

Imagining the Possible

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NSF Advancing Data Intensive Research in Education
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Scales and Scopes for Data Repositories

- Micro
 - Meso
 - Macro
- Whose learning are we trying to measure?
 - What aspect of learning are we targeting?
 - Over what time scale?
 - With what grain size?

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Meso-Level Data from Virtual to Face-to-Face

- Publisher developed
- Connects Standards to instructional design and lesson plans
- Used in multiple ways – individual teachers to PLCs
- Supports measurement of **opportunity to learn**
- Programming idiosyncratic to publisher
- Data availability is problematic



Follett Publisher

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Meso-Level Data from Race To the Top Ohio's Example

- Standards and Curriculum
- Instructional Practices
- Assessment and Growth
- Learner Profiles
- Data Analysis and Reporting
- Professional Development

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Meso-Level Data from Race To the Top

Ohio IIS – Instructional Improvement System

Thinkgate, LLC. went out of business this week. We apologize for the inconvenience this has caused.

The Ohio Department of Education is exploring options to gain access to the Thinkgate system. This would allow the 100 districts that have used the platform to continue doing so for the remainder of the 2014-2015 school year.

Additional information will be provided as it becomes available.

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Macro-Level Data

Modify Element for Map "K12 Map for Demo" Close

Map Element
* required

System Name:

Database Name: Assessments

Table Name: StudentTesting

Element Name: SID

Element Identifier:

Element Definition: The unique student identifier.

Data Type: int **Length:**

Comments: This element is used to identify students.

Your update was successful Update

CEDS Element	Definition Alignment	Code Set Alignment
K12 -> K12 Student -> Identity -> Identification -> Student Identifier	Identical in intent, with wording differences	Not Applicable (Element does not contain a code set)

CEDS Element
 Element could not be located in CEDS

Domain: All
Search:

- Early Learning
- K12
 - K12 School
 - LEA
 - SEA
 - K12 Student
 - Identity
 - Name
 - Other Name
 - Identification
 - Student Identifier
 - Student Identification System
 - Social Security Number
 - Personal Information Verification
 - Contact
 - Demographic
 - Enrollment
 - Academic Record
 - Attendance
 - CTE
 - Disability
 - Discipline
 - Language
 - Economically Disadvantaged
 - Homeless
 - Immigrant
 - Limited English Proficiency
 - Migrant
 - Neglected or Delinquent

Code **Description** Add

Figure 3. CEDS Element Tree View

Common
Education
Data
Standards

NCES



Macro-Level Data

District and School Information

Type	Name	Description
	District Accreditation	Raw Data: Current accreditation status for Districts.
	District Calendar Days and Hours	Raw Data: Comparison of district's calendar information.
	School District by Representative District	List of school districts by Missouri Representative District.
	School District by Senatorial District	List of school districts by Missouri Senatorial District.
	School District by Congressional District	List of school districts by United States Congressional District
	School Districts with Congressional District	List of School Districts with their United States Congressional District
	School Districts Map - County Boundaries	Map of Missouri school districts with county boundaries.
	School Districts Map - House District Boundaries	Map of Missouri school districts with House district boundaries.
	School Districts Map - Senate District Boundaries	Map of Missouri school districts with Senate district boundaries.
	School Districts Map - Congressional District Boundaries	Map of Missouri school districts with congressional district boundaries.
	District Enrollment by Grade	Raw Data: District enrollment by grade level for 1991-2014 (data as of 10/15/2014)
	District Enrollment 2007-2012	Raw Data: Multi-year enrollment by district.
	District Enrollment 2014	Raw Data: District Enrollment by district - ranked by percent of total State enrollment.
	District Dropout and Graduation Rates 2007-2011	Raw Data: 2007-2011 Dropout and Graduation Rates by District.
	Census of Technology 2011	Report: Summary Report of annual Census of Technology measures.

District and Building Graduation and Dropout Indicators

Type	Name	Description
	District Annual Dropout Rate	Raw Data: District dropout information. Includes total dropouts and race breakouts.
	District Graduate Analysis	Raw Data: District graduate analysis. Includes placement status on previous year's graduates.
	District Graduation Rate	Raw Data: District graduation rates. Includes total graduates and race breakouts.
	Four-Year District Graduation Rate	Raw Data: Four-Year State and District Graduation Rates
	Four-Year District Graduation Rate	PDF: Four-Year State and District Graduation Rates
	Building Annual Dropout Rate	Raw Data: Building dropout information. Includes total dropouts and race breakouts.
	Building Graduate Analysis	Raw Data: Building graduate analysis. Includes placement status on previous year's graduates.
	Building Graduation Rate	Raw Data: Building graduation rates. Includes total graduates and race breakouts.
	Graduates 16 Month Postsecondary Follow-up (SFSP-C11)	Report: Number of graduates who have enrolled in Postsecondary education within 16 months of graduation. This report is being published as on

District and Building Student Indicators

Type	Name	Description
	District Attendance Rate	Raw Data: District attendance rate. Includes K-12 and K-8 rates.
	District Demographic Data	Raw Data: District demographic data. Includes enrollment information by race. Data as of 10/09/2014
	District Discipline Incidents	Raw Data: District discipline information. Includes enrollment, number of incidents, and rates by offense and removal types.
	District Proportional Attendance Rate	Raw Data: District proportional attendance rate (students attending 90% of the time). Years 2009-2013. Includes K-8 and 9-12 rates.
	Building Attendance Rate	Raw Data: Building attendance rates.
	Building Demographic Data	Raw Data: Building demographic data. Includes enrollment information by race. Data as of 10/09/2014
	Building Discipline Incidents	Raw Data: Building discipline information. Includes enrollment, number of incidents, and rates by offense and removal types.
	Building Proportional Attendance Rate	Raw Data: Building proportional attendance rate (students attending at least 90% of the time). Years: 2009-2013. Includes K-8 and 9-12 rates.

District and Building Education Staff Indicators

Type	Name	Description
	District Faculty Information	Raw Data: District faculty information. Includes salary, degree, and years of experience. Data as of 10/09/2014
	District Student Staff Ratios	Raw Data: District staff ratios. Include student to teachers and student to administrator ratios. Data as of 10/09/2014
	Building Faculty Information	Raw Data: Building faculty information. Includes salary, degree, and years of experience. Data as of 10/09/2014
	Building Student Staff Ratios	Raw Data: Building staff ratios. Include student to teachers and student to administrator ratios. Data as of 10/09/2014
	Building Certification	Raw Data: Building teacher certification information. Includes number of teachers with a valid certificate and highly qualified teachers.
	District Certification	Raw Data: Building teacher certification information. Includes number of teachers with a valid certificate and highly qualified teachers.

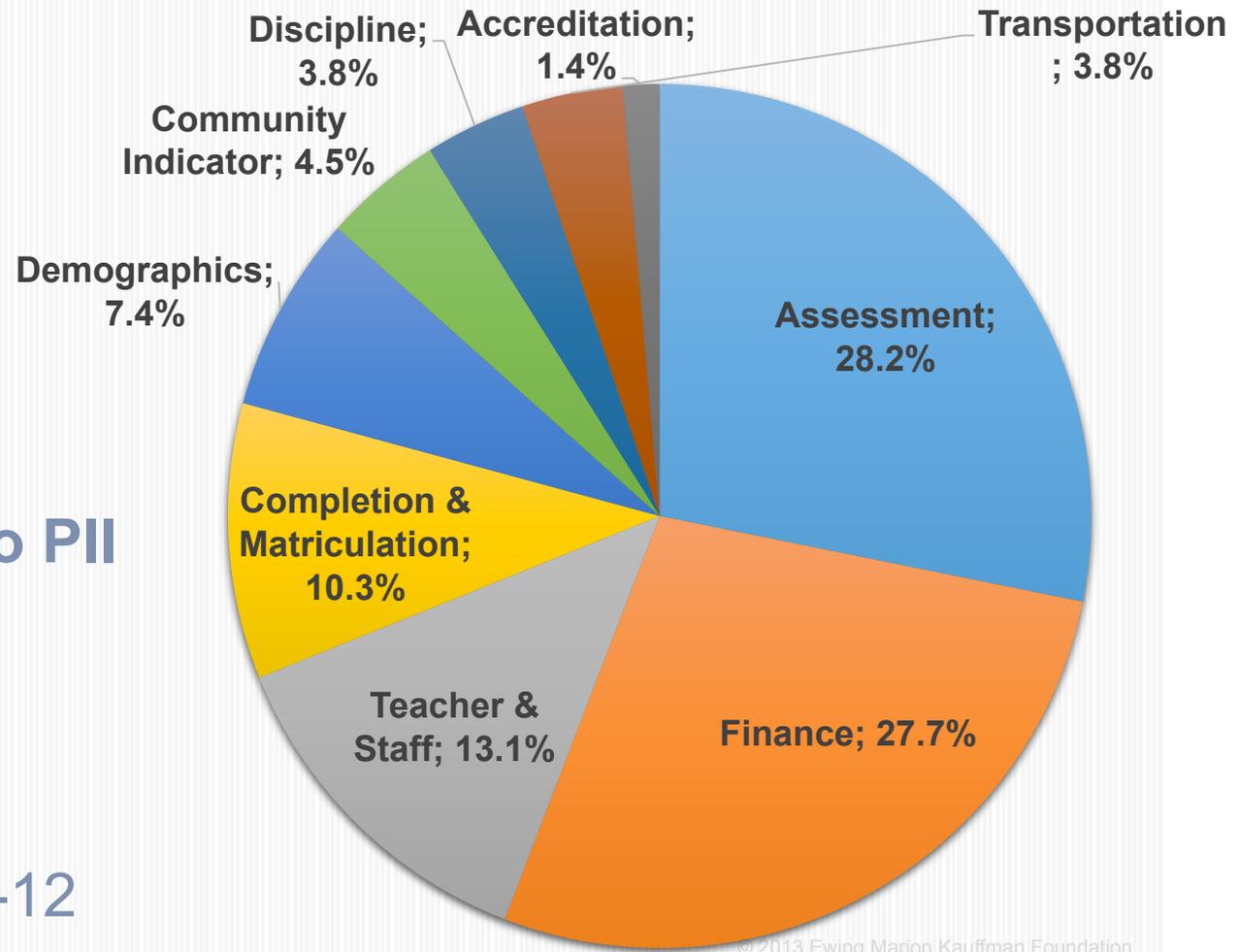
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The Data Behind EdWise

- 14 million records
- 600+ metrics
- Aggregate only, **no PII**
- Nine themes
- 100% of data is K-12



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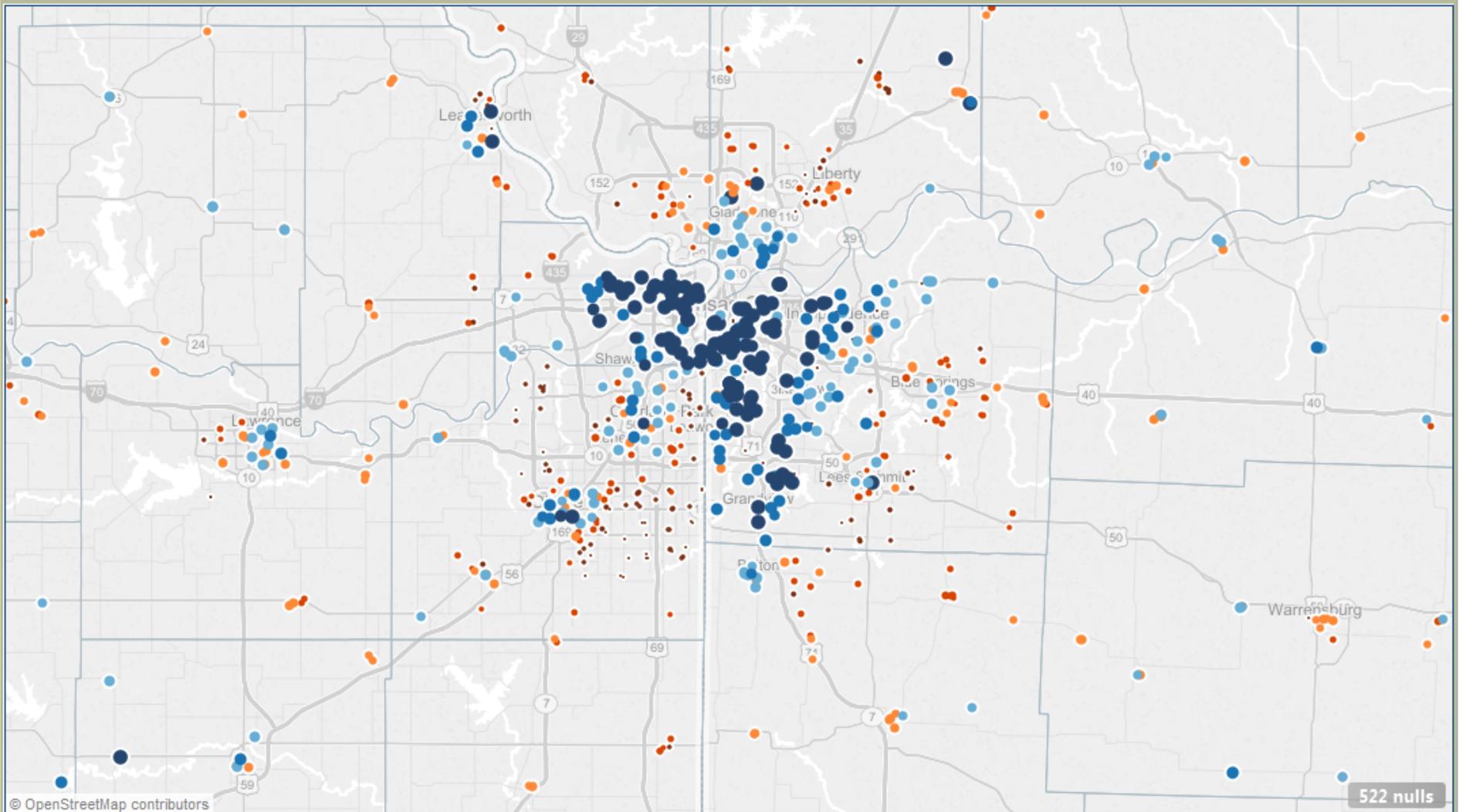
Beginning of School Year

2013



Tool 1: Mapping

Mapping Analytic - Percent of Students with Free or Reduced Lunch, January



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Tool 2: Find a District/School

Metric Measurement Level District	Beginning of School Year 2013	State Missouri	Grade/Assessment Group Null	Districts/Schools Matching Selected
Metric Category [A] Fall Enrollment				
Metric Value [A] 10000 50749				
Metric Category [B] Students Per Teacher				
Metric Value [B] 0 15				
Metric Category [C] Percent of Students with Free or Reduced Lunch, January				
Metric Value [C] 0.5 31.167				
Metric Category [D] Percent of Non-White Students within the Fall Enrollment				
Metric Value [D] 0.5 1				

State	District/School
Missouri	Ferguson-Florissant R-II
	Hazelwood
	Kansas City 33
	St. Louis City



Metadata Ontologies and Protocols

- IEEE 1484.12.1 – 2002 Standard for Learning Object Metadata
- Dublin Core Metadata Initiative –
- Others

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