



Why Data Systems Matter

IDIO Virtual Convening

October 19, 2020

Steve Tozer: U of IL Chicago



CENTER FOR
URBAN
EDUCATION
LEADERSHIP



Overview

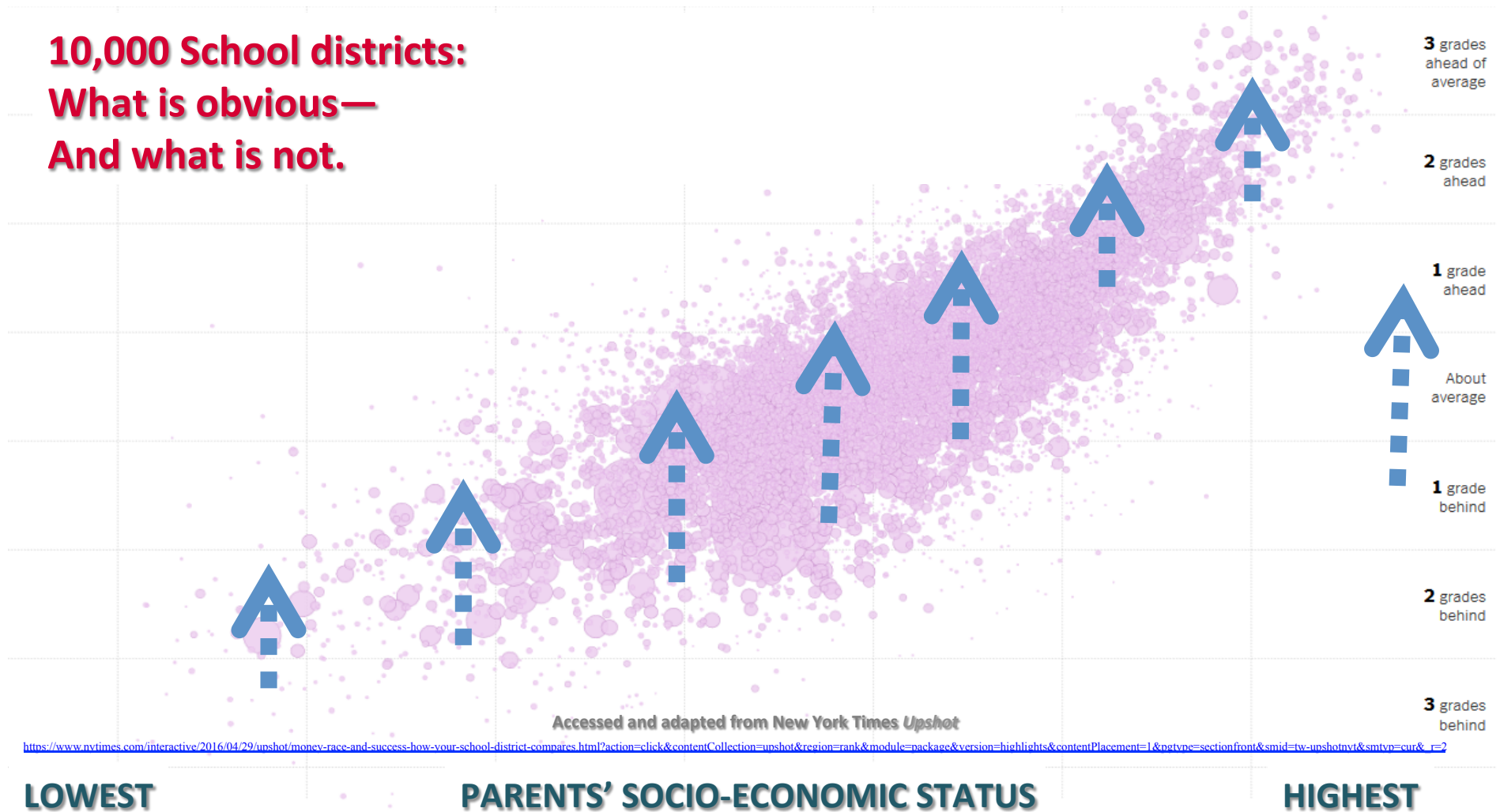
- Two stories of continuous improvement
 - The Chicago story: “from worst to first”
 - The UIC story: using data for continuous improvement
- Leading for continuous equity improvement: the importance of data
- Challenges in leading high-quality early childhood education
- Challenges in leading early intervention
- Aligning data systems: research, practice, and policy

The “freeze prompt”

- On-line presentations benefit from a “plan B” in the event that the presenter’s access to the web is interrupted.
- Should my presentation be interrupted by tech difficulties at some point, the chat room will open and you will be invited to enter a response to this prompt while I reconnect.

Identify in the chat room a specific problem or obstacle that you face, in your role, in using data effectively to improve educational outcomes.

**10,000 School districts:
What is obvious—
And what is not.**



Based on demographics alone, students in Charlotte-Mecklenburg, NC should be achieving at much lower levels than students in Simi Valley, CA

Charlotte-Mecklenburg Schools
+0.4 grades

Median Income: \$57K
8% Asian
42% Black
17% Latino
33% White

Simi Valley Unified
-0.6 grades

Median Income: \$91K
13% Asian
6% Black
25% Latino
56% White

3 grades
ahead of
average

2 grades
ahead

1 grade
ahead

About
average

1 grade
behind

2 grades
behind

3 grades
behind

Accessed and adapted from New York Times *Upshot*

https://www.nytimes.com/interactive/2016/04/29/upshot/money-race-and-success-how-your-school-district-compares.html?action=click&contentCollection=upshot®ion=rank&module=package&version=highlights&contentPlacement=1&pgtype=sectionfront&smid=tw-upshotnyt&smtyp=cur&_r=2

LOWEST

PARENTS' SOCIO-ECONOMIC STATUS

HIGHEST

The Chicago story: “from worst to first”

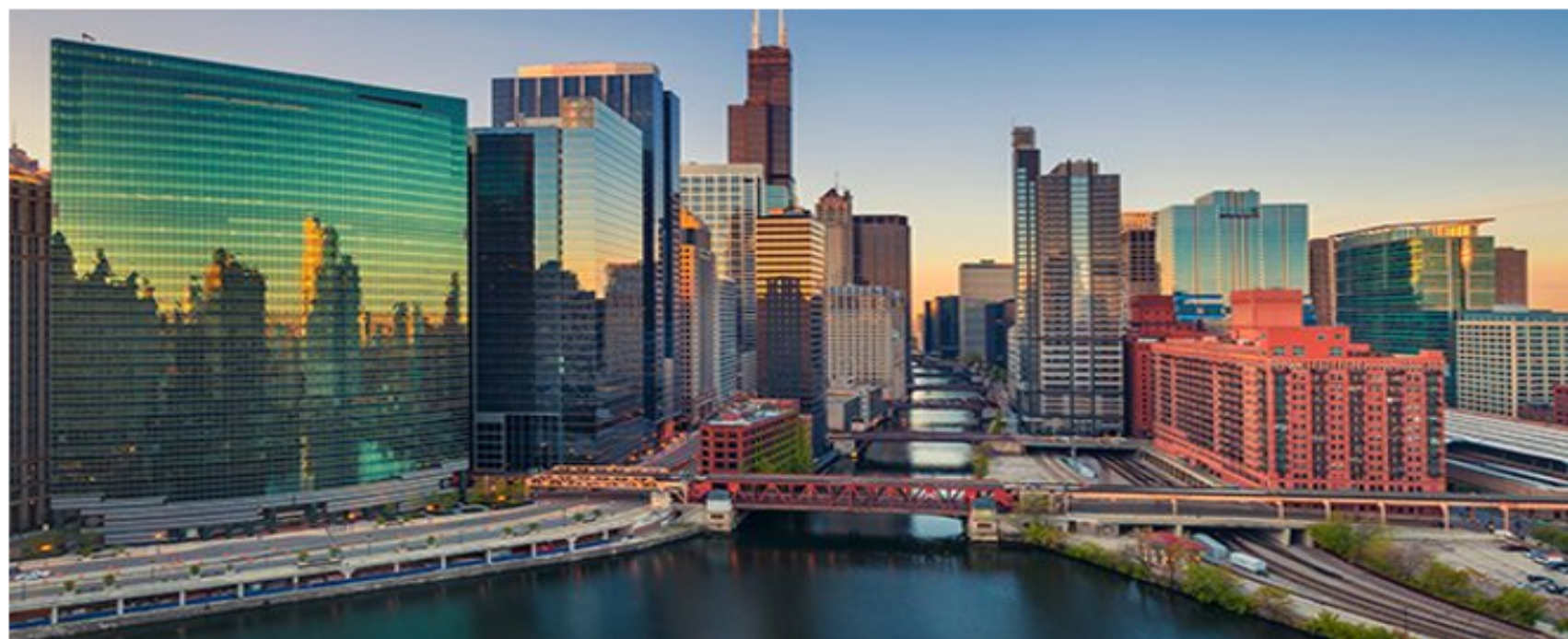
“... the worst school system in America.”

**--U.S. Secretary of Education William Bennett,
1987**



Chicago Schools Lead Country in Academic Growth, Study Finds

By Sarah D. Sparks Nov. 9, 2017



Exactly 30 years after then-Secretary of Education William J. Bennett labeled Chicago Public Schools the [worst in the nation](#), new research shows that [Windy City schools now lead the country in academic growth](#).

A new study by Stanford University researchers Sean Reardon and Rebecca Hinze-Pifer tracked reading and math test score growth among public school students from 2009 to 2014. Across racial groups, the researchers found that Chicago students learned significantly faster from grades 3 to 8 than did students in nearly all other U.S. districts—gaining about six years' worth of learning in five years.

2001 Grade 3

2001 ILxCPS v. CPS: Reading & Math

Grade 3

AFRICAN AMERICAN	READING				MATH			
	Female		Male		Female		Male	
	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
Free/Reduced Lunch ELIGIBLE	153	147	150	147	154	148	153	149
95% Confidence Interval	0.36	0.28	0.36	0.26	0.36	0.28	0.37	0.24
Combined Confidence Interval (+/-)	0.64		0.62		0.63		0.61	
Difference in Average Scale Scores	-5.36		-3.38		-5.78		-4.50	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
	156	154	153	150	157	154	156	151
95% Confidence Level	0.44	0.84	0.42	0.86	0.44	0.82	0.43	0.81
Combined Confidence Interval (+/-)	1.3		1.3		1.3		1.2	
Difference in Mean Scale Scores	-2.8		-3.0		-3.3		-4.3	
LATINO	READING				MATH			
	Female		Male		Female		Male	
	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
Free/Reduced Lunch ELIGIBLE	154	154	153	152	157	155	159	155
95% Confidence Interval	0.58	0.47	0.58	0.47	0.57	0.45	0.60	0.46
Combined Confidence Interval (+/-)	1.06		1.05		1.02		1.06	
Difference in Mean Scale Scores	-0.20		-1.28		-2.10		-3.72	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
	159	159	157	157	161	160	161	160
95% Confidence Level	0.56	1.43	0.53	1.35	0.55	1.42	0.54	1.35
Combined Confidence Interval (+/-)	1.99		1.88		1.97		1.89	
Difference in Mean Scale Scores	-0.11		-0.17		-0.69		-1.82	
WHITE	READING				MATH			
	Female		Male		Female		Male	
	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
Free/Reduced Lunch ELIGIBLE	159	158	157	156	161	160	161	160
95% Confidence Interval	0.33	1.06	0.33	1.04	0.33	1.07	0.33	1.09
Combined Confidence Interval (+/-)	1.39		1.37		1.39		1.42	
Difference in Mean Scale Scores	-0.80		-1.49		-0.88		-1.74	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
	167	168	165	165	169	169	170	169
95% Confidence Level	0.14	1.14	0.13	1.04	0.14	1.16	0.14	1.08
Combined Confidence Interval (+/-)	1.28		1.17		1.30		1.22	
Difference in Mean Scale Scores	0.59		-0.36		0.00		-0.73	

Pink= IL outperforms CPS

Tan= It's a draw

- Grade 3
- Af Am, Latino, White
- Reading & Math
- Boys & Girls
- Eligible and not eligible for FRL
- CPS behind in 13 of 24 cells, ahead in none,
- So no green cells
- Next slide: Gr. 3, 5, 8, still in 2001

2001 ILxCPS v. CPS: Reading & Math

Grade 3

Grade 5

Grade 8

AFRICAN AMERICAN	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Interval	0.36	0.28	0.36	0.26	0.36	0.28	0.37	0	0.37	0.26	0.39	0.28	0.38	0.25	0.42	0.28	0.36	0.25	0.39	0.28	0.44	0.31	0.49	0.33
Combined Confidence Interval (+/-)	0.64		0.62		0.63		0.61		0.64		0.67		0.63		0.69		0.60		0.67		0.76		0.82	
Difference in Average Scale Scores	-5.36		-3.38		-5.78		-4.50		-0.68		-0.88		-2.68		-3.28		2.35		1.73		1.00		0.75	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Level	0.44	0.84	0.42	0.86	0.44	0.82	0.43	0	0.43	0.88	0.43	0.86	0.45	0.91	0.46	0.85	0.35	0.67	0.37	0.69	0.47	0.90	0.49	0.88
Combined Confidence Interval (+/-)	1.3		1.3		1.3		1.2		1.3		1.3		1.4		1.3		1.0		1.1		1.4		1.4	
Difference in Mean Scale Scores	-2.8		-3.0		-3.3		-4.3		-0.5		-1.2		-2.4		-3.3		1.4		-0.5		0.7		-2.4	

LATINO	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Interval	0.58	0.47	0.58	0.47	0.57	0.45	0.60	0	0.47	0.34	0.46	0.36	0.49	0.34	0.51	0.38	0.47	0.32	0.47	0.34	0.59	0.40	0.60	0.43
Combined Confidence Interval (+/-)	1.06		1.05		1.02		1.06		0.81		0.82		0.83		0.89		0.78		0.81		0.99		1.04	
Difference in Mean Scale Scores	-0.20		-1.28		-2.10		-3.72		0.24		0.12		-1.78		-2.17		1.71		2.44		-0.11		0.56	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Level	0.56	1.43	0.53	1.35	0.55	1.42	0.54	1	0.53	1.30	0.52	1.32	0.54	1.39	0.56	1.40	0.43	1.12	0.45	1.20	0.56	1.44	0.60	1.54
Combined Confidence Interval (+/-)	1.99		1.88		1.97		1.89		1.83		1.84		1.93		1.95		1.55		1.65		2.00		2.14	
Difference in Mean Scale Scores	-0.11		-0.17		-0.69		-1.82		1.57		0.20		-1.65		-2.24		1.88		1.17		-0.09		-1.50	

WHITE	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Interval	0.33	1.06	0.33	1.04	0.33	1.07	0.33	1	0.36	0.97	0.36	1.00	0.36	1.01	0.38	1.09	0.35	0.83	0.37	0.84	0.47	1.12	0.49	1.17
Combined Confidence Interval (+/-)	1.39		1.37		1.39		1.42		1.33		1.37		1.38		1.47		1.18		1.21		1.59		1.66	
Difference in Mean Scale Scores	-0.80		-1.49		-0.88		-1.74		0.27		-1.02		-0.41		-2.24		1.77		1.47		0.48		1.05	
Free/Reduced Lunch NOT ELIGIBLE	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI	ILLxCHI	CHI
95% Confidence Level	0.14	1.14	0.13	1.04	0.14	1.16	0.14	1	0.14	1.12	0.14	1.14	0.15	1.20	0.15	1.24	0.12	1.01	0.12	0.96	0.16	1.36	0.18	1.36
Combined Confidence Interval (+/-)	1.28		1.17		1.30		1.22		1.26		1.29		1.35		1.39		1.13		1.09		1.52		1.54	
Difference in Mean Scale Scores	0.59		-0.36		0.00		-0.73		1.31		0.29		-1.17		-2.15		3.08		0.74		0.31		-0.44	

Of 48 cells
grades 3-5,
CPS behind
in 24,
ahead in 1
(green).

Of 24 cells
in grade 8,
CPS ahead
in 10 cells,
behind in
1.

2012: ILxCPs Vs. CPs--Reading & Math

Grade 3

Grade 5

Grade 8

In 2012, of
72 cells in
grades 3, 5,
8, CPs
ahead in 62
cells,
behind in
none.

AFRICAN AMERICAN	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Interval	221	221	214	214	225	227	222	224	221	221	214	214	225	227	222	224	242	246	235	239	259	264	255	260
Combined Confidence Interval (+/-)	0.58	0.62	0.58	0.65	0.60	0.66	0.62	0.68	0.58	0.62	0.58	0.65	0.60	0.66	0.62	0.68	0.40	0.49	0.43	0.51	0.50	0.64	0.53	0.67
Difference in Average Scale Scores	1.20		1.23		1.26		1.29		1.20		1.23		1.26		1.29		0.88		0.94		1.14		1.20	
	-0.44		-0.55		2.56		1.66		-0.44		-0.55		2.56		1.66		3.83		4.71		5.14		5.56	
Free/Reduced Lunch NOT ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Level	233	241	224	232	237	246	233	242	233	241	224	232	237	246	233	242	251	259	243	252	270	279	266	274
Combined Confidence Interval (+/-)	1.16	2.73	1.13	2.68	1.28	2.92	1.28	3.15	1.16	2.73	1.13	2.68	1.28	2.92	1.28	3.15	0.65	1.80	0.64	1.98	0.89	2.70	0.91	2.66
Difference in Mean Scale Scores	3.89		3.81		4.20		4.43		3.89		3.81		4.20		4.43		2.45		2.62		3.59		3.57	
	8.53		7.60		9.24		9.42		8.53		7.60		9.24		9.42		8.69		8.76		8.84		7.77	

LATINO	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Interval	223	224	218	219	231	233	231	233	223	224	218	219	231	233	231	233	245	250	241	244	265	271	264	269
Combined Confidence Interval (+/-)	0.47	0.62	0.48	0.61	0.50	0.65	0.52	0.67	0.47	0.62	0.48	0.61	0.50	0.65	0.52	0.67	0.40	0.49	0.43	0.51	0.50	0.64	0.53	0.67
Difference in Mean Scale Scores	1.09		1.09		1.16		1.19		1.09		1.09		1.16		1.19		0.88		0.94		1.14		1.20	
	0.39		0.78		1.70		1.82		0.39		0.78		1.70		1.82		4.38		3.08		5.74		4.69	
Free/Reduced Lunch NOT ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Level	236	244	230	237	243	249	242	251	236	244	230	237	243	249	242	251	254	262	249	258	275	285	274	285
Combined Confidence Interval (+/-)	0.85	2.71	0.82	2.53	0.96	2.91	0.98	2.81	0.85	2.71	0.82	2.53	0.96	2.91	0.98	2.81	0.65	1.80	0.64	1.98	0.89	2.70	0.91	2.66
Difference in Mean Scale Scores	3.56		3.35		3.87		3.79		3.56		3.35		3.87		3.79		2.45		2.62		3.59		3.57	
	7.98		7.62		5.84		9.64		7.98		7.62		5.84		9.64		8.08		9.09		9.91		10.80	

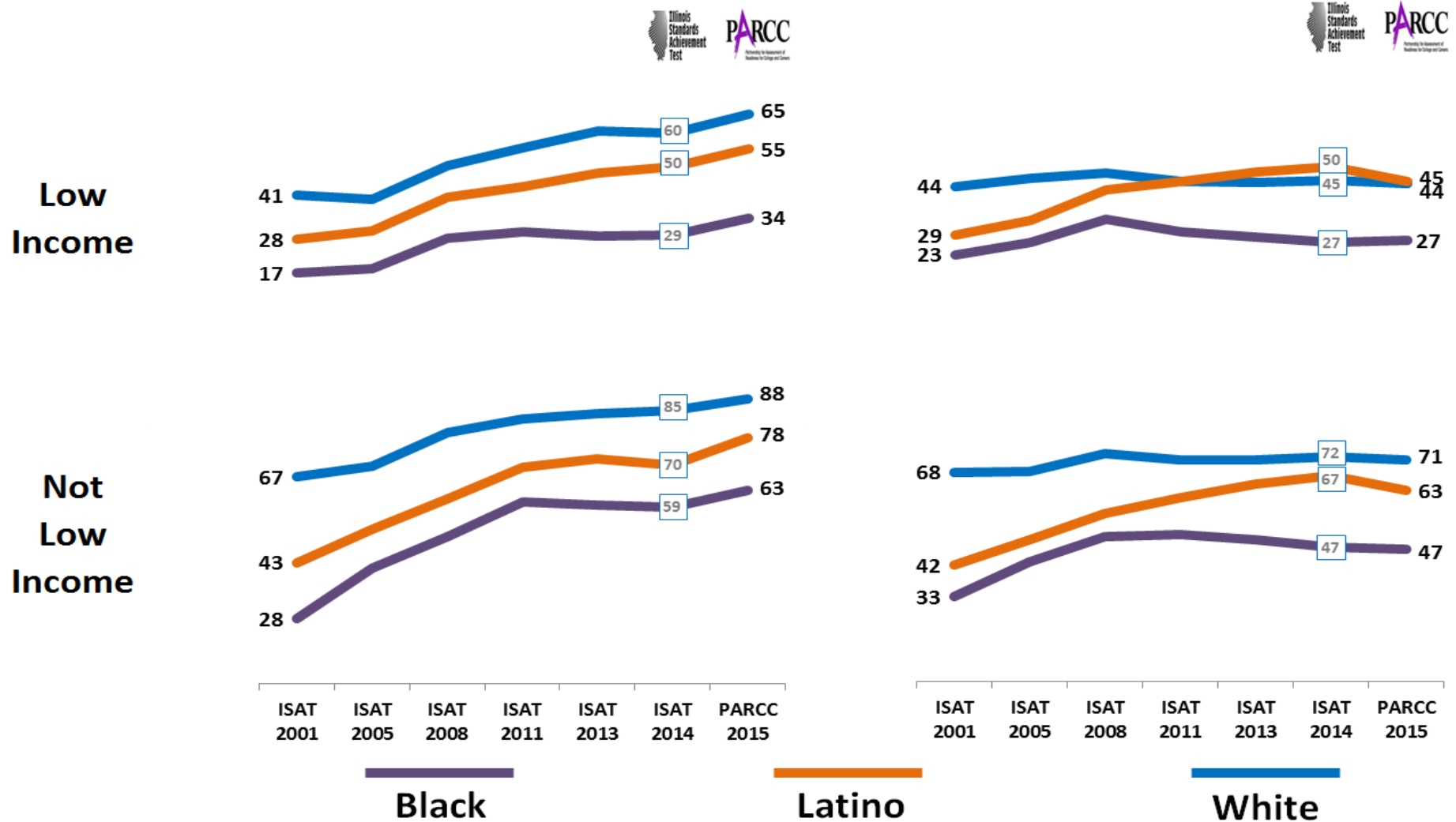
WHITE	READING				MATH				READING				MATH				READING				MATH			
	Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male	
Free/Reduced Lunch ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Interval	231	236	226	227	236	244	237	243	231	236	226	227	236	244	237	243	249	259	243	250	268	284	267	277
Combined Confidence Interval (+/-)	0.46	2.58	0.46	2.16	0.50	2.53	0.51	2.49	0.46	2.58	0.46	2.16	0.50	2.53	0.51	2.49	0.38	1.89	0.43	1.78	0.48	2.58	0.53	2.40
Difference in Mean Scale Scores	3.04		2.62		3.03		3.00		3.04		2.62		3.03		3.00		2.27		2.21		3.06		2.94	
	5.41		1.86		7.63		6.14		5.41		1.86		7.63		6.14		10.46		7.11		15.52		9.61	
Free/Reduced Lunch NOT ELIGIBLE	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI	ILxCHI	CHI
95% Confidence Level	248	256	241	250	256	265	256	266	248	256	241	250	256	265	256	266	262	273	256	266	288	303	287	298
Combined Confidence Interval (+/-)	0.29	2.21	0.27	2.02	0.34	2.44	0.35	2.39	0.29	2.21	0.27	2.02	0.34	2.44	0.35	2.39	0.23	1.84	0.23	1.88	0.32	2.58	0.34	2.72
Difference in Mean Scale Scores	2.50		2.29		2.78		2.74		2.50		2.29		2.78		2.74		2.07		2.11		2.91		3.06	
	8.64		8.92		9.73		10.23		8.64		8.92		9.73		10.23		10.49		9.26		15.07		11.46	

3rd Grade Reading 2001-15

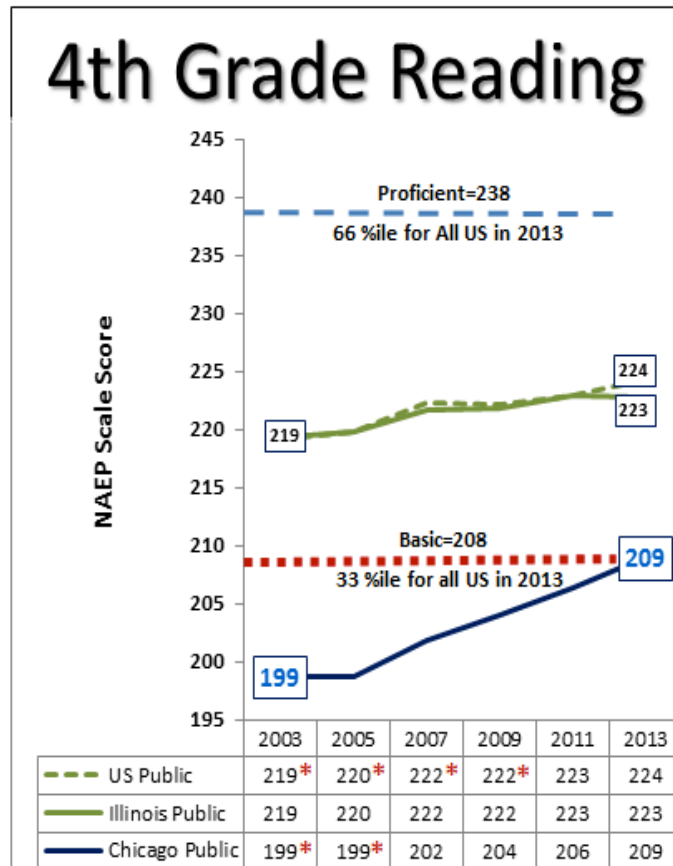
Percent Scoring At or Above Statewide Medians

City of Chicago

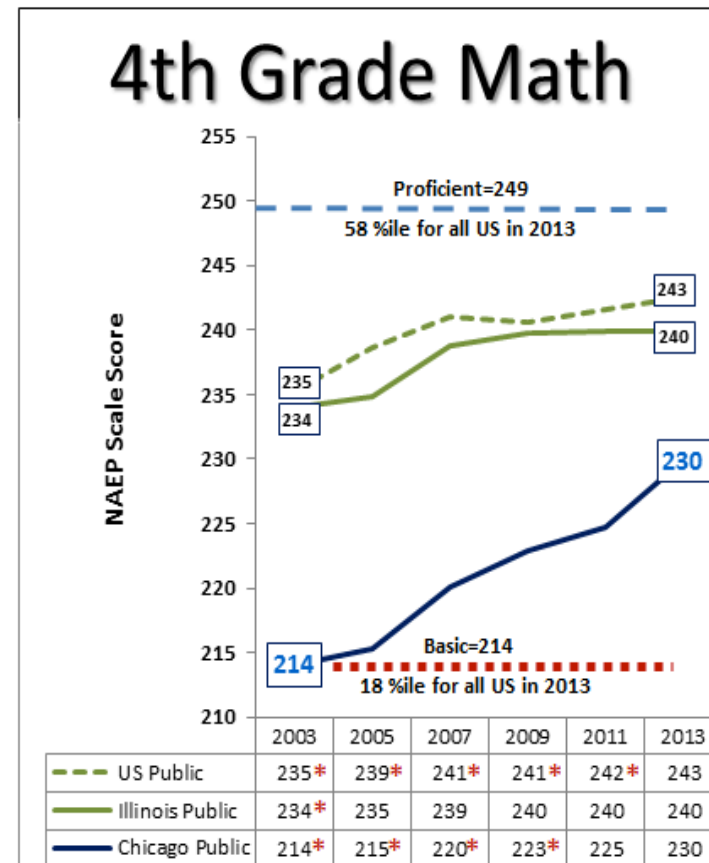
Rest of Illinois



Since 2007 Chicago Has Accounted for Almost All Statewide NAEP Gains



* Statistically different than 2013 scale score [$p < 0.05$]



* Statistically different than 2013 scale score [$p < 0.05$]

Two Findings from the Reardon Study

“First, test scores improve from third to eighth grade in Chicago much faster than in most districts in the U.S. And second . . .”

(Reardon & Hinze-Pifer, 2017, Stanford Center for Education Policy Analysis: Test Score Growth among Public School Students in Chicago, 2009-2014)



And Second . . .

Students in recent cohorts have higher math and ELA skills than third-graders in earlier cohorts, perhaps because of improvements in the quality of early elementary grade schooling or increased school readiness and skills when children enter kindergarten.

(Reardon & Hinze-Pifer, 2017, Stanford Center for Education Policy Analysis: Test Score Growth among Public School Students in Chicago, 2009-2014)

“The School is the Unit of Change”

1996: New state law for CPS Principal Eligibility leads to “CPS Principal Competencies” and CPS eligibility

2000: “and the principal is the leader of that change”

2001-2002: CPS partnerships with UIC, New Leaders to prepare principals able to use data to improve learning outcomes



The University of Illinois Chicago story

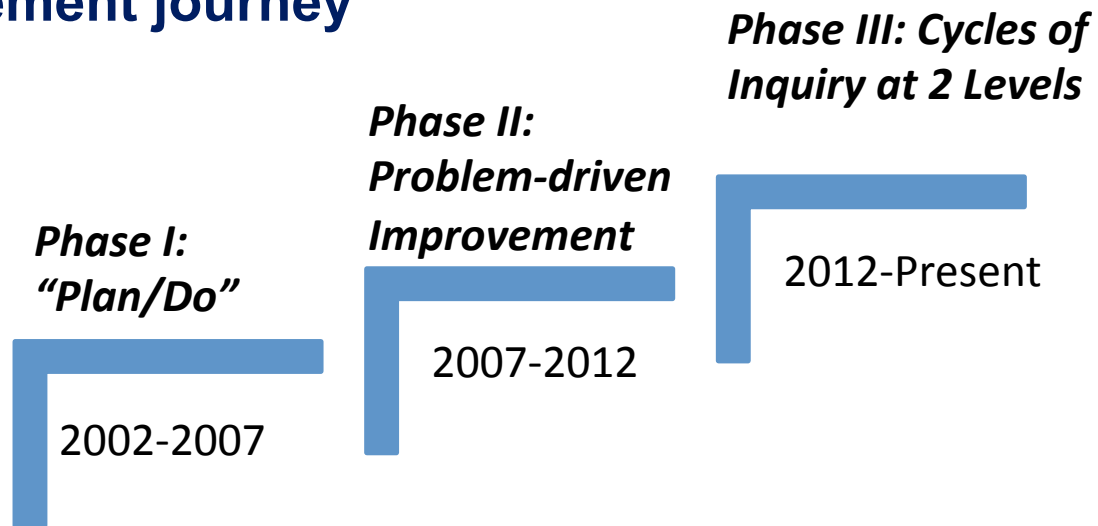
Program and principals learning to use data for continuous improvement





CENTER FOR
URBAN
EDUCATION
LEADERSHIP

University of Illinois Chicago's 18-year continuous improvement journey



Starting points: Four organizing principles

Primary outcomes:
PreK-12 student
learning

Partnership with
Chicago Public
Schools

Continuous
improvement for
school leaders

Data on progress
and performance



UIC program completers placed as school leaders since 2003

- **94% (UIC Principals & APs)**
- **70% (UIC Principals)**
- **15% (Illinois avg. “yield”)**



MAKING GOOD ON THE PROMISE OF PUBLIC EDUCATION

Continuous Improvement/Encouraging results

- Improved school performance on CPS indicators
- 110 current CPS leaders at school & district level are UIC program grads: CEO, Network Chiefs, Chiefs of ECE and Language & Culture, Principals, APs.
- National recognition: Council of Great City Schools, UCEA, Bush Institute, PBS, U.S. News, etc.



Cycles of Inquiry Reveal New Equity Challenges

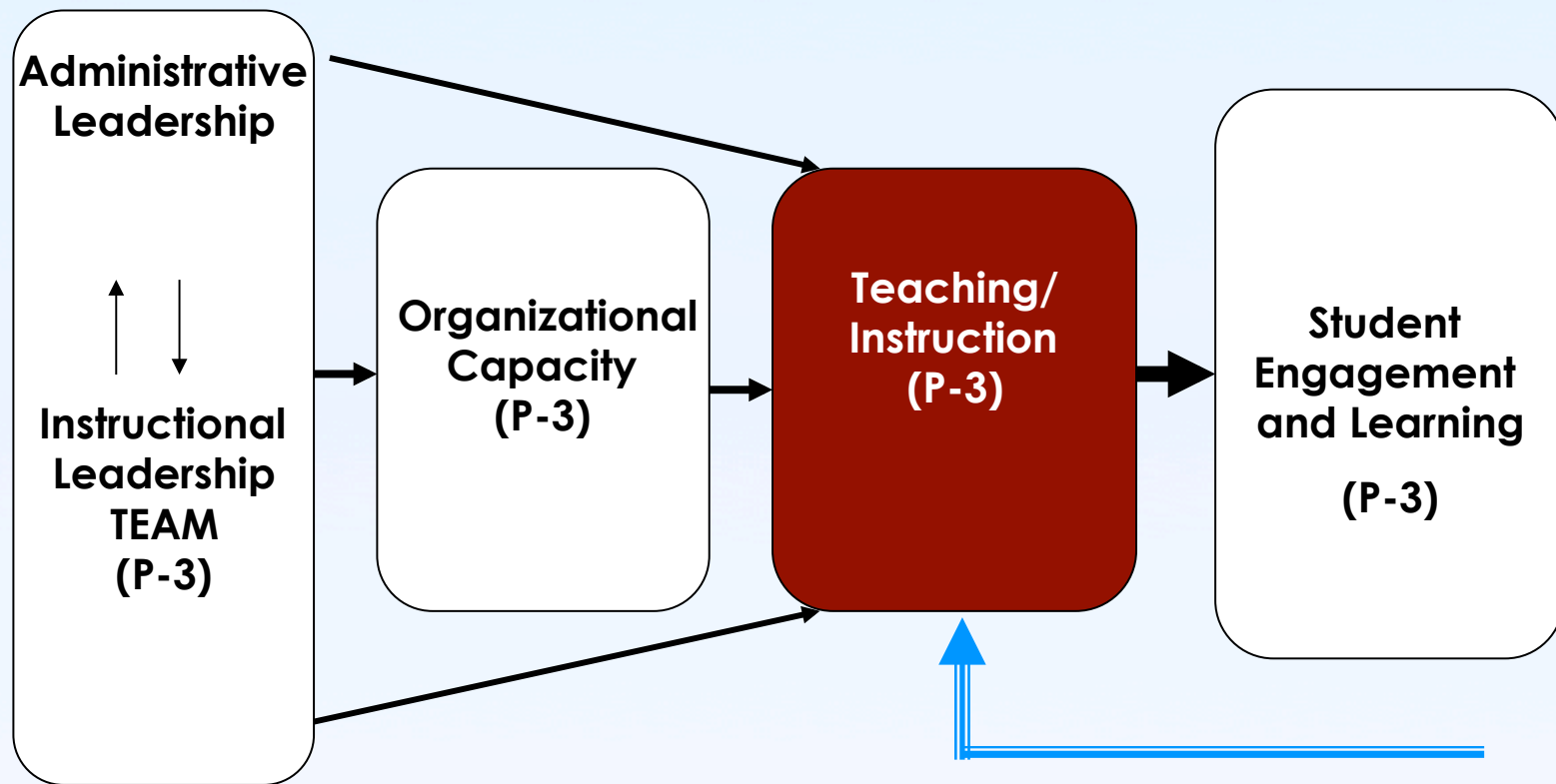
- In CPS (Chicago Public Schools), most high-poverty/high minority schools are improving
- But not at the intersection of poverty, race, and student “churn” (mobility & attendance)
- High-churn schools in CPS lag 1.5 grade levels behind stable enrollment CPS schools by 3rd grade in math and ELA
- Yet not so for 15% of these schools: why not?

How do school/center leaders improve learning outcomes?

- **Leadership challenge:** organizing a school/center to support adult and student learning at scale . . .
- Starting with organizing for P-3 learning
- Using cycles of inquiry to address identified problems of practice
- Using data so teachers are the “diagnosers,” not the problem to be diagnosed



Within-school Improvement of Student Learning (explicit theory of impact)



A 3-part formula (Leithwood 2004)

- **Vision:** can you create a shared vision of P-3 education that everyone in your school community understands?
- **Systems:** Are you putting in place the org capacity—the daily and weekly routines, including routine examination of data, that will help people achieve that P-3 vision?
- **People:** Are you giving people the opportunity to learn how to execute those systems? (Are you developing your talent?)



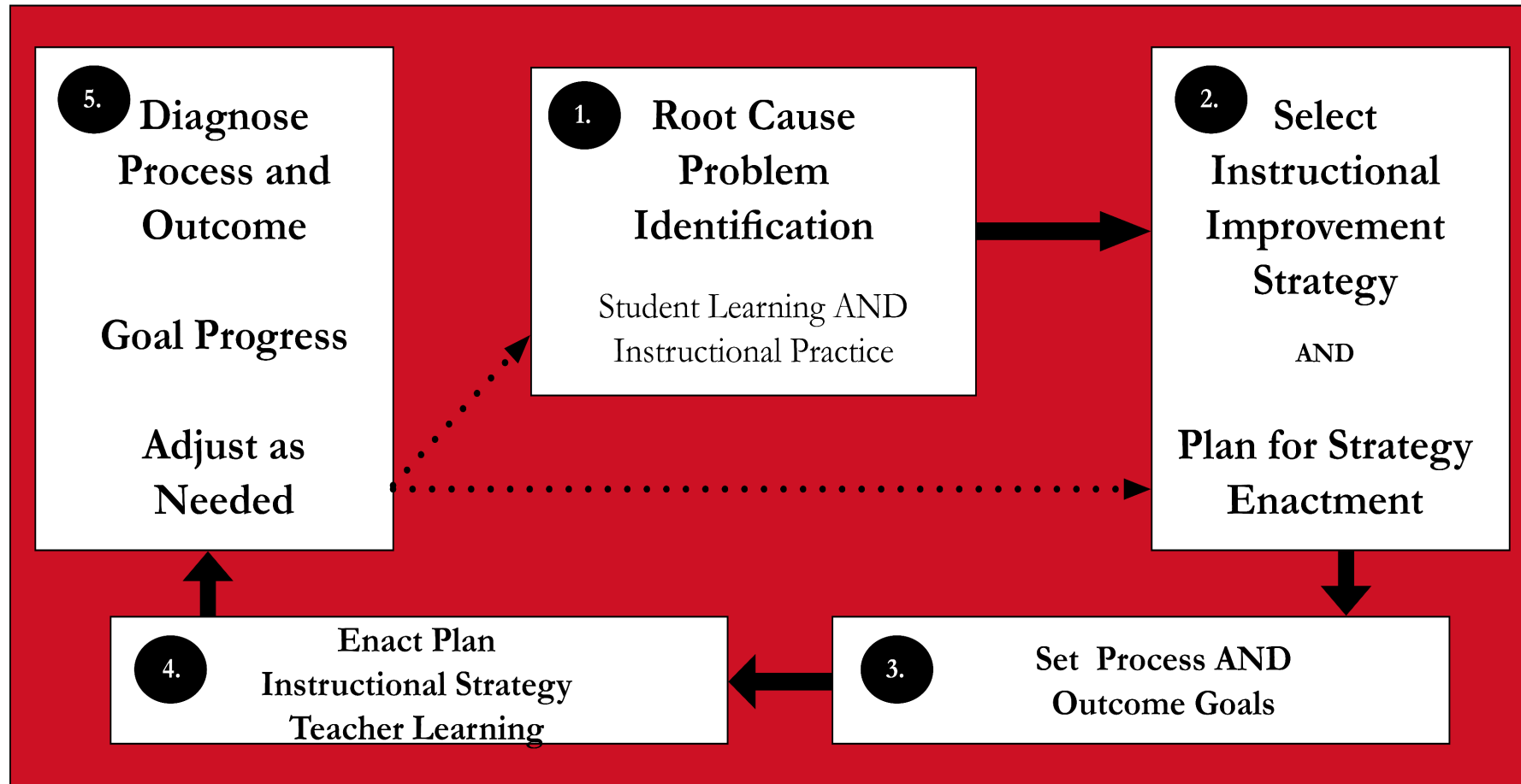
Using data in cycles of inquiry

At UIC, Principals learn to use cycles of inquiry within their schools to identify problems of practice and improve performance (vision, systems, and people)--collaboratively
(Cosner, Tozer, et al 2015)

Leading School Improvement

Cycles of Inquiry for Finding and Solving Problems

Five Step Process



Challenges in leading high-quality early childhood education

- Variability of delivery systems
- Often under-prepared workforce
- Principals or center leaders without strong ECE backgrounds
- An underdeveloped profession: weak alignment of research, practice, and policy
- Funding: national, state, and local

Leadership on Problems of Equity Practice in Early Childhood Education

- Professional standards in ECE as a proxy for research and best practice (e.g., NAEYC, CEC/DEC)
- Using standards for data-based continuous improvement conversations re: families, teaching practices, evidence-based assessment, developmental outcomes, etc.
- Professional standards as focus of collaborative identification of problems of practice

NAESP Leading P-3 Learning Communities (2014)

- **Comp 1: Embrace the PK-3 Early Learning Continuum**
- **Comp 2: Ensure developmentally appropriate teaching**
- **Comp 3: Provide personalized, blended learning environments**
- **Comp 4: Use Multiple Measures To Guide Growth in Learning**
- **Comp 5: Build Professional Capacity Across the Learning Community**
- **Comp 6: Make your school a hub of P-3 learning for families and communities**

(2021 Revision of these standards coming soon)

Challenges in leading early intervention

- **In addition to problems of leading ECE more generally**
- Beyond professional standards in Early Childhood Intervention: Practice Based Evidence developments since 1986 (Bagnato, et al. 2011)
 1. Authentic assessment
 2. Curriculum based assessment
 3. Functional content and objectives
 4. Curriculum alignment with early learning standards & outcomes
 5. Individually aligned instructional targets in inclusive, natural environments

Aligning data systems: research, practice, and policy

- R, P, and P: well-aligned in a mature field
- Not so in fields of school leadership, early childhood education, and early intervention
- The intersection of leadership, ECE, and EI presents data challenges at every level: individual student assessment; classroom practice; school/center data use; local/state data systems, etc.



MAKING **GOOD** ON THE PROMISE OF **PUBLIC EDUCATION**

Leadership as lever for equity change

- Leaders at every level of policy and practice need data to lead **processes of informed problem-solving**
- Key: Learning to use processes of continuous improvement for **collaborative** problem-ID and problem-solving
- The most valuable current web resource: Carnegie Foundation for Advancement of Teaching
- Bryk, Gomez, et al (2015): *Learning to Improve—How America's Schools Can Get Better at Getting Better*

Prompt for Chat Q & A

- Please use the chat board to enter any question that you would like to see addressed in the Q and A period
- If you don't have a question, we invite you to respond to the following question in no more than three sentences:

To what extent does your school, center, or organizational unit currently use data in cycles of inquiry to focus on specific problems of practice for continuous improvement? Explain.