



# Building & Using Longitudinal Data Systems to Improve Student Achievement in Iowa

Aimee R. Guidera

Nancy J. Smith

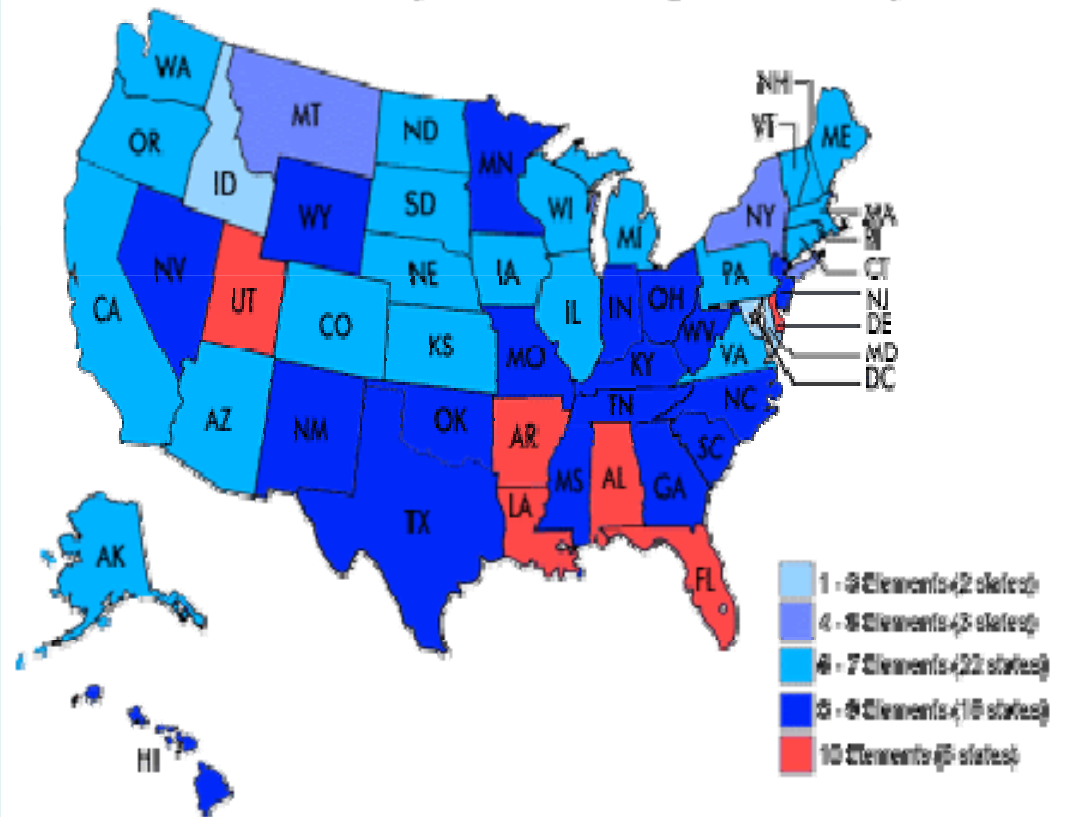
December 19, 2008

# The Ten Essential Elements

## •10 Essential Elements

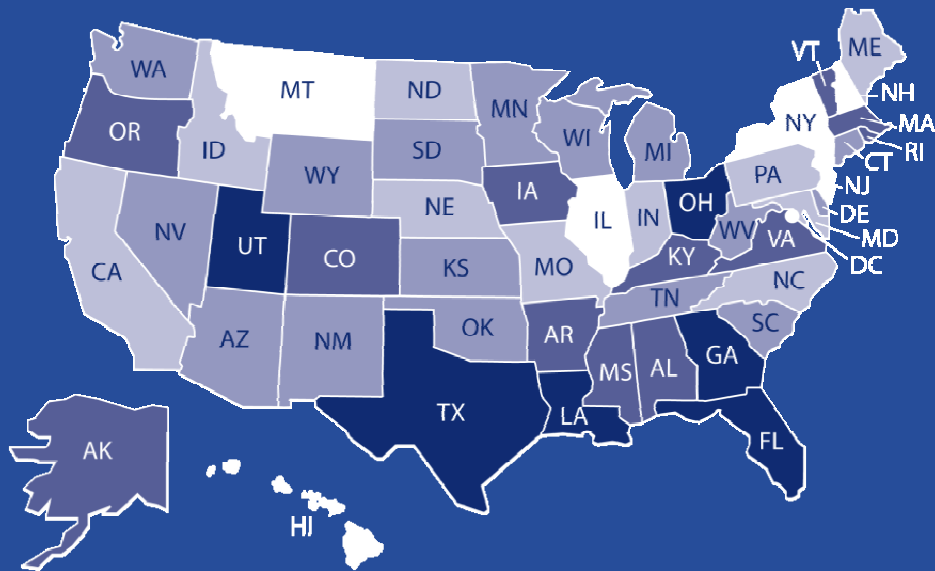
- 1. Unique statewide student identifier (*48 states, up from 36 in 2005*)
- 2. Student-level enrollment, demographic and program participation information (*49, up from 38 in 2005*)
- 3. Ability to match individual students' test records from year to year to measure growth (*48, up from 32 in 2005*)
- 4. Information on untested students (*41, up from 25 in 2005*)
- 5. Teacher identifier system with ability to match teachers to students (*21, up from 13 in 2005*)
- 6. Student-level transcript information, including information on courses completed and grades earned (*17, up from 7 in 2005*)
- 7. Student-level college readiness test scores (*29, up from 7 in 2005*)
- 8. Student-level graduation and dropout data (*50, up from 34 in 2005*)
- 9. Ability to match student records between the Pre-K-12 and post-secondary systems (*28, up from 12 in 2005*)
- 10. State data audit system assessing data quality, validity, and reliability (*45, up from 19 in 2005*)

2008 DQC/NCEA Survey about State Longitudinal Data Systems

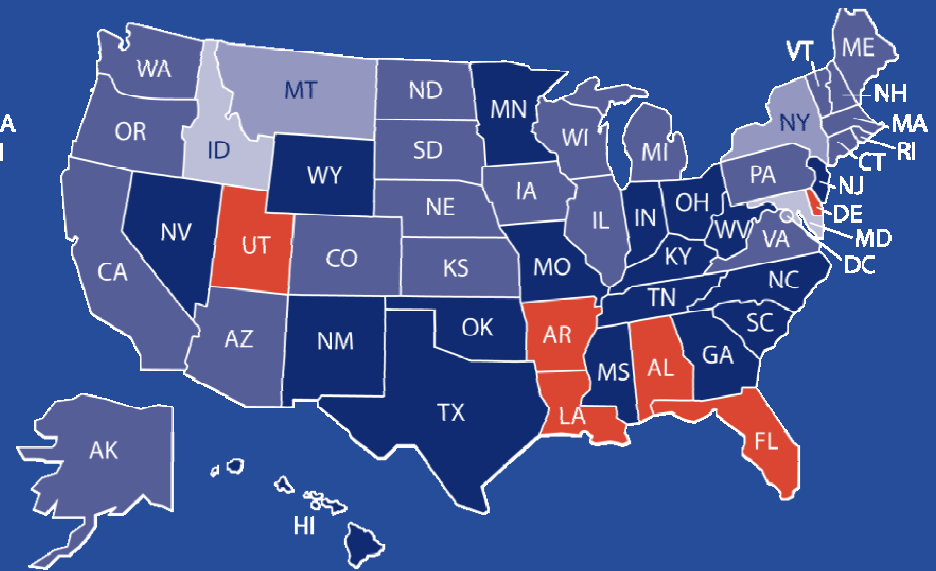


# DQC Progress: 2005-2008

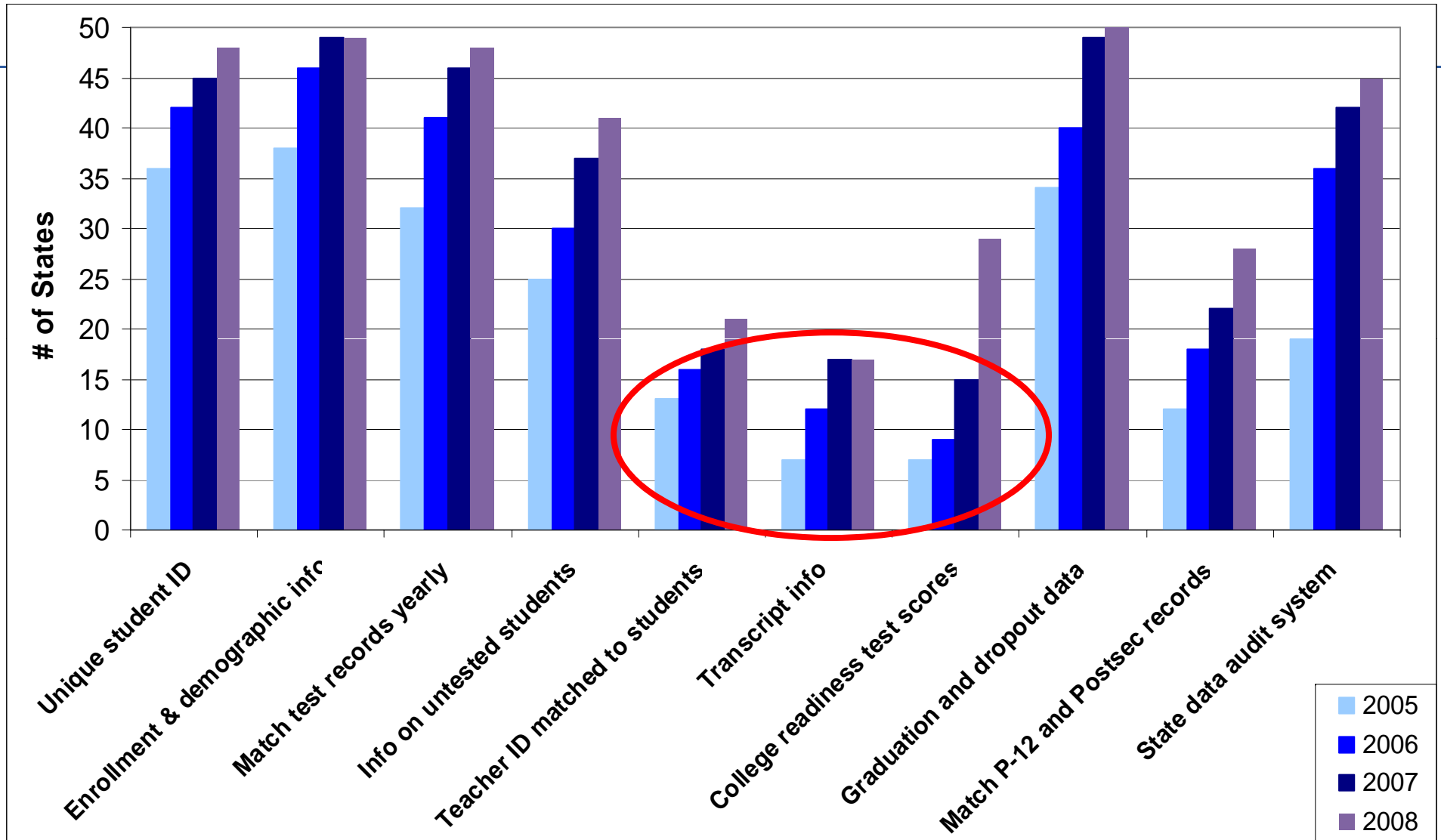
2005



2008



# DQC Progress: State of the States



5/22/2009

# Iowa – 2008 DQC Survey Results

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## 7 out of 10 Elements

1. A unique statewide student identifier that connects student data across key databases across years – **YES**
2. Student-level enrollment, demographic and program participation information – **YES**
3. The ability to match individual students' test records from year to year to measure academic growth – **YES**
4. Information on untested students and the reasons they were not tested – **NO**
5. A teacher identifier system with the ability to match teachers to students – **NO**
6. Student-level transcript information, including information on courses completed and grades earned – **NO**
7. Student-level college readiness test scores – **YES**
8. Student-level graduation and dropout data – **YES**
9. The ability to match student records between the p-12 and higher education systems – **YES**
10. A state data audit system assessing data quality, validity and reliability – **YES**

# Can your state answer these policy questions?

	All States*	Iowa
<ul style="list-style-type: none"> <li>• What 8<sup>th</sup> grade achievement levels indicate that a student is well prepared to succeed in challenging courses in high school?</li> </ul>	12	No
<ul style="list-style-type: none"> <li>• Have students taken the coursework to prepare them for college and work – both in years of study and rigor of content?</li> </ul>		
<ul style="list-style-type: none"> <li>• Are the students academically prepared to graduate from high school and enter college?</li> </ul>	10	No
<ul style="list-style-type: none"> <li>• What high school achievement levels indicate that a student is college and work ready?</li> </ul>	16	Yes
<ul style="list-style-type: none"> <li>• What is the relationship between students' performance on state assessments (high school exit exam, end-of-course exams) and subsequent postsecondary performance and graduation?</li> </ul>		

\*out of 50 states, plus DC

# Can your state answer these policy questions?

	All States*	Iowa
• What percentage of high school graduates who go on to college take remedial courses?	27	Yes
• Which high schools in the state are consistently highest-performing in preparing different student populations for college and work?	16	Yes
• How do dual-enrollment and advanced placement programs in high school affect students' success in college?	10	No

\*out of 50 states, plus DC

5/22/2009

# Does Iowa Have the Data Elements in Place to Answer These Key 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 NO NO NO

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 NO NO NO

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?

# Does Iowa Have the Data Elements in Place to Answer These Key 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 YES NO NO NO

- 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 YES

- 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?

# Does Iowa Have the Data Elements in Place to Answer These Key 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 YES 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 YES

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 YES

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?

# Does Iowa Have the Data Elements in Place to Answer These Key Policy Questions?

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

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

**NGA Graduation Rate - Need Elements 1, 2, 8, 10** YES YES YES YES

# Beyond the 10 Elements...

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- Fundamental Design & Access Issues
  - Privacy Protection
  - Data Warehousing: IA reports that it is “in process”
  - Interoperability
  - Data Analysis Tools: IA reports having
  - Professional Development around Data Processes and Use
  - Researcher Access
- Future Issues
  - Connect school performance with spending: IA can do at the state and district level
  - Connect school performance to employment and other systems in IES grant
  - Transfer records across systems and states

# Iowa: Objectives Outlined in IES Grant Application

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- Support/Expand Statewide Educational Data Warehouse – EdInsight
- Improve efficiency of data transfer; gain ability to calculate new dropout and graduation rates with better accuracy
- Ensure Interoperability with Postsecondary Systems
- Link Workforce and Educational Data Systems
- Develop Standardized and Electronic Transcripts

# Just when you thought you were done...How to Maximize Use of Your State Data System

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1. Which elements are you missing? Are there plans/timelines for implementing? What are challenges? Who is responsible?
2. Is there broad acceptance and understanding of the role of state longitudinal data system by key stakeholders and understanding of the goals of collecting, sharing, using data from that system? Who are the champions? Who are the potential detractors? How do you turn potential detractors into allies?

## Just when you thought you were done...How to Maximize Use of Your State Data System

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3. Are there agreed upon policy & practical questions/issues that the state wishes to address with data and realistic timelines and budget for completing that analysis?
4. Does your state have the necessary agreements (political, legal and practical) among various sections to ensure data can be shared across and among P-12 and postsecondary systems to ensure transparency? Accountability? And feedback for continuous improvement? If not, what are the barriers? Is there an action plan for addressing this gap?

# Just when you thought you were done...How to Maximize Use of Your State Data System

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5. Are there assurances that the state longitudinal data system has sustained appropriate funding and the capacity to provide training and professional development to practitioners, policymakers, and staff who will need to access and use data from the data system? Is it a line item in the budget? For how much money? To whom does this funding go? Are there plans to increase this funding over time?

## Just when you thought you were done...How to Maximize Use of Your State Data System

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6. Is there a strategic plan and adequate funding and capacity to provide training and professional development to practitioners, policymakers, and staff who will need to access and use data from the data system? Who is responsible for doing this? Are all divisions within SEA trained to access and use the data coming out of SLDS? LEA and school-based training for accountability and continuous improvement purposes?

## Just when you thought you were done...How to Maximize Use of Your State Data System

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7. Is there a governance structure in place to have discussion about sharing data across and between sectors, states, districts and the appropriate uses of that data (and to ensure reduction and duplication of effort)? Is there a governance plan in place for determining which data are to be accessible to whom and in what capacity? Are there assurances of researcher access to data?

# Just when you thought you were done...How to Maximize Use of Your State Data System

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8. Has a data warehouse been developed (does it include K-12 and postsecondary data? Other data sets that could be connected with education data?) and development of portals and business intelligence/data analysis reports and tools to make it easier for stakeholders to access the data relevant to their interests?

# DQC Phase II: Expanding the Focus

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## Align, Link, and Share Data Across the Pipeline

- Pre K and K-12 and Postsecondary
- P-20 with other critical data systems (health, labor, social services)
- Across districts and states

Focus on **Using** Longitudinal Data for Improving Student Achievement