



DATA QUALITY CAMPAIGN

Using Data To Improve Student Achievement

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NM LESC
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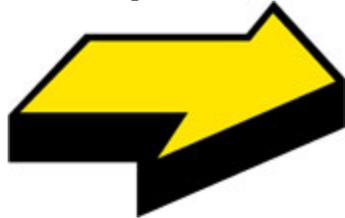
DATA QUALITY
CAMPAIGN

Our Time Together....

- **Provide an overview of the power of longitudinal data to improving student achievement and system performance**
- **Share the current progress of states to build state data systems**
- **Introduce “the next step”: moving from building data systems to using the information coming out of them**
- **Offer a view of New Mexico’s current data landscape**
- **Discuss opportunities for New Mexico to take advantage of ARRA to support the further development and use of your data systems**
- **Other items you wish to discuss....**

Moving along the Accountability Spectrum

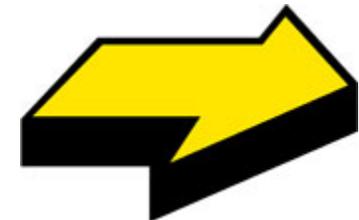
Compliance Reporting



Accountability (rearview mirror view—what we did well/not so well)



Continuous Improvement (looking out the front window)



What You Can Do with Longitudinal Data

- Longitudinal data gives you the *power* to answer questions about:
 - Student academic growth
 - Whether students are “on track” to later success
 - School effectiveness with well-prepared and poorly-prepared students
 - Student mobility and attrition
 - Teacher preparation and effectiveness

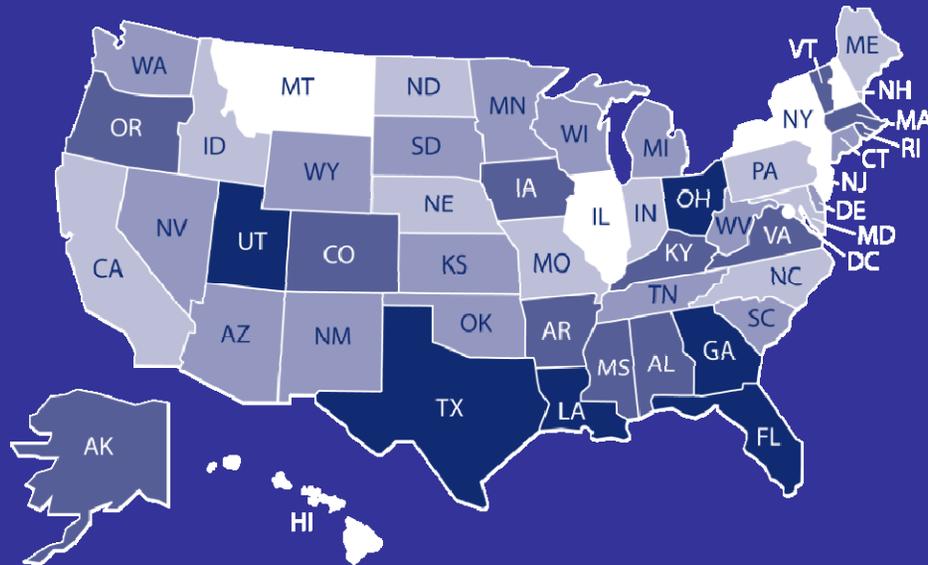
Longitudinal Data Systems and Improvement Efforts

Longitudinal data systems inform good decision making at all levels

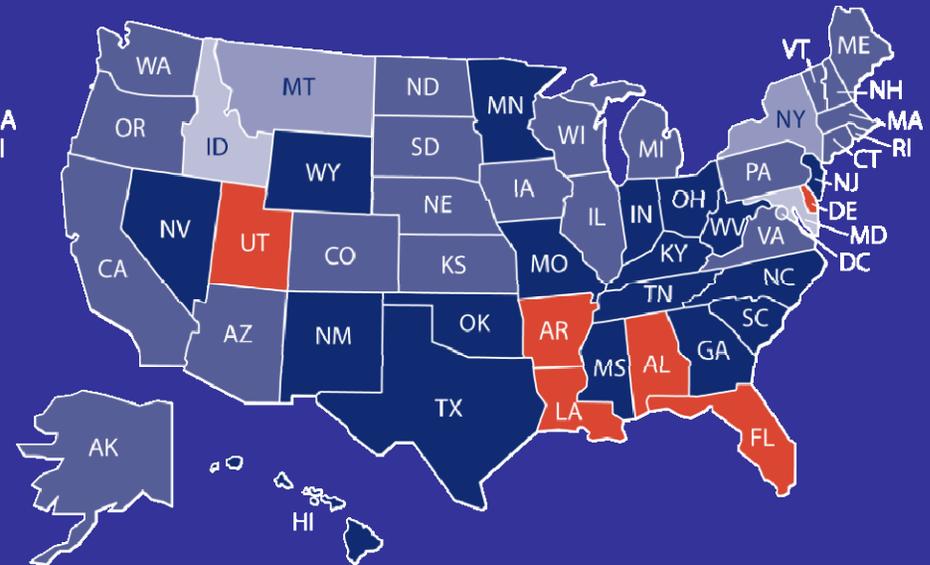
- Teachers and administrators are able to tailor instruction and programs to individual student needs.
- Policymakers are better informed with information based on student level data over time.
- Researchers can better evaluate impact of specific programs, approaches, and pedagogy on student achievement.

DQC Progress: 2005-2008

2005

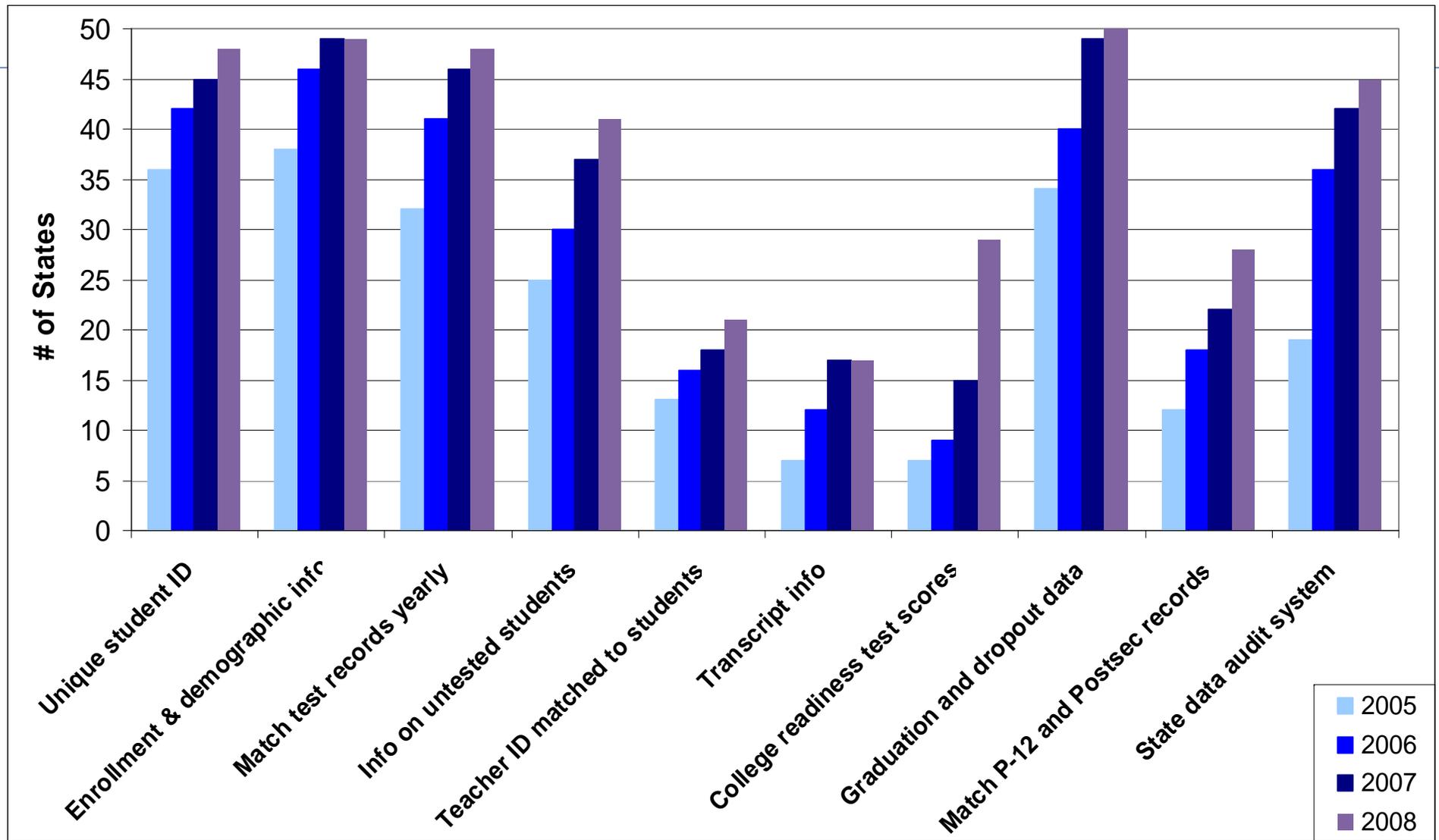


2008



■ 0 elements/not part of 2005 survey ■ 4-5 elements ■ 8-9 elements
■ 1-3 elements ■ 6-7 elements ■ 10 elements

DQC Progress: State of the States



6/22/09

DQC Phase II: Changing the Culture around Data in Education

Helping Stakeholders view Data

Not as a Hammer



But as a Flashlight



Phase II of the DQC: Changing the Culture around data use and maximizing states' investments in longitudinal data systems.

Changing the Culture around Data Use

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Expand the ability of state longitudinal data systems to link across the P-20 education pipeline and across state agencies

Ensure that data can be accessed, analyzed and used, and communicate data to all stakeholders to promote continuous improvement

Continuous Improvement

Build the capacity of all stakeholders to use longitudinal data for effective decisionmaking

10 State Actions To Ensure Effective Data Use

Expand the ability of state longitudinal data systems to link across the P–20 education pipeline and across state agencies.

1

Link state K–12 data systems with early learning, postsecondary education, workforce, social services and other critical state agency data systems.

2

Create stable, sustained support for robust state longitudinal data systems.

3

Develop governance structures to guide data collection, sharing and use.

4

Build state data repositories (e.g., data warehouses) that integrate student, staff, financial and facility data.

10 State Actions To Ensure Effective Data Use

Ensure that data can be accessed, analyzed and used, and communicate data to all stakeholders to promote continuous improvement.

5

Implement systems to provide all stakeholders timely access to the information they need while protecting student privacy.

6

Create progress reports with individual student data that provide information educators, parents and students can use to improve student performance.

7

Create reports that include longitudinal statistics on school systems and groups of students to guide school-, district- and state-level improvement efforts.

10 State Actions To Ensure Effective Data Use

Build the capacity of all stakeholders to use longitudinal data for effective decisionmaking.

8

Develop a purposeful research agenda and collaborate with universities, researchers and intermediary groups to explore the data for useful information.

9

Implement policies and promote practices, including professional development and credentialing, to ensure that educators know how to access, analyze and use data appropriately.

10

Promote strategies to raise awareness of available data and ensure that all key stakeholders, including state policymakers, know how to access, analyze and use the information.

New Mexico - Status

New Mexico (9 of 10 Essential Elements)

Although each state's education system is unique, 10 elements are essential in a longitudinal data system. DQC's annual survey results track individual states' progress towards implementing these elements but also the [policy implications](#) of creating such longitudinal systems. The DQC provides a forum for states to learn from each other as they continue to improve their systems, so DQC also catalogues [state-specific resources](#) to facilitate cross-state sharing of benefits, challenges, and lessons learned.

Data Systems Overview

10 Elements

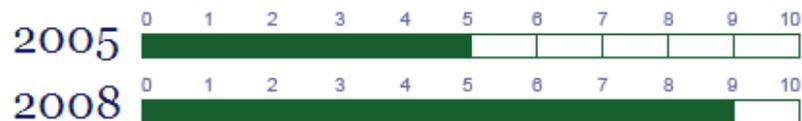
Policy Responses

State Resources

Using Data Systems

Summary of Growth

NUMBER OF ELEMENTS MET



Elements met in this state

» [What does this mean? Read about the 10 Essential Elements](#)

- ✓ 1. Statewide Student Identifier
- ✓ 2. Student-Level Enrollment Data
- ✓ 3. Student-Level Test Data
- ✓ 4. Information on Untested Students
- ✓ 5. Statewide Teacher Identifier with a Teacher-Student Match
- ✓ 6. Student-Level Course Completion (Transcript) Data
- ✗ 7. Student-Level SAT, ACT, and Advanced Placement Exam Data
- ✓ 8. Student-Level Graduation and Dropout Data
- ✓ 9. Ability to Match Student-Level P-12 and Higher Education Data
- ✓ 10. A State Data Audit System

New Mexico Strategic Planning Exercise (1/09)

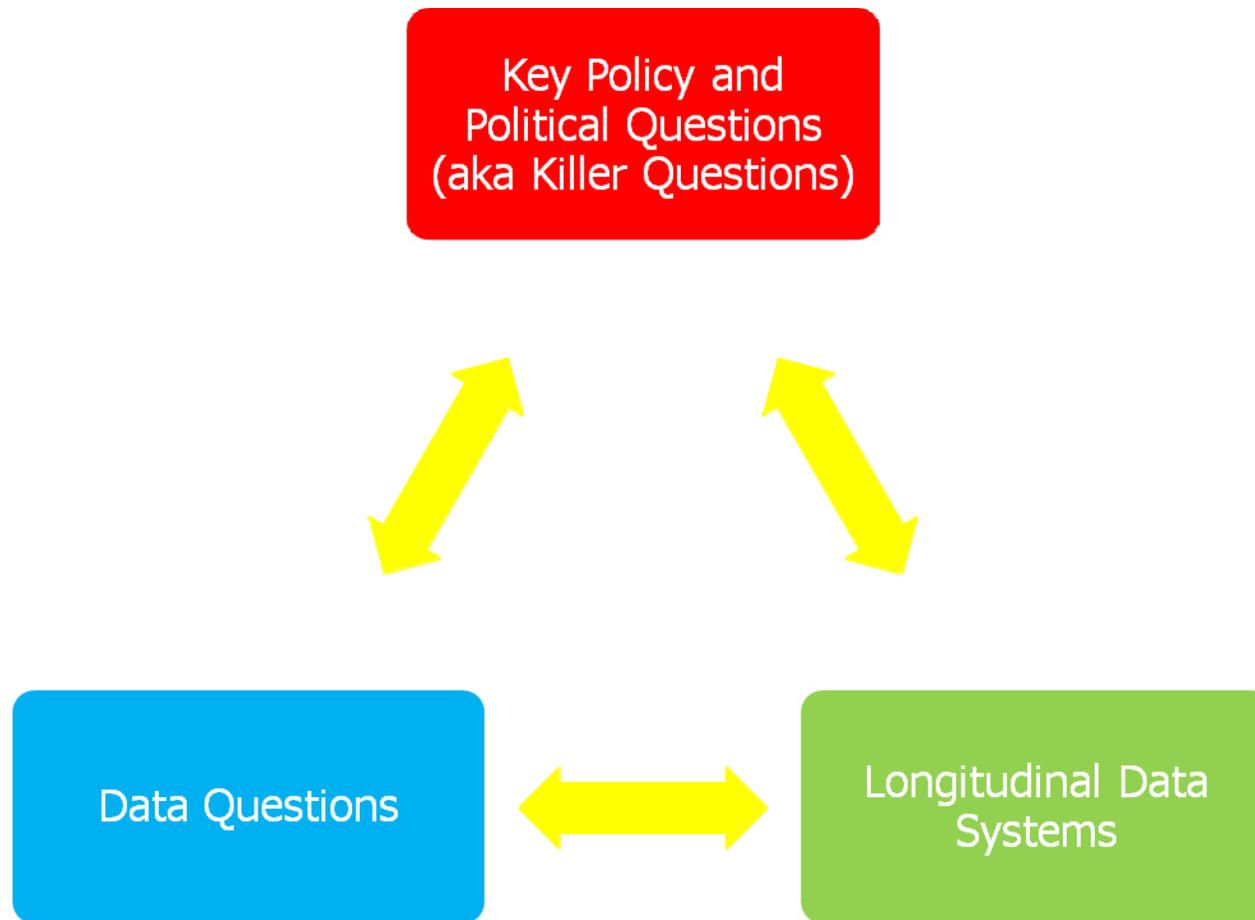
POSITIVES

- Legislature is a champion; need to define their needs.
- Broad understanding with districts of the value of the state system
- STARS is very good; need to build out access to the information
- Have 9 of 10 elements

NEEDS / CHALLENGES

- Governance Plan
- Focus P-20
- Add pre-K and Institutions of Higher Education Data
- Need funding & time to implement system
- Need element #7 (College Readiness Score)
- Need value proposition on data sharing and buy in to do so
- Need common definitions/codes/data standards
- Need MOUs to address data sharing

Using Longitudinal Data Systems: What New Mexico is Doing



Data Questions, Policy Questions, Political Questions

Question Type	Data Questions	Policy Questions	Political Questions
Policy Elements	Data For Advocacy and Accountability	Statute, Regulation, Standards, Frameworks, Budget	Power Groups, Practices & Behaviors
Example 1	<ul style="list-style-type: none"> •What percentage of students score proficient or above on achievement tests in math or reading? •What are the achievement gaps among different groups of students? 	<ul style="list-style-type: none"> •How should the certification requirements for teachers be strengthened? •What kinds of instructional interventions should be implemented? •How will these reforms and interventions be funded and where will the money come from? 	<ul style="list-style-type: none"> •Who has the influence to change how teachers are prepared? •What groups control professional development? •Who controls where the most effective teachers and principals are placed? •Who evaluates the teachers? •Who can change how resources are allocated?
Example 2	<ul style="list-style-type: none"> •What percentage of ninth graders enter college four years later? •What percentage of high school graduates take remedial courses in college? 	<ul style="list-style-type: none"> • What changes do we make in high school standards and teacher training to ensure that more students graduate ready to succeed in college? • What statutory changes should be enacted to better align the curriculum between high school and college ? • How will these initiatives be funded and where will the money come from? 	<ul style="list-style-type: none"> • Who has the influence to change practices and behaviors in high school? • Who has the power to get colleges and high schools to talk to one another? • Who has the influence to get high schools and colleges to cooperate rather than compete for limited resources?

The Killer Questions: The NM Legislative Perspective

Common killer questions that legislators ask when they look at education data for New Mexico:

- How do we help more young children get ready for school?
- How do we increase the level of student performance for all students and close the achievement gap among students?
- How do we ensure that students graduate from high school ready for college and the workforce?
- How do we ensure that more students enter college and successfully complete programs and degrees?
- How do we strengthen the relationship between education and the economy?
- What will these educational initiatives cost?
- How will we know if these efforts are successful?
- Where will the funding come from?
- Who has the power and influence to make change happen?

NM Executive Order 2009-019*

- Executive Order establishes a New Mexico Data Warehouse Council. The Executive Order:
 - Includes information on Council membership, which consists of a cross section of Departmental Secretaries.
 - Requires the Council must meet at least 6 times annually.
 - Establishes an advisory panel to provide independent review of technical feasibility of policies, proposals, and guidelines under consideration by the Council.
 - Sets out goals for the work of the Council.
 - Sets out the duties of the Council.

The Council serves as an advisory board that makes recommendations to the Governor.

Data Opportunities in ARRA

\$53.6 Billion in Stabilization Funds

- \$48.6B to assist education budgets (formula)

To tap into these funds, states must meet 4 Assurances:

1. Equalize Teacher Distribution
2. Enhance Quality & Alignment of Assessments
3. Support Struggling Schools
4. **IMPROVE THE COLLECTION & USE OF LONGITUDINAL DATA**

- \$4.35B State Incentive Grants—Race to the Top

Distributed by Secretary by competitive grant to SEAs.

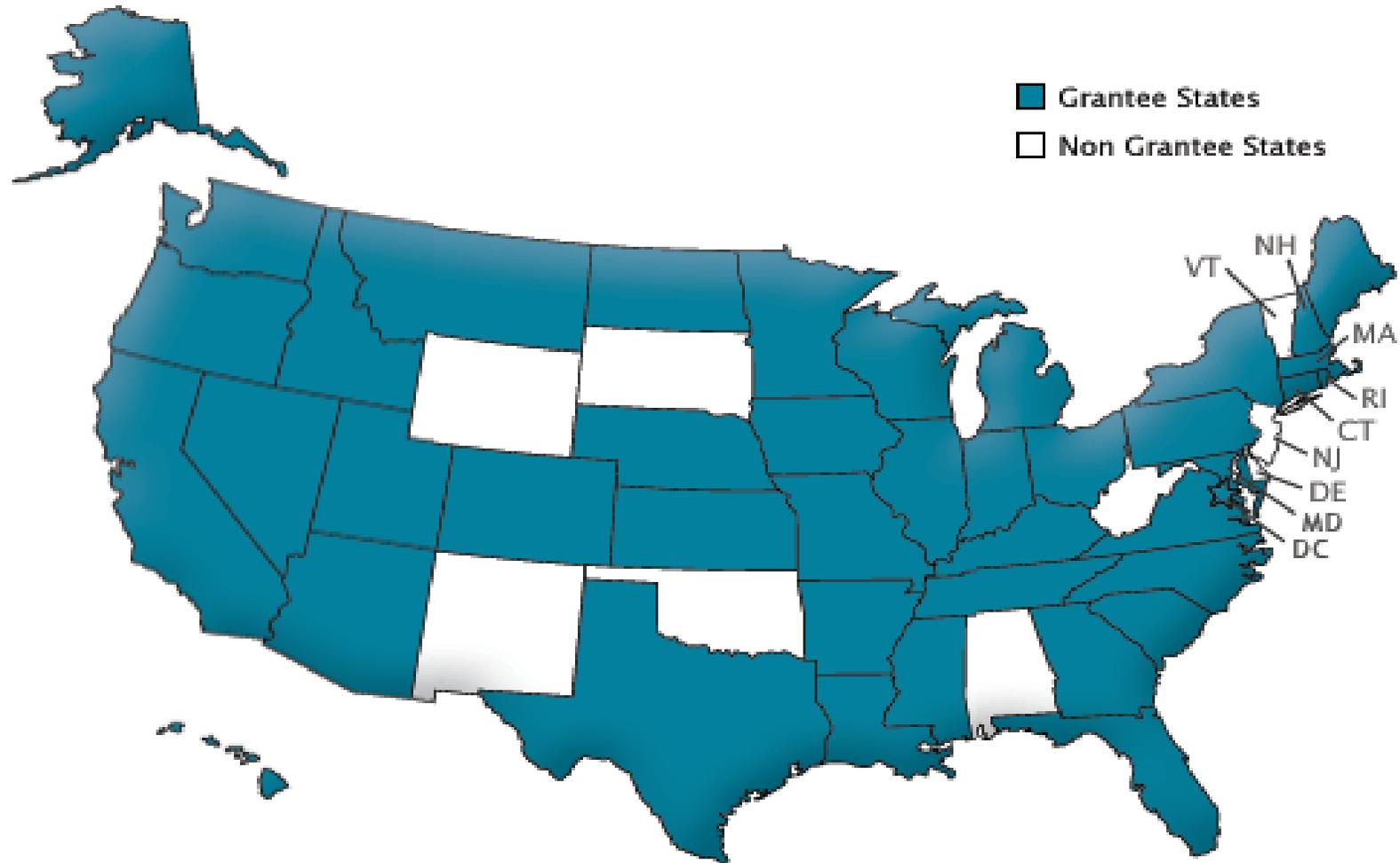
- 2 rounds (applications due December '09 & June '10)
- Must remove barriers to making progress/meeting all 4 assurances
- Large (\$200-300 million grants to a state)

Data Opportunities in ARRA

\$250 Million for State Longitudinal Data Systems

- Competitive Grant managed by Institute of Education Sciences (final Request for Application expected June '09)
- Help states implement and use state longitudinal data systems (based on DQC ten elements, but also postsecondary and workforce data)
- Since 2005, the awards have been:
 - 3 to 5 year awards of \$1.5 to \$9 million per State
 - November 2005: 14 SEAs awarded over \$52 million
 - June 2007: 13 SEAs awarded over \$62 million
 - April 2009: 27 SEAs awarded over \$150 million

IES Grants - Grantee States



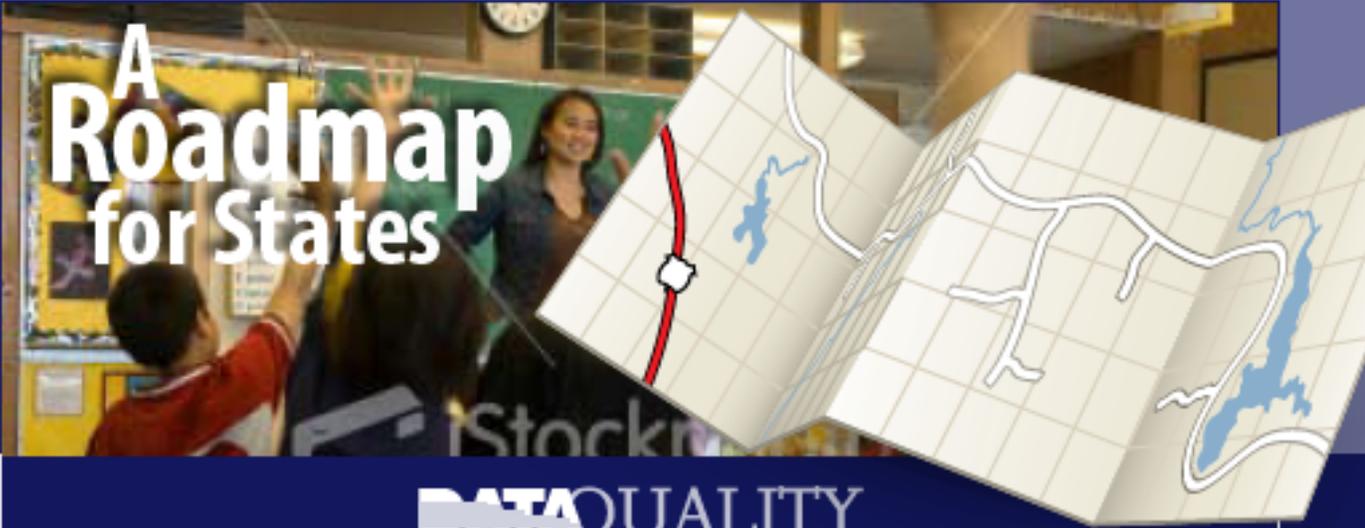
Maximizing Federal Opportunities to Build & Link NM's Data Systems

- Identify agencies and specific individuals in your state who are in charge of each of the programs and funding sources.
- Create an interagency data planning and implementation committee with both policy leaders and technical/data staff to develop and coordinate applications for ARRA funds.
- Seek broad stakeholder input to create a list of priority questions that you need to answer with your state's linked data systems.
- Develop a governance model that determines how data are linked and shared, who has access, how data may be used, and who controls and maintains the systems.
- Identify and, if necessary, change any laws or policies that may prevent state agencies from linking their data with other state agencies while protecting student privacy.
- Develop a strategy for ensuring that your K-12 longitudinal state data system has all of the elements needed to support decisions within your state.
- Develop strategies for implementing the DQC's 10 state actions to ensure effective data use.
- Consider collaborating with other states to develop interoperable systems that can answer appropriate questions about people who move from one state to another.

Roadmap

**Leveraging Federal Funding
for Longitudinal Data Systems**

**A
Roadmap
for States**



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An Alternative Process: South Carolina

SC DOE conducted this work in the absence of guidance/support of the key state policymakers; however, the following effort was critical to beginning a conversation in SC around data use.

Process

- 1.SC DOE Identified existing questions
- 2.SC DOE reworded existing questions in order to identify data elements necessary to answer the requested questions.
- 3.SC DOE identified data elements that it already collects (and status of collection) and compared with questions that were asked
- 4.SC DOE tagged each question with topics/sub topics and audience/stakeholder group.
- 5.SC DOE narrowed down the list of questions to begin addressing with information from data warehouse.

SC – List of Questions

Consolidated Questions: Phase IV					Data Sources																					
#	Prty	Original QUESTIONS for Data Warehouse	New and Reworded Questions	Source	Data Sources Required To Answer Question																					
					Aggregate Levels	DW Data Avail?	PPR/SPPS Logic	IGP / Kuder	PACT / PASS	PCS (P of Cert Scan)	SAST (Student)	Accountability	ACT	ASVAB (Military)	Drop Out	CSB	CHE / Higher Ed	CT (John Silber DB)	Dept Commerce	GED	HsAP	Kuder 4 Adults	Kuder 4A Sources	SCOTS / Kuder	Summer Survey	Freshman Survey
1	1	1. Does mobility affect performance? If so, what is the impact of mobility on achievement/student performance?	What is the correlation between the number of times a student changes schools and GPA (or number of At Risk Indicators, or PACT or HSAP scores)?	NCES	P	Y	X	X																		
2	1	2. What is the impact of Early Intervention Services?	What is retention rate of students (or graduation rate) based on the grade that they are placed in At Risk programs? (Does catching them in 8th grade help more than catching them in 9th grade?)	NCES	P	Y	X	X		?																
3	1	3. What is the relationship between course offerings and student performance?	What is the correlation between the number of majors (includes AP/IB) a school offers and the student retention, gpa, and at risk indicators?	NCES	P	Y	X	X	X																	

SC – Six Sandbox Questions

Sandbox Questions: Phase IV										Exists in DW		Data Source													
#	Prt y	Role(s)	Cate-gory(ies)	Topic(s)	Sub-Topic(s)	keywords	Original QUESTIONS for Data Warehouse	New and Reworded Questions	Sourc e	Aggregate Levels	DW Data Avail?	PPR/SPPS Logic	IGP / Kinder	PACT	PCS (Prer Cert Exam)	SAS1 (Students)	Accountability	ACT	ASVAB (Military)	Drop-Outs (Grades-12)	CHE / Higher Ed	CI (Join Ed)	Dept C	HE	
15	0		Students	Enrollmen t	AP	AP Enrollment Grade-level School-level District-level State-level	15. What is the Advanced Placement (AP) enrollment?	15. What is the enrollment in AP classes per grade per school per district per state? What are the subgroups enrollments in AP classes per grade per school per district per state?	NCES	Y	X				X										
16	0		Students	Enrollmen t, Test Results	AP Course Grades	AP Students Course-Grades	16. What is the Advanced Placement (AP) enrollment by test scores	16. What are the course grades for students enrolled in AP courses?	NCES	Y					X										
51	0		Educators, Students	Performance	Student Performance	Teacher Student Student-Roster Course-Grades Student-Absence Student-Tardies Discipline	51. What is the teacher to student connection (available to districts, if not LEAs)?	51. Provide teacher rosters showing only students registered for an individual teacher's courses/classes. Provide course-grades, absences, tardies, disciplinary actions, as of last data collection.	NCES	T, S, C, D, S															
55			Adminis-tration	School, District, State	Capacity Planning	Student-Enrollment Actual-Enrollment Enrollment-Projections Projected-Enrollment Enrollment-Trends School-Enrollment District-Enrollment State-Enrollment	55. Enrollment reports: projections, numbers, student demographics	55. Provide school-, district-, and state-level enrollment reports with current and future projections. Include student demographics. Base projections on history and available trend information. Provide subtotals within each level of projection (demographics within grade level within school).	NCES	Y	X				X										

Additional Policy Questions

Does your system have the necessary elements to address these key policy questions?

Key Policy Questions	Present in this state?			
	05-06	06-07	07-08	08-09
Predicting Success in Later Grade Levels - Need Elements 1, 2, 3, 4	YES	YES	YES	YES
1. What is the impact of preschool on later academic achievement (e.g., third grade test results)?				
2. Do the effects of our early interventions 'fade out' later?				
3. Are students academically prepared for high school?				
4. Which elementary and middle schools in the state are consistently highest-performing in preparing different student populations for high school?				
5. Which elementary and middle schools produce the strongest academic growth among initially poorly-prepared students, and among initially well-prepared students?				
Academic Growth - Need Elements 1, 3, 4	YES	YES	YES	YES
6. How many students are achieving at least one year's academic growth every year?				
7. How many of the students who started out below grade level are achieving more than a year's growth?				
Achievement Levels in Early Grades as Indicators of Later Success - Need Elements 1, 3, 4, 6, 7, 8, 9	NO	NO	NO	NO
8. What achievement levels in grades 3-7 indicate that a student is 'on track' for later success?				
Impact of Grade-level Retention - Need Elements 1, 2, 3, 4, 6, 7, 8, 9	NO	NO	NO	NO
9. What effect does early grade retention have on later academic success of students who were retained in the early grades?				

Additional Policy Questions

Course Rigor - Need Elements 1, 3, 6, 7 NO NO NO NO

10. What 8th grade achievement levels indicate that a student is well prepared to succeed in challenging courses in high school?
11. Have students taken the coursework to prepare them for college and work – both in years of study and rigor of content?
12. What evidence exists that students who take and pass the courses have learned the course content?

Sustaining Enrollment in Early Grades - Need Elements 1, 2 YES YES YES YES

13. What students are being lost in transition between middle and high school?
14. What proportion of the students who enter elementary school maintain continuous enrollment and complete 8th grade in a timely manner?

Consistently High-Performing Schools - Need Elements 1, 6 NO NO NO YES

15. Which elementary and middle schools in the state are consistently highest-performing in preparing different student populations for high school?

College Preparation - Need Elements 1, 3, 6, 7, 8, 9 NO NO NO NO

16. Are the students academically prepared to graduate from high school and enter college?

High School Indicators of College Preparedness - Need Elements 1, 3, 7, 9 NO NO NO NO

17. What high school achievement levels indicate that a student is college and work ready?
18. Are students academically prepared to enter college and complete their program or degree in a timely manner?
19. What is the relationship between students' performance on state assessments (high school exit exam, end-of-course exams) and subsequent postsecondary performance and graduation?

Additional Policy Questions

College Remediation - Need Elements 1, 8, 9 NO NO NO YES

20. What percentage of high school graduates who go on to college take remedial courses?

High School Completion Rates - Need Elements 1, 2, 8 NO YES YES YES

21. What proportions of the students who enter 9th grade maintain continuous enrollment and complete their high school requirements in a timely manner?

High Performing Schools: College Preparation of Subgroups - Need Elements 1, 2, 3, 7, 9 NO NO NO NO

22. Which high schools in the state are consistently highest-performing in preparing different student populations for college and work?

Academic Growth by Prior Performance Subgroup - Need Elements 1, 2, 3, 7 NO NO NO NO

23. Which high schools produce the strongest academic success for initially poorly-prepared students, and for initially well-prepared students?

College Success of K-12 Students - Need Elements 1, 9 NO NO NO YES

24. In what content areas do students require remediation?

25. What are the retention and degree completion rates of students who are placed in remedial coursework?

Dual Enrollment - Need Elements 1, 6, 7, 9 NO NO NO NO

26. How do dual-enrollment and advanced placement programs in high school affect students' success in college?

Additional Policy Questions

Graduation Rates by Subgroup and Prior Performance - Need Elements 1, 2, 3, 8 NO YES YES YES

27. Which institutions are doing the best job of graduating students on time, based on those students' prior preparation and level of economic disadvantage?

Teacher Effectiveness and Preparation Programs - Need Elements 1, 3, 4, 5 YES YES YES YES

28. Which teacher preparation programs produce the graduates whose students have the strongest academic growth?

NGA Graduation Rate - Need Elements 1, 2, 8, 10 NO YES YES YES