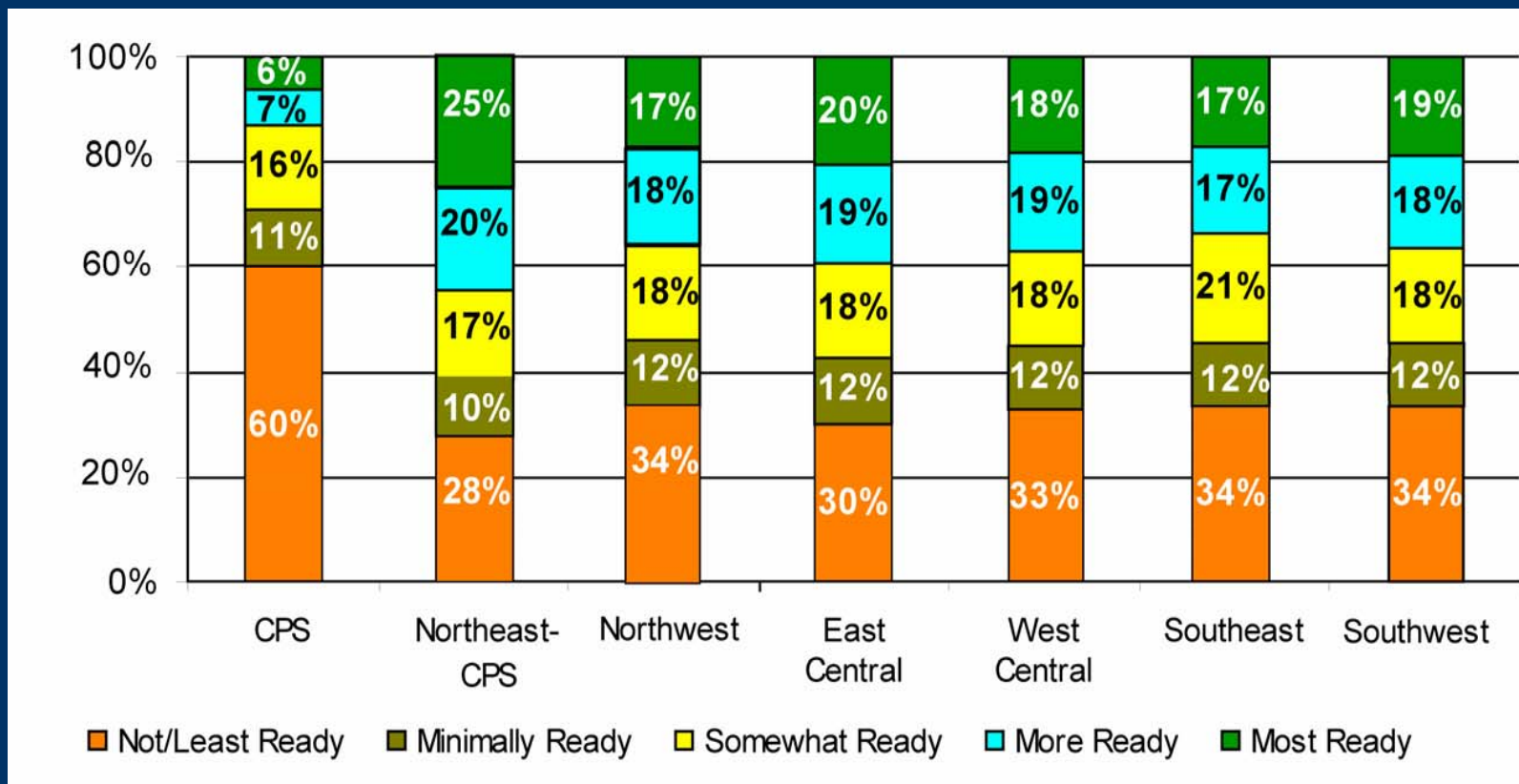
Distribution of the Class of 2002		Percentage Expecting Bachelor's Degree or More	
Not/Least Ready	34%	Not Ready	72%
Minimally Ready	11%	Partially Ready	84%
Somewhat Ready	17%		
More Ready	17%	College Ready	96%
Most Ready	20%		

- *About a third of the Class of 2002 are not ready for college, about a third are partially ready, and about a third are college ready.*
- *Majority expect to earn a bachelor's degree.*

- *Students from different family income and racial/ethnic groups are finishing high school with very different levels of college readiness.*



Regional Analysis of College Readiness



College readiness is an issue across the state—helps to generalize the issue.



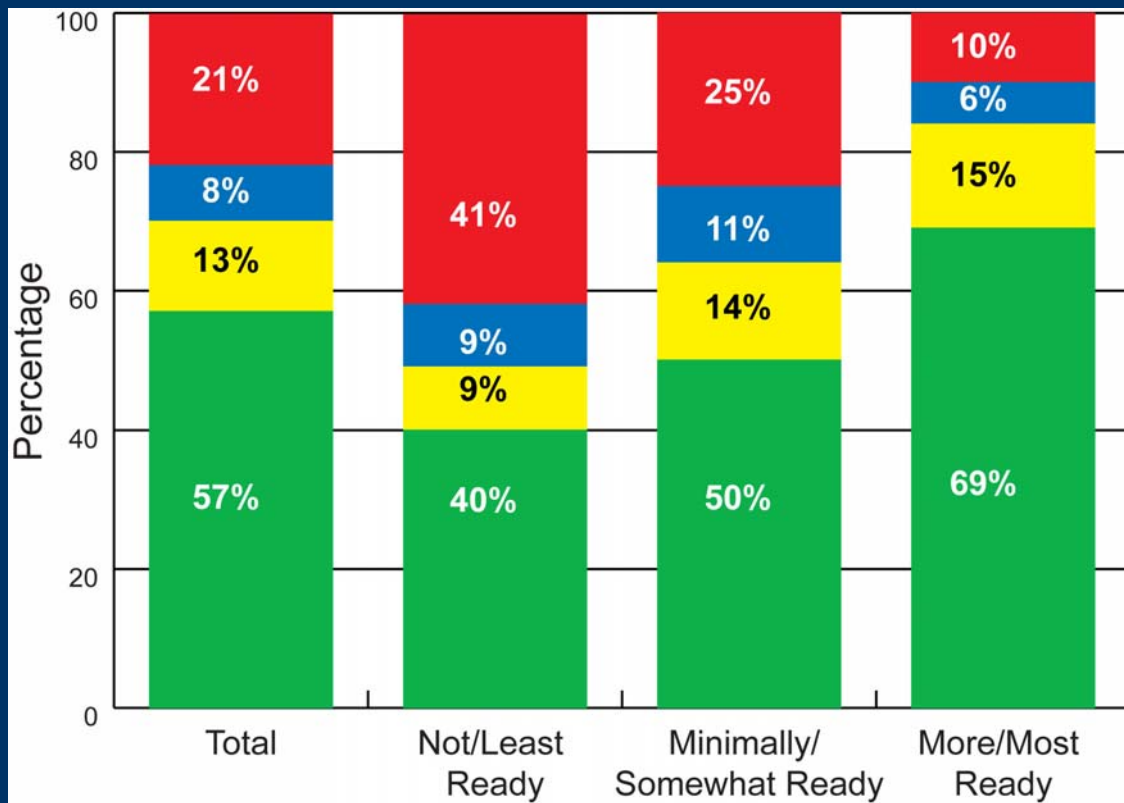
Going to College in Year 1 (2002-2003)

Readiness Index	% to College In 2002-03
Not/Least Ready	43%
Minimally Ready	58%
Somewhat Ready	69%
More Ready	79%
Most Ready	84%
Total	64%

- *College-going is strongly related to readiness.*
- *More than two in five not/least-ready students continue immediately into postsecondary education – fewer from low-income families, more from higher-income families.*



Third Year Status of Those Who Went to College in AY 2002-2003 by Readiness



- *Readiness continues to matter!*
- *And it is also important to track transfers.*





TQI and the Illinois High School Class of 2002





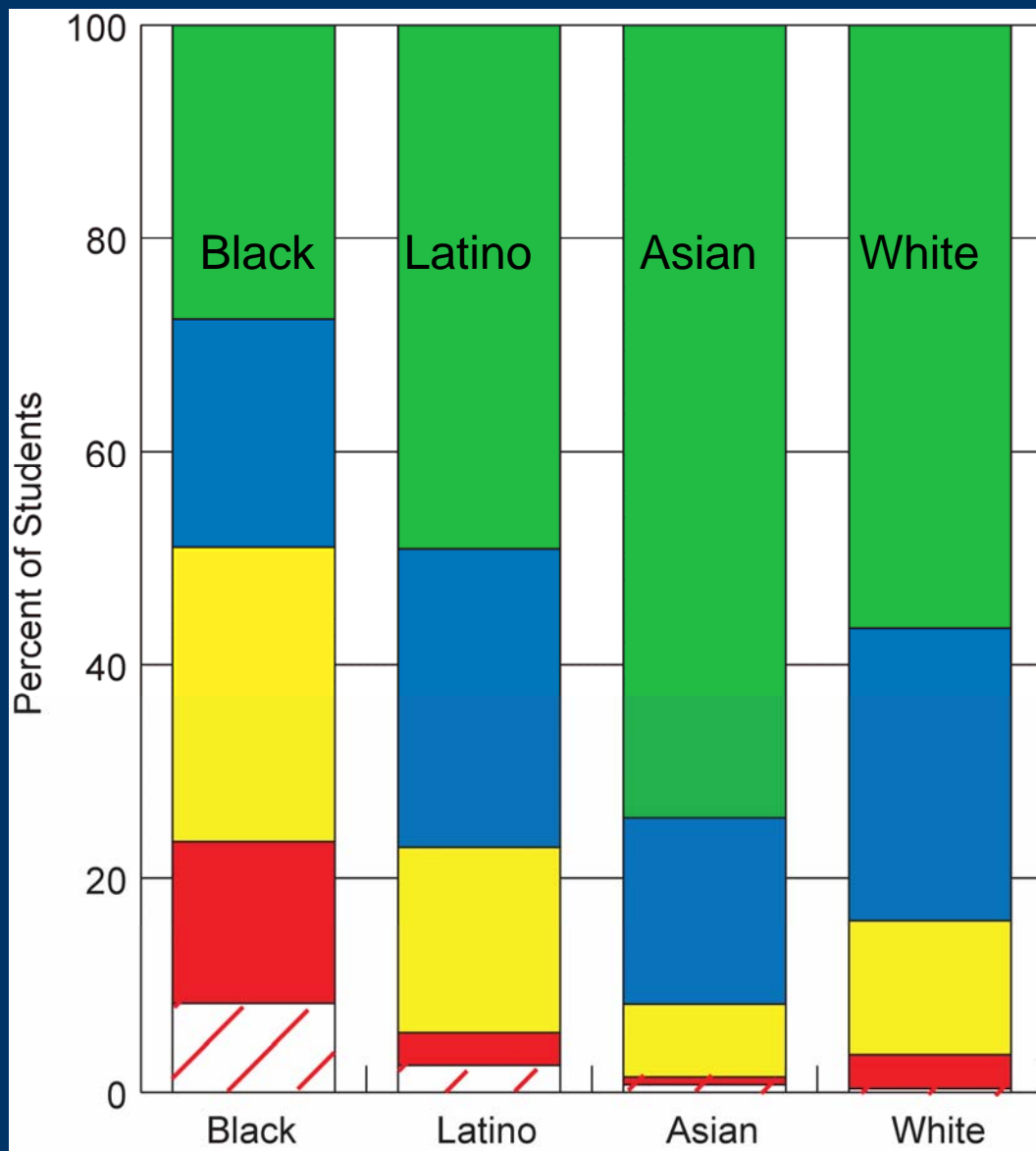
Access to High-School TQI for the Class of 2002 by Race/Ethnicity

	Lowest TQI Quartile		Lower Middle TQI Quartile	Upper Middle TQI Quartile	Highest TQI Quartile
	Lowest 10%	11-25%			
Black	24%	21%	27%	16%	12%
Latino	10%	13%	28%	27%	22%
Asian	1%	5%	13%	21%	59%
Native American	10%	12%	26%	26%	26%
White	1%	7%	20%	30%	41%
Total	6%	10%	21%	27%	36%

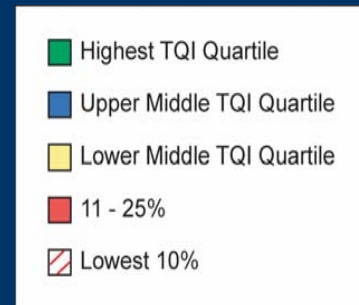
- **Students from different racial/ethnic backgrounds do not have equal access to high schools with high TQIs.**



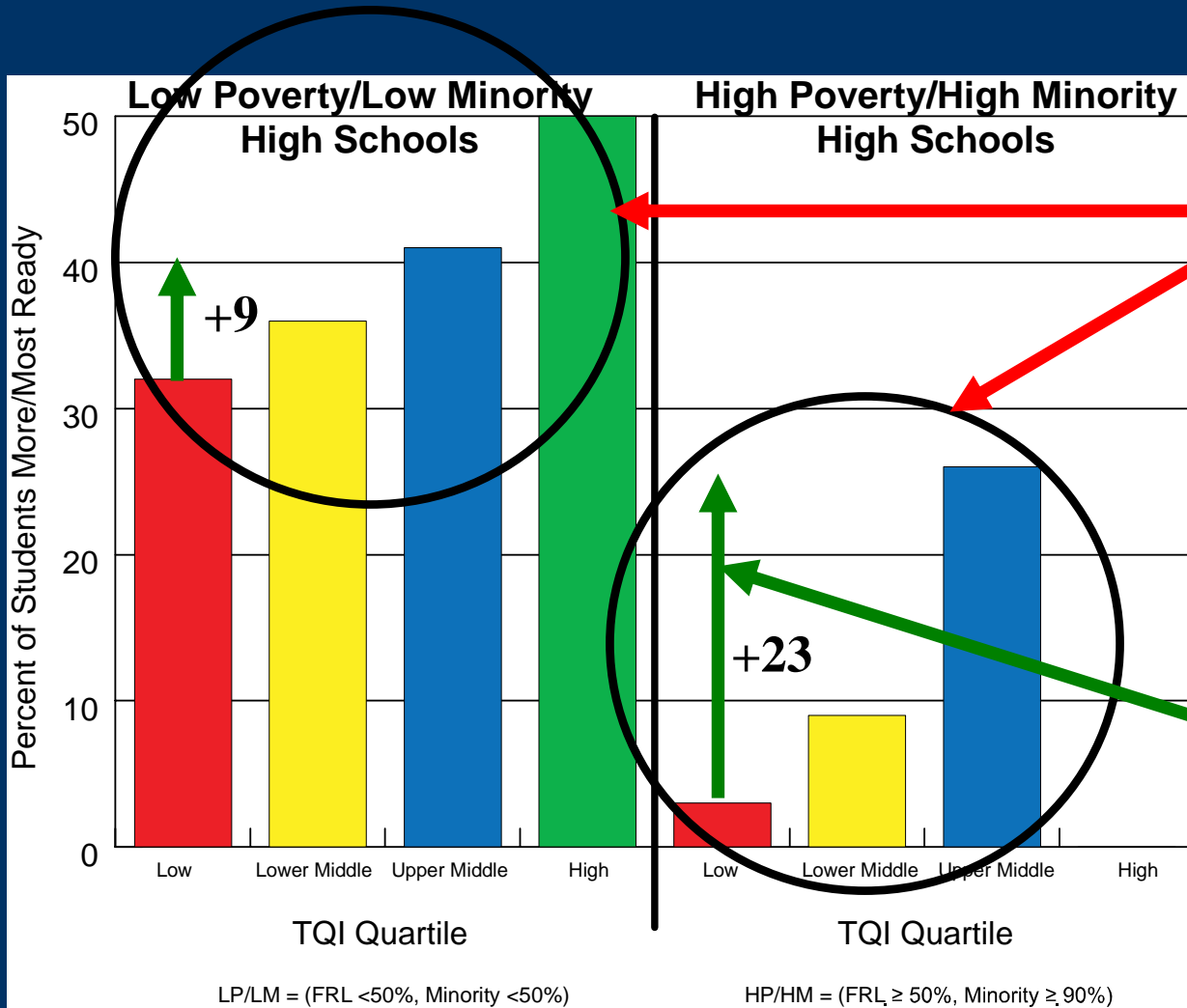
High-School TQI for Top Two Quartile Family-Income Students by Race/Ethnicity



- More than 20% of black students from higher-income families are still in lowest-TQI-quartile high schools.*



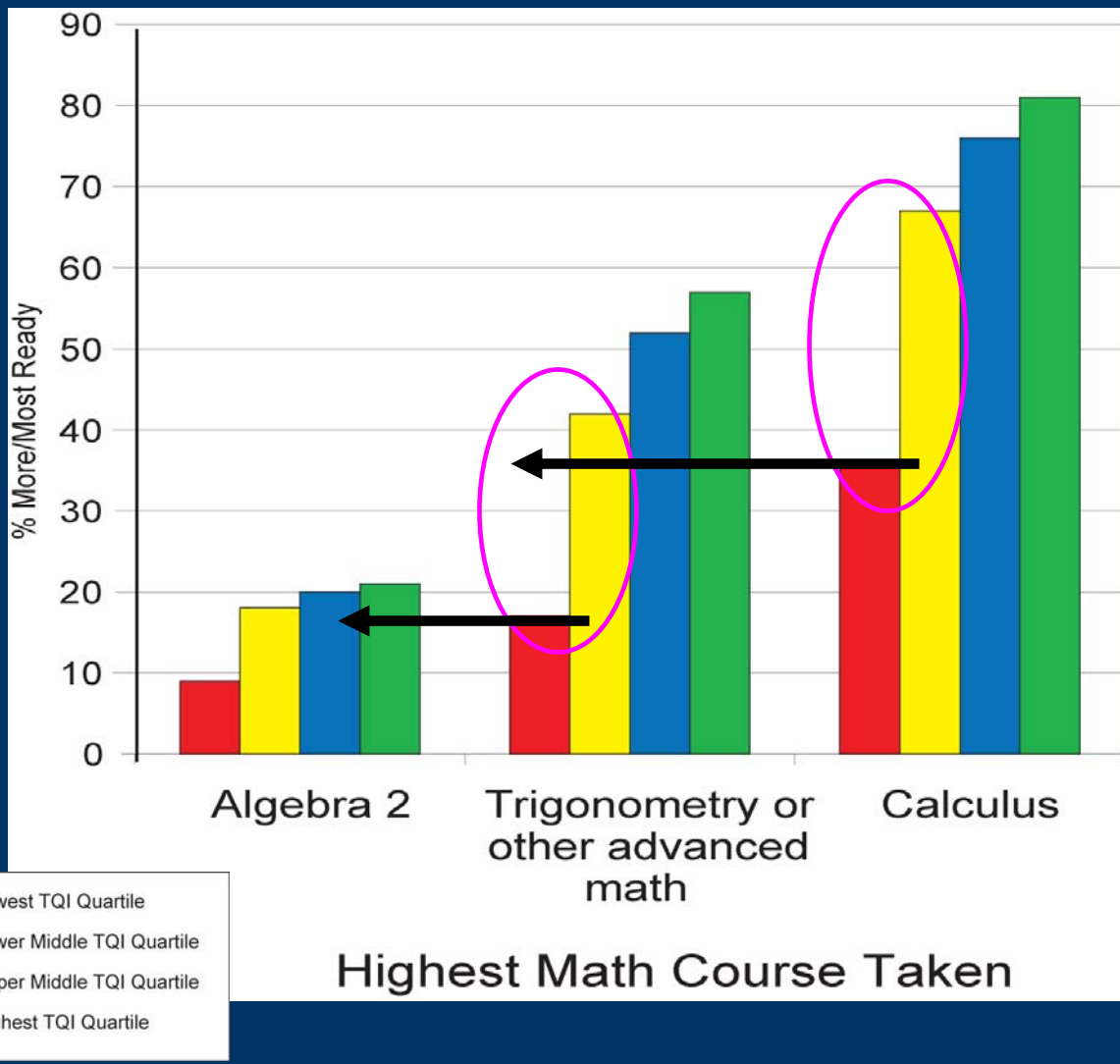
Linking school TQI to student college readiness



- *TQI is related to students' college readiness, regardless of school poverty and minority characteristics.*
- *TQI matters more for high schools serving mostly disadvantaged students.*



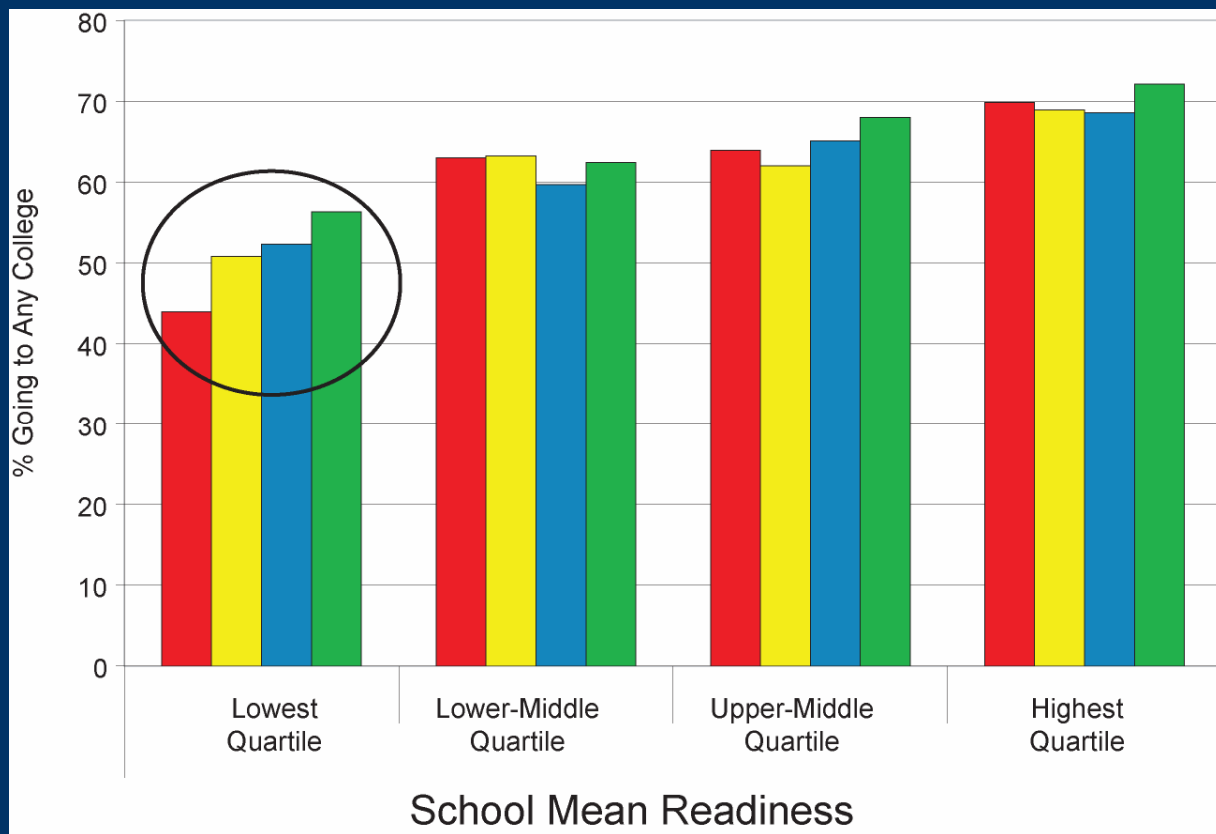
TQI, Highest Math Course, and College Readiness



- *College readiness is strongly related to math-taking AND to the school TQI in which the courses are taken.*
- *Taking higher-level math courses in TQI schools beyond the lowest quartile provides a greater readiness boost.*







TQI and College Going



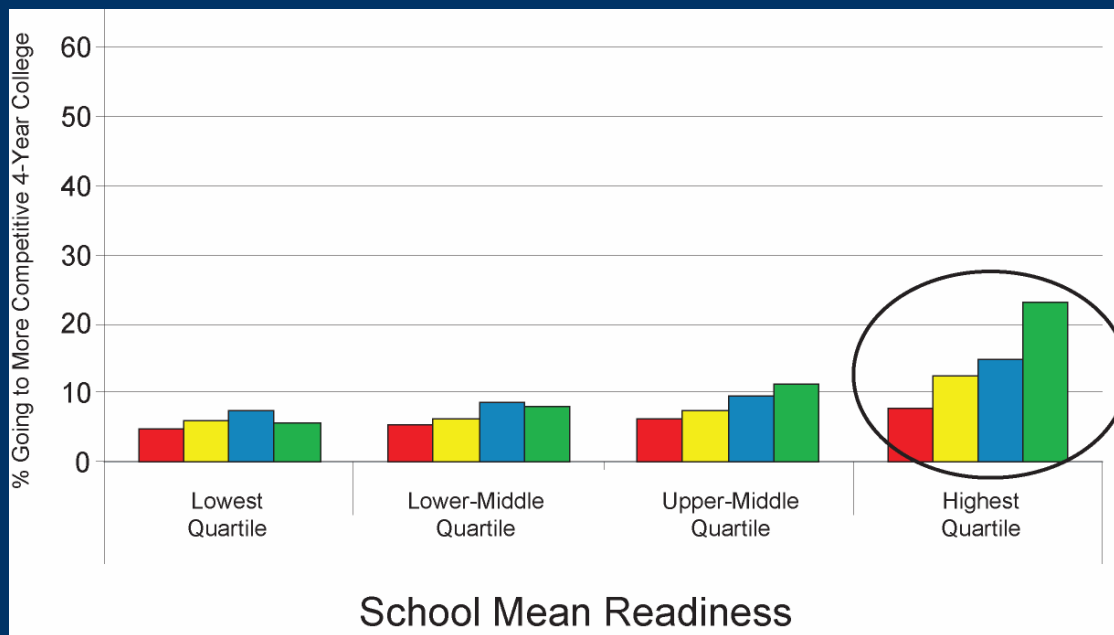
- In schools with the lowest overall college readiness, a higher TQI leads to more college-going.*

High School TQI Quartiles

 Lowest Quartile	 Lower-Middle Quartile	 Upper-Middle Quartile	 Highest Quartile
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TQI and College Choice: % Going to More Competitive 4-Year Institutions



- In schools with the highest overall college readiness, a higher TQI leads to more students attending more-competitive four-year colleges.*

High School TQI Quartiles

Lowest Quartile	Lower-Middle Quartile	Upper-Middle Quartile	Highest Quartile
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Key Observations

- **Academic preparedness** is the major critical component to college access.
- It is even more strongly related to the **type of institution attended, and to continuation.**
- Our findings on persistence provide a **very different (and more positive) picture** of college-retention than looking at individual college persistence rates.
- There is a strong relationship between **high-school TQI and student college readiness.**
 - Higher education has a strong vested interest in partnering to increase performance in K-12 schools.
 - Who become teachers, and how they are trained and supported in the profession must continue to be a focus of attention.





Contact us at:

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