

Meet Stimulus Funds' Research Requirements with Confidence

January 20, 2010



Welcome

Joe Townsend, Research Manager



- Empirical Education Intro: focus is evaluations and research design
- ARRA initiatives:
 - Race to the Top (R2T)
 - Enhancing Education Through Technology (EdTech)
 - Investing in Innovation (i3)
 - Statewide Longitudinal Data Systems (SLDS)
 - Title I School Improvement Grant (Title I SIG)
- Agenda

Agenda

- Welcome and Introduction
- Emerging ED view of research
- Basic themes of the Guidelines
- Specific example: ITS research design
- Recap and Next Steps
- Q & A

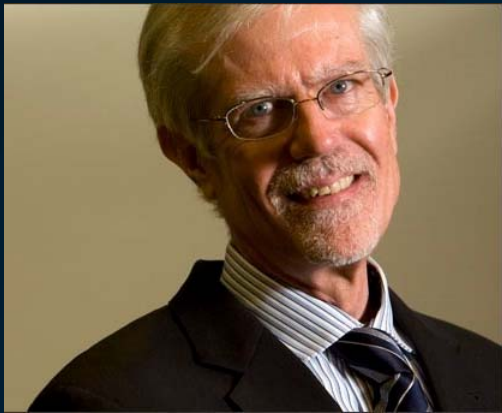
Emerging ED View of Research

Denis Newman, President



New model for research and evaluation emerging from the new US Department of Education:

OLD	NEW
Educators are consumers of research	Educators are producers of research
Methods are limited to randomized control trials (similar to medical research)	Methods include comparison studies that are more readily implemented by school systems
Focus is on research design	Equal focus on design and relevance
ED gives contracts to established researchers	ED builds capacity for research among educators



John Q. Easton (New) Director Institute of Education Sciences US Department of Education

(from Education Week 12/2/09):

He said he sees a major role for the IES in helping states build longitudinal-data systems with the \$250 million in economic-stimulus money being directed to those ongoing efforts, and in helping them develop the research capacity to use the data. “A lot of school districts don’t have this capacity,” he said, “but they could.”

That’s important, said Susan Fuhrman, the president of Teachers College, Columbia University, because “so much of what’s going on in education we don’t have evidence for, and the federal government doesn’t have the capacity to do it all.”

“Instructional Improvement Systems” Definition from Race to the Top

Definition:

...technology-based tools and other strategies that provide teachers, principals, **and administrators** with meaningful support and actionable data to systemically manage continuous instructional improvement, including ... **evaluating the effectiveness** of the actions taken.

A New Approach to Research and Evaluation

- No longer just an external event at the end of the project
- Data systems at the state and district level are to be used for continuous improvement during the project
- Research and evaluation are an important part of the innovation

Basic Themes of the Guidelines

Gloria I. Miller, Director of Evaluation Design



Research is part of a process of continuous improvement

1. Initial Evidence
2. Evaluation
3. Capacity Building

Basic Themes of the Guidelines

	R2T	EdTech	i3	SLDS	SIG
Initial Evidence			✓		
Evaluation	✓ National SEA?	✓ National SEA?	✓ Grant LEA		✓ National SEA?
Capacity Building	✓	✓	✓	✓	✓

Research & Continuous Improvement

- Evaluation Designs for Programs
 - Randomized controlled trials
 - Quasi-experimental: Comparison group studies
 - Quasi-experimental: Interrupted time series
- Evaluation Design for Personnel
 - Value added

Making Use of Current Resources

- Most districts typically already have the data needed for the design
- Flexible and usable in any of the 3 themes
- Accepted as sufficiently rigorous methodology (can be used in i3)

Interrupted Time Series

Andrew Jaciw, Senior Research Scientist



January 20, 2010



2005-2006

2006-2007

2007-2008

2008-2009

2009-2010

2010-2011

2011-2012

2012-2013

9th
Grade



2005-2006

2006-2007

2007-2008

2008-2009

2009-2010

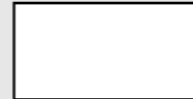
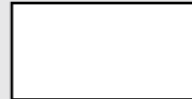
9th grade improvement programs

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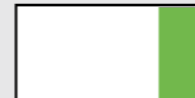
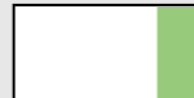
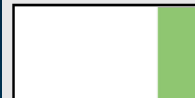
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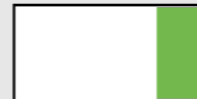
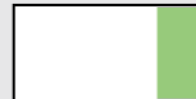
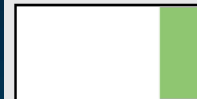
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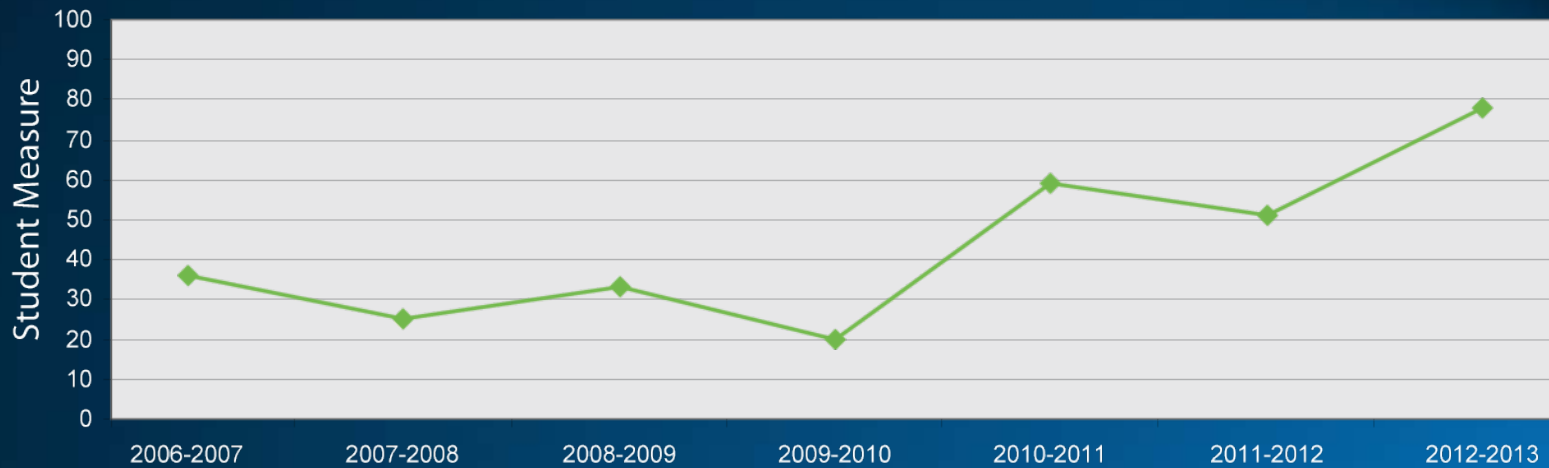
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9th grade improvement programs



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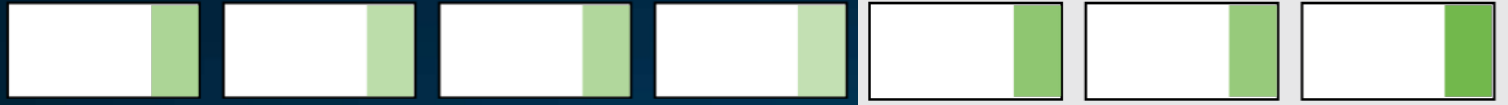
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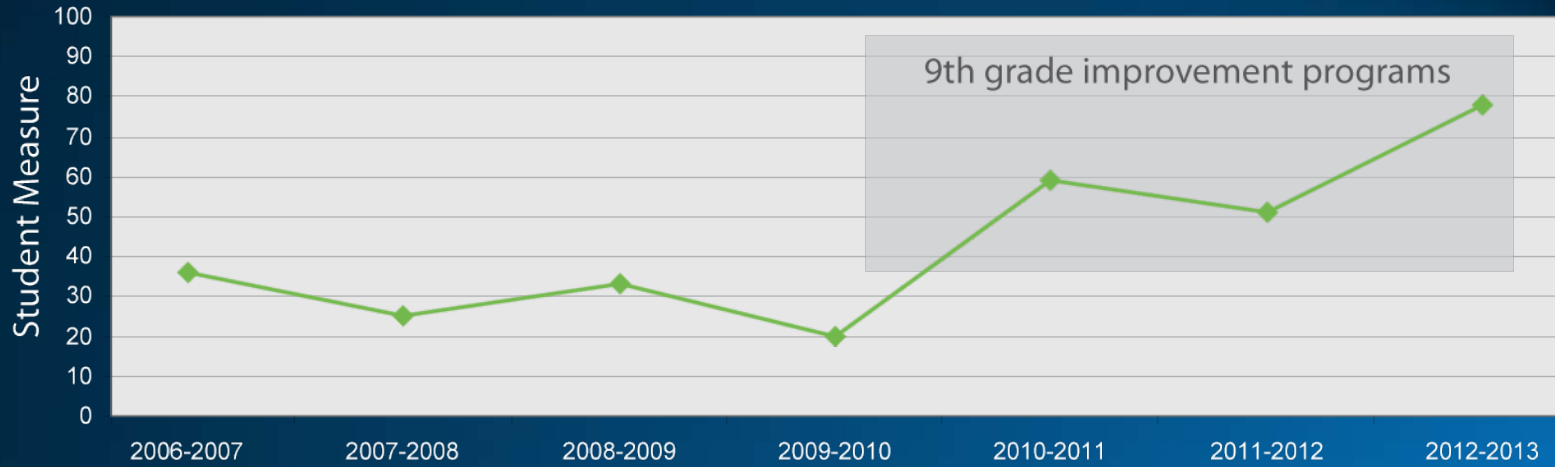
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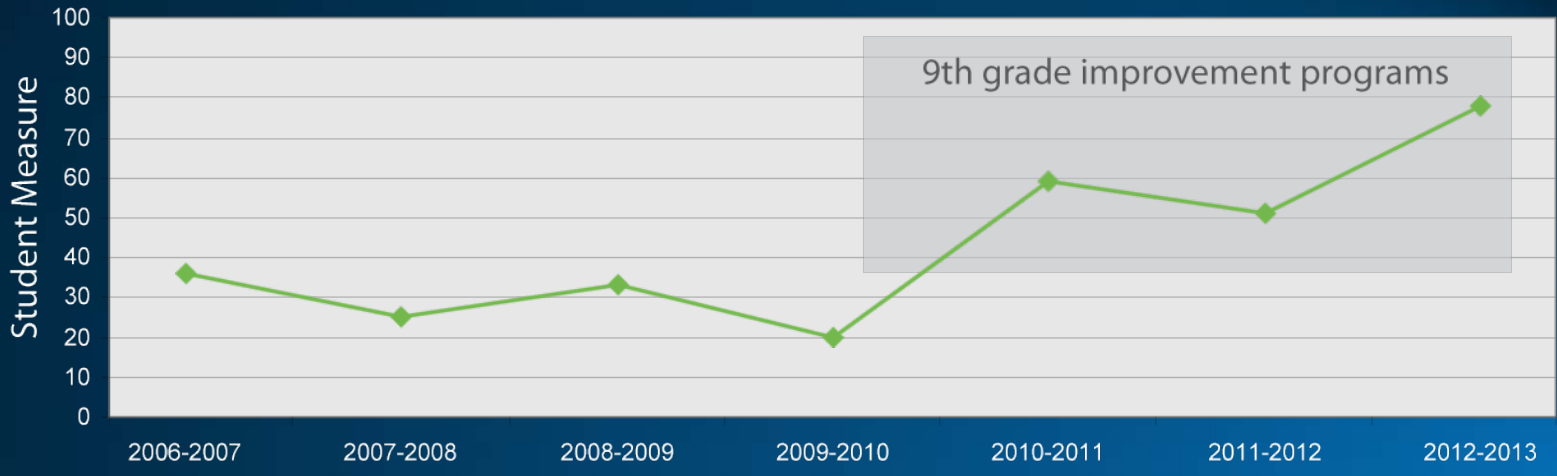
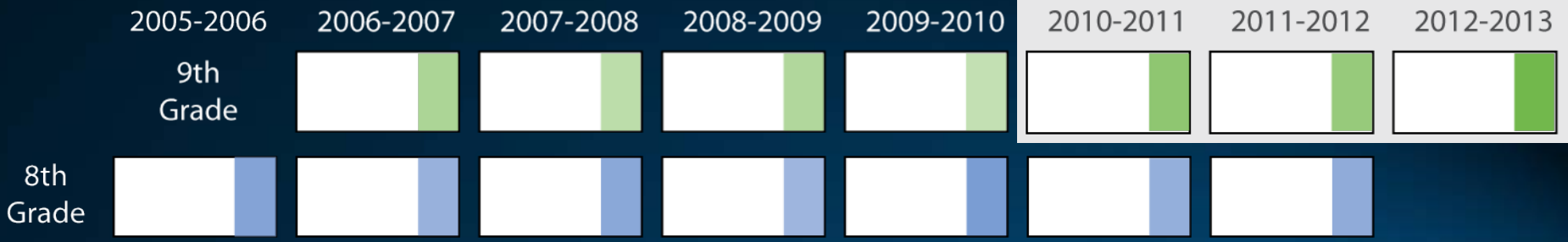
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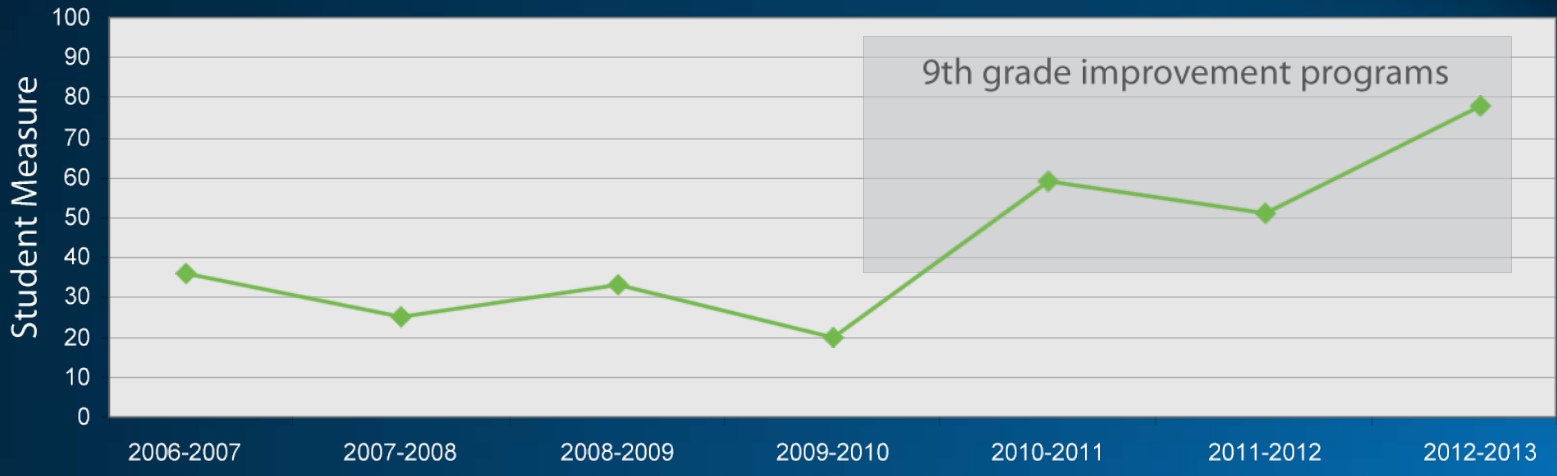
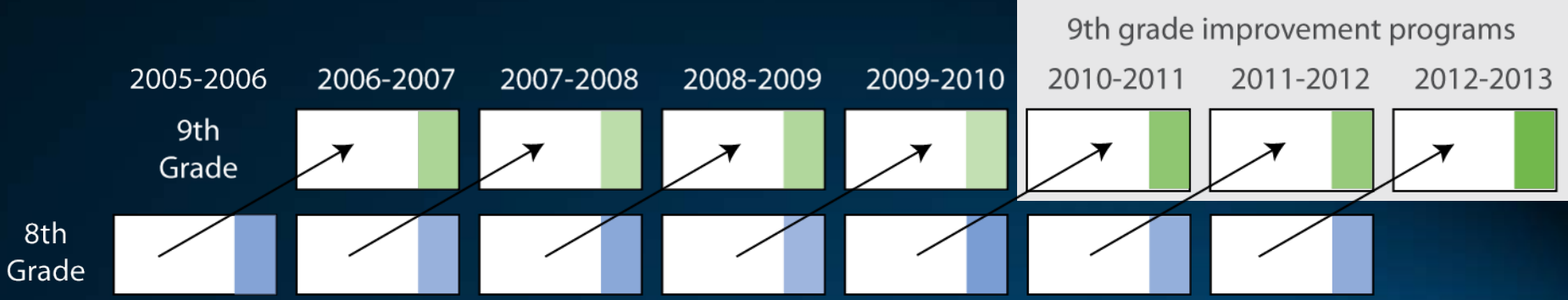


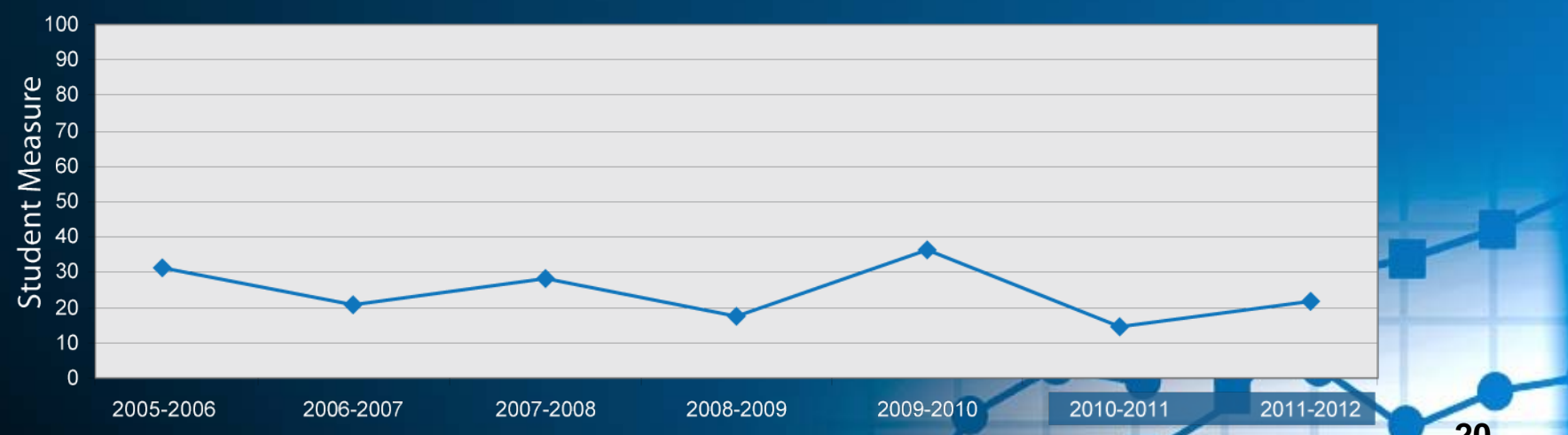
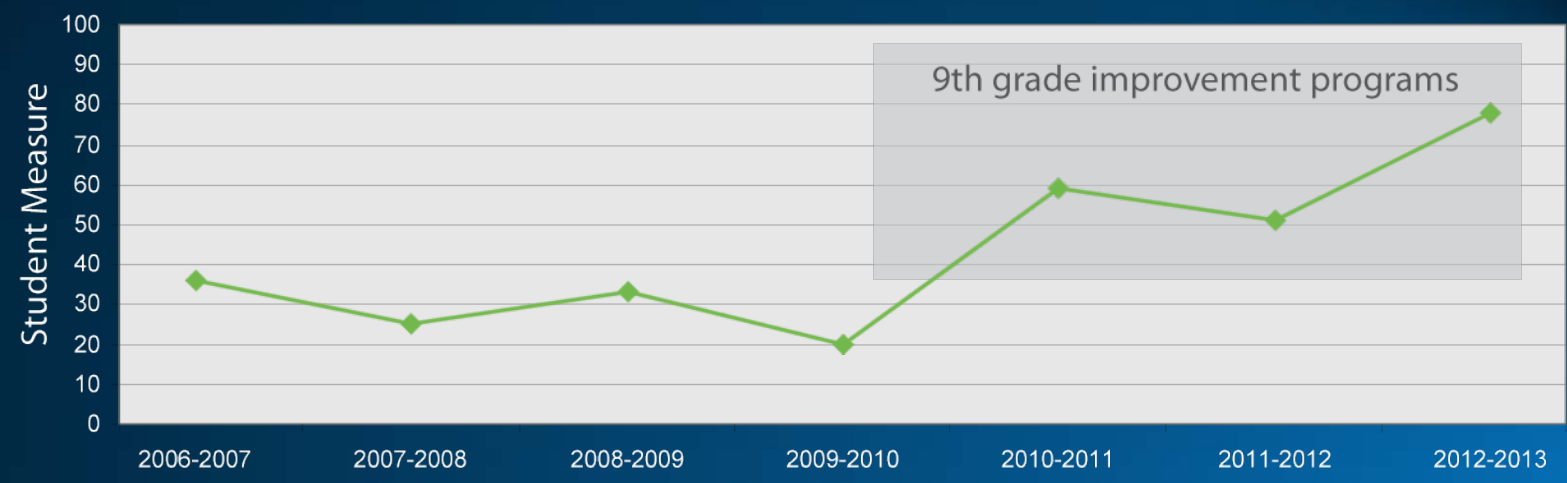
9th grade improvement programs



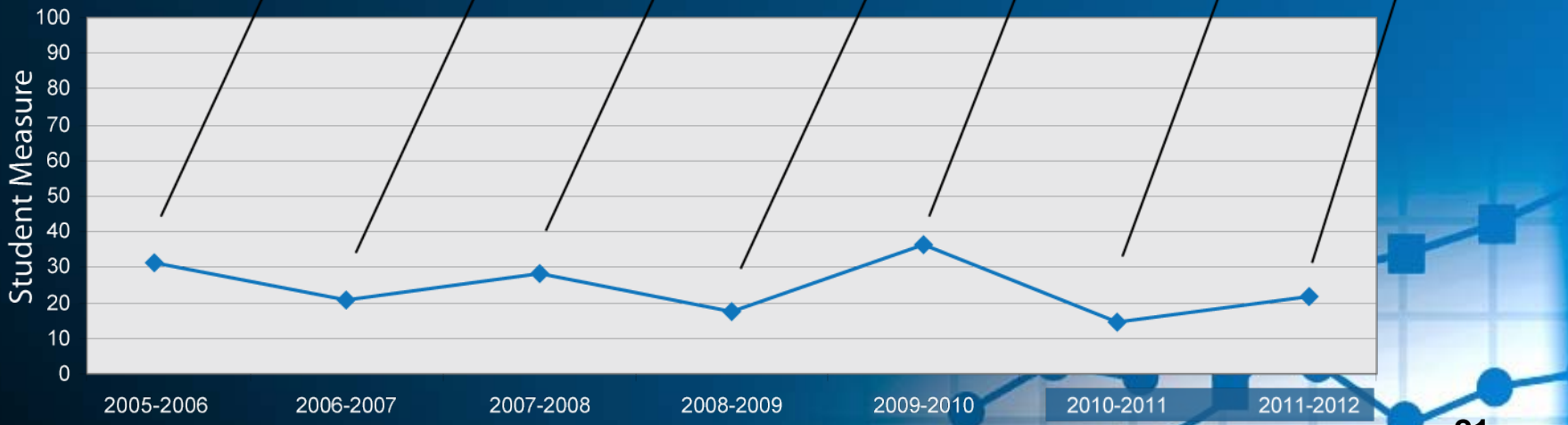
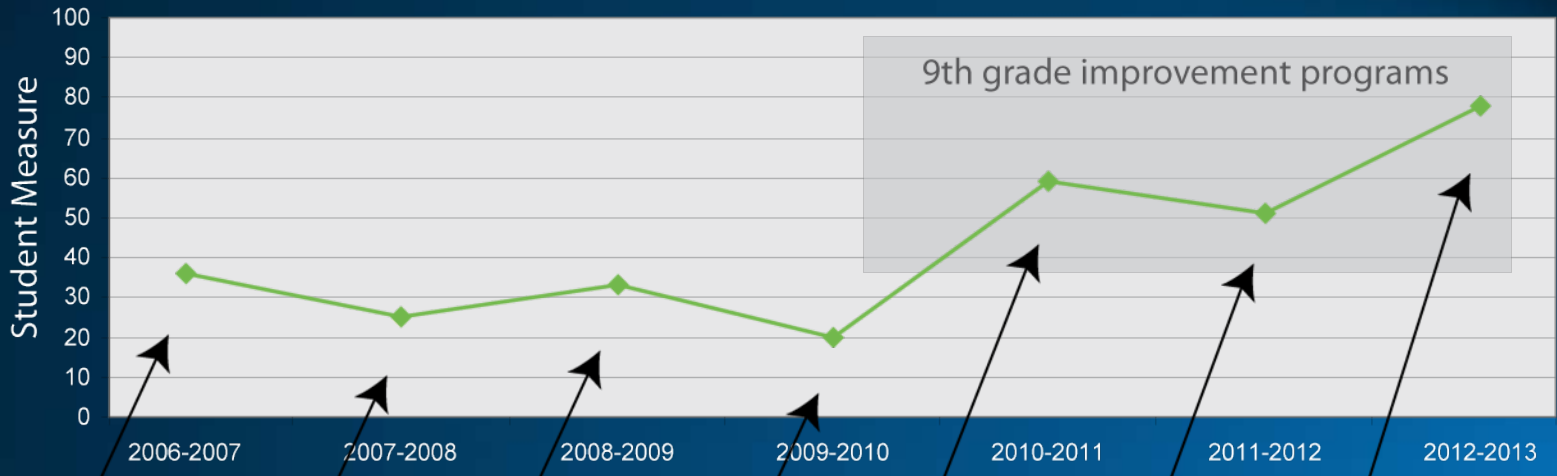
9th grade improvement programs

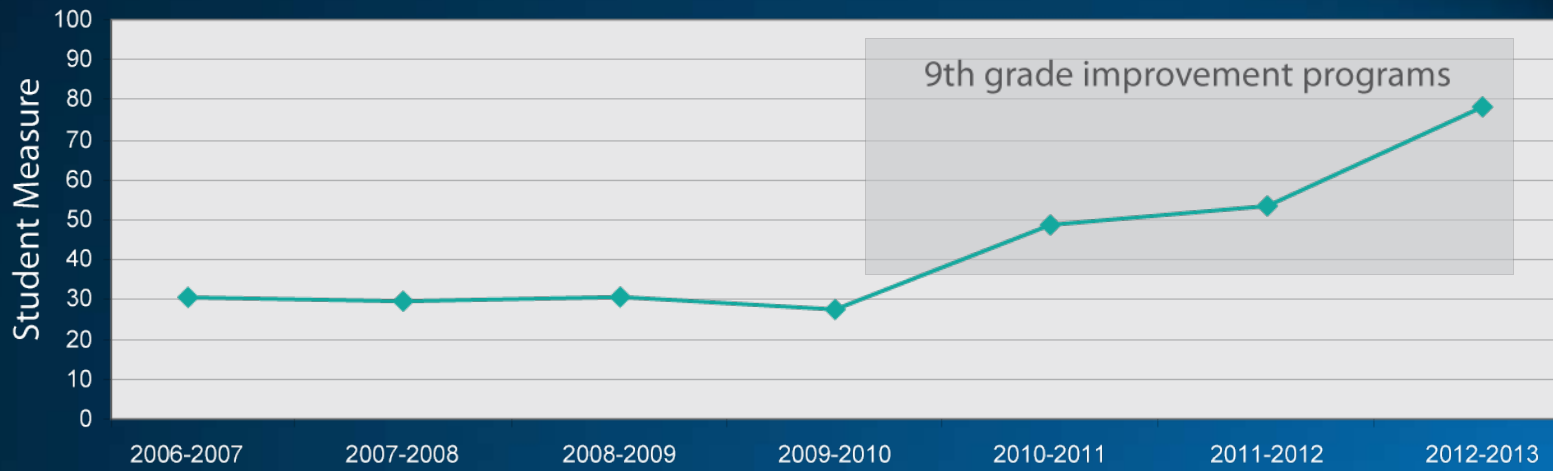




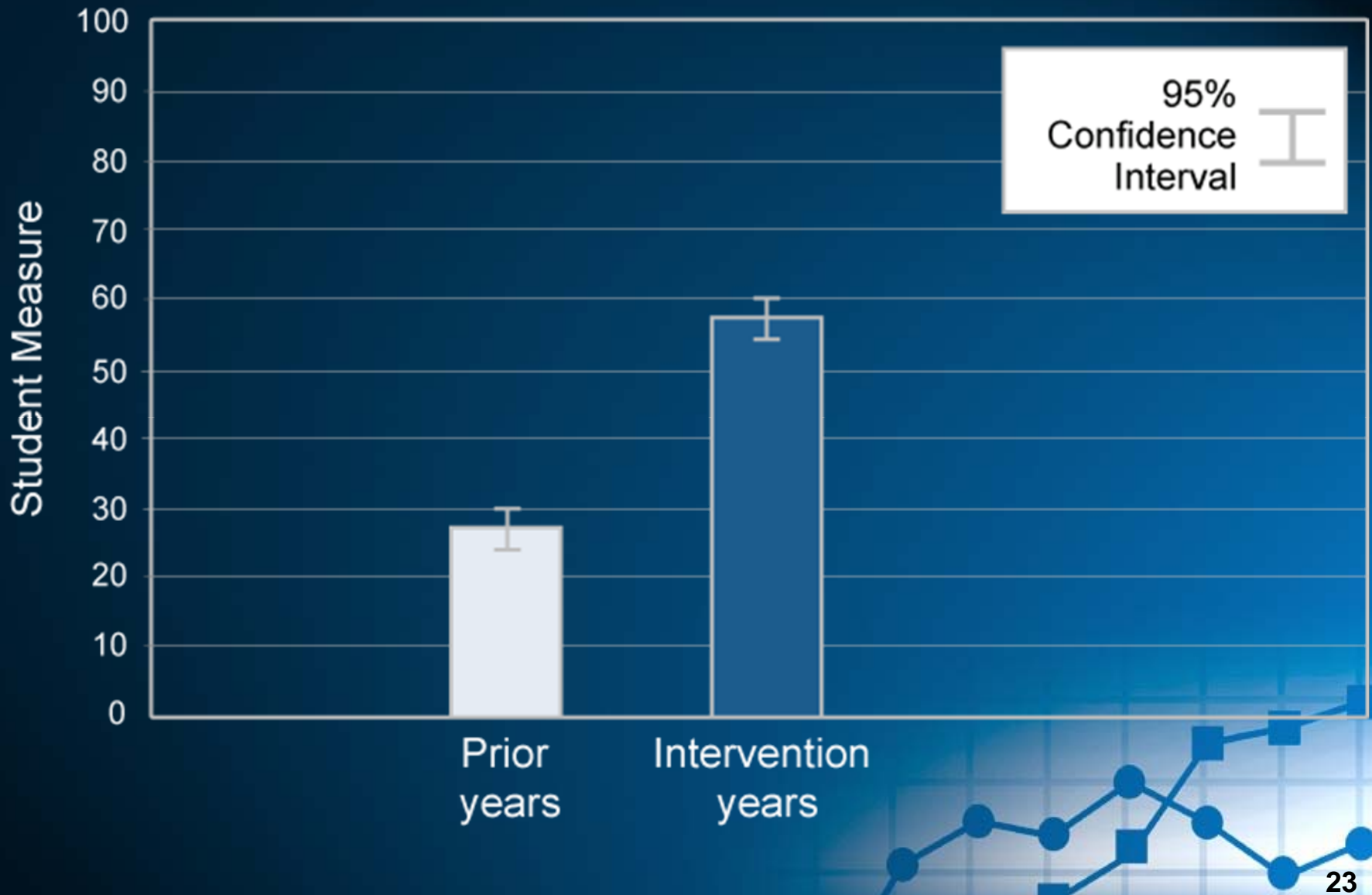


8th Grade

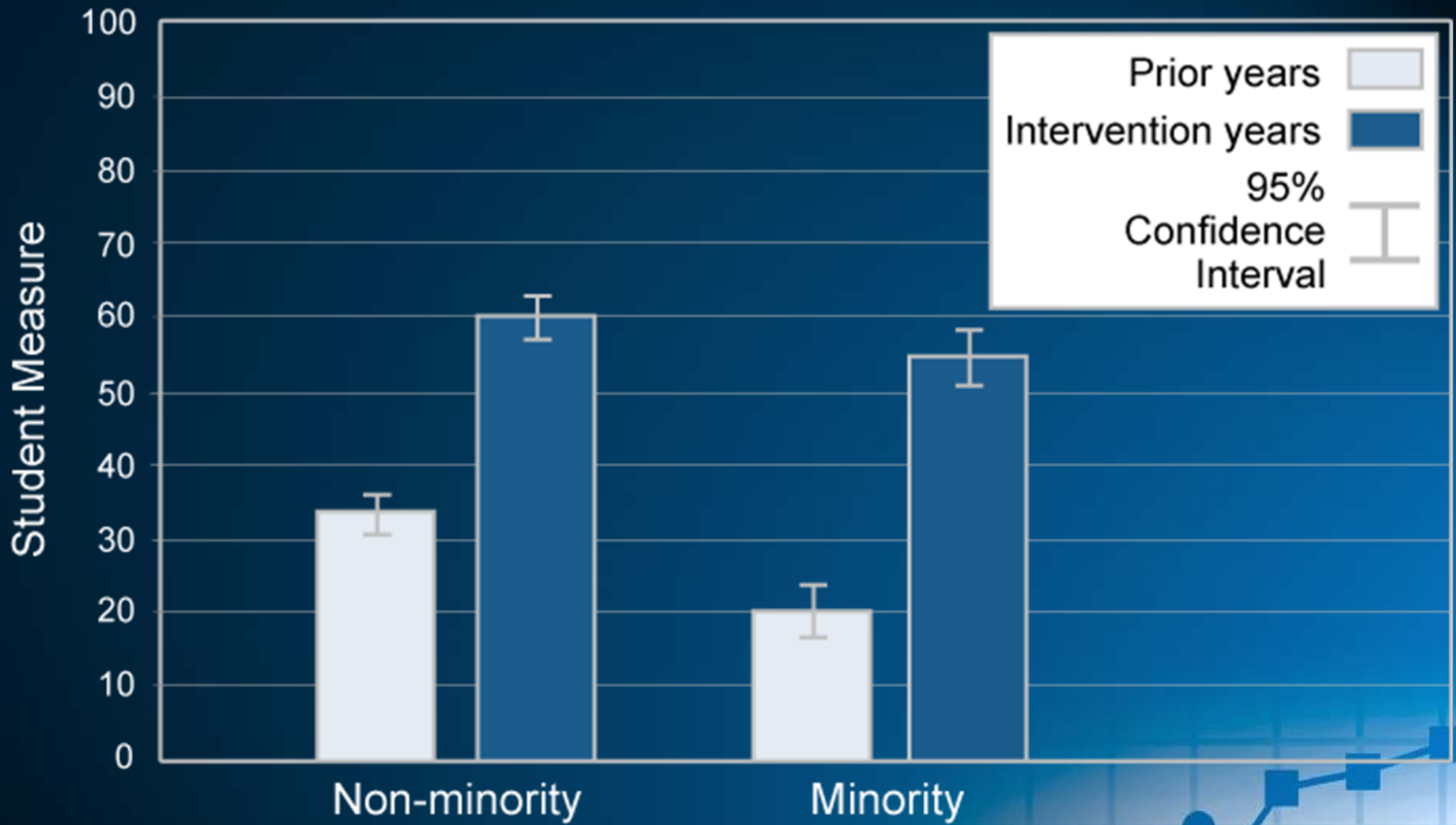




Interrupted Time Series



Interrupted Time Series



Advantage of using statistics over the tracking of averages or gains

- Meet standards accepted by US DoE
- Eliminate potential for bias
 - Ex. Adjust for Pretest
- Random variation – Estimate of level of certainty with confidence intervals
- Tracking requires same pretest and posttest; ITS can have different pre- and post- measures
- Differential impacts for Subgroups – With statistics, we can simultaneously control for several variables at the same time



Recap and Next Steps

Joe Townsend, Research Manager



- Shifting winds of educational research and evaluation
- Recap 3 themes for R2T, EdTech, i3, SLDS, SIG
 - Initial evidence
 - Evaluation
 - Building capacity
- Value of ITS:
 - Utilizing available data – research, design, planning
 - Standards of DoE
 - Control for bias and variance
 - Subgroup analysis

Building the Partnerships

- Beyond meeting reporting requirements to rigorous analysis and sustained research capacity
- Attributes of a research partner
 - Size of organization
 - Research agenda
 - Customizability of tools
 - Time efficiency
 - Experience
 - Reputation
 - Capacity and flexibility

Building the Partnerships, cont'd.

- Where to look for research and analysis capacity
 - Internal
 - University
 - Non-profit research organizations (RELs)
 - Other firms
 - Empirical Education Inc.

Questions and Answers

Email us at jtownsend@empiricaeducation.com

Contact us for a complimentary 1 hour consultation

Visit us to learn more:

- Empirical Education website: empiricaeducation.com
- ARRA Programs page: empiricaeducation.com/initiatives.php
- Products and Services: empiricaeducation.com/services.php