Kansas' Education Longitudinal Data System (LDS)

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Kathy Gosa, Director, Information Technology

Kansas State Department of Education

Background

KIDS (Kansas Individual Data on Students)

- Student level data collection was implemented in 2005-2006 school year via KIDS
  - Assigns State IDs to PK-12 students
  - Tracks students as they move from school to school
  - Maintains longitudinal data regarding each student
    - links student's info across programs across time
    - eliminates data redundancy
    - provides more complete picture of student
- KIDS data is the basis for
  - state and federal funding,
  - state and federal reporting,
  - state assessments, interim assessments, and
  - school accountability
- KIDS data is also used for Direct Certification- KBI Missing Children-KFIT
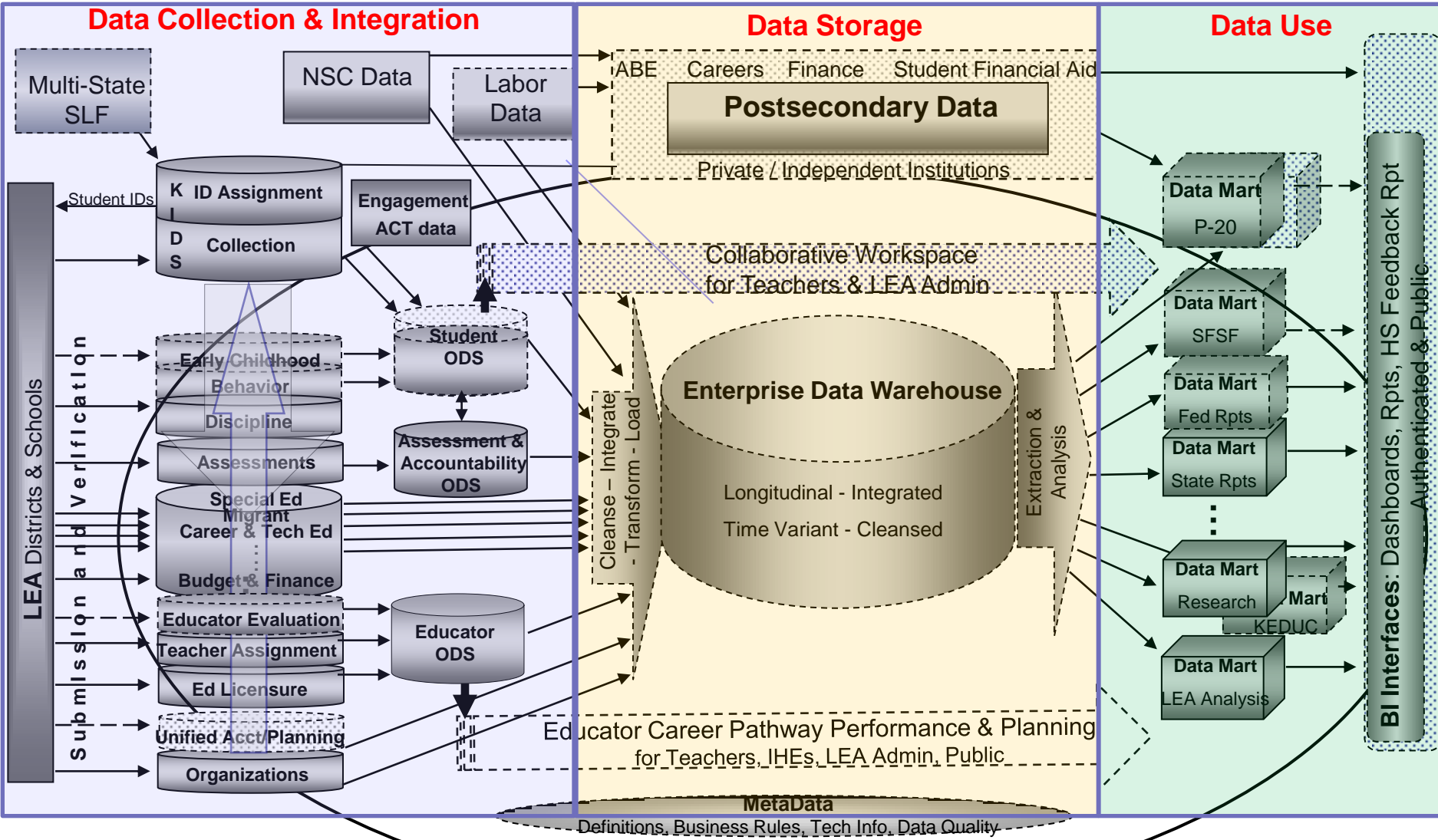
Background

- In 2007 Kansas funded KSDE's initial development of the Enterprise Data System (EDS), which included establishing a Data Warehouse with longitudinal, integrated, and time variant data across the PK-12 education enterprise.

  - Includes data linked across districts and programs as well as over time.

  - Goal is to provide a comprehensive picture of students, teachers, organizations, and programs in the education enterprise.

- Through federal grants, KSDE has now expanded the EDS to incorporate postsecondary data and to provide information back to education stakeholders.

KSDE Enterprise System Design

Staff & Stakeholder Training & Capacity Building + Data Governance

Data Collection & Integration

Data Storage

Data Use

Multi-State SLF

NSC Data

Labor Data

Student IDs

K I D S
ID Assignment
Collection

Engagement ACT data

LEA Districts & Schools

Submission and Verification

Early Childhood
Behavior
Discipline
Assessments
Special Ed
Migrant
Career & Tech Ed
Budget & Finance
Educator Evaluation
Teacher Assignment
Ed Licensure
Unified Acct/Planning
Organizations

Student ODS

Assessment & Accountability ODS

Educator ODS

ABE   Careers   Finance   Student Financial Aid

Postsecondary Data

Private / Independent Institutions

Collaborative Workspace for Teachers & LEA Admin

Cleanse – Integrate - Transform - Load

Enterprise Data Warehouse

Longitudinal - Integrated
Time Variant - Cleansed

Extraction & Analysis

Data Mart P-20

Data Mart SFSF

Data Mart Fed Rpts

Data Mart State Rpts

Data Mart Research

Mart KEDUC

Data Mart LEA Analysis

BI Interfaces: Dashboards, Rpts, HS Feedback Rpt — Authenticated & Public

Educator Career Pathway Performance & Planning
for Teachers, IHEs, LEA Admin, Public

MetaData
Definitions, Business Rules, Tech Info, Data Quality

Existing
In Progress
Planned / Grant

Common Authentication – Security Architecture & Policies
Tool and Process Standardization

Enterprise Architecture

12-2011

Susan Jones:

A look at her education
Longitudinal Student Data

Longitudinal Connection:

Susie Jones, Age 3-4

Susie enters the Early Childhood Special Education program receiving speech therapy services in a Kansas school district.

■**KIDS:**

☐ Susie receives her State Student ID (SSID) number via KIDS.

☐ The district reports Susie's participation in the speech therapy program as a 3 year old and the next year as a 4 year old.

■**LDS:**

☐ Federal reports submitted by KSDE include Susie in the school and district counts as well as the special education count.

☐ The district receives federal funding for Susie's participation in the Early Childhood Special Education program.

☐ Each year Susie's demographic information and participation in the Early Childhood Special Education program, both linked to her SSID, are loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones, Age 5-6

Susie enrolls in Kindergarten at the local school and at the end of the year is promoted to 1st grade. She completes her IEP for speech therapy at the end of her 1st grade year.

- **KIDS:**
  - The district reports Susie's enrollment and attendance information to KIDS.

- **LDS:**
  - Susie continues speech therapy in 1st grade as part of her Individual Education Plan (IEP).
  - Federal reports submitted by KSDE include Susie in the totals for the school and district as well as the special education count. These totals are used to calculate the district's fund allocations of IDEA, Title I, and other federal programs.
  - Each year Susie's demographic, enrollment, attendance and special education program participation, all linked to her SSID, are loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones, Age 6

In September after Susie starts 1st grade her dad loses his job so the family applies for assistance and moves to her grandparent's farm.

Susie attends the same school but she now rides the bus and receives free lunches.

- **KIDS:**
  - ☐ The district reports Susie's enrollment, attendance, and completed courses to KIDS.
- **LDS:**
  - ☐ Susie's district is notified (through direct certification) that she is eligible for the free lunch program.
  - ☐ The district's state funding includes Susie in the totals, and they receive additional transportation funding for her since she rides the bus 9 miles from the farm to the school.

Longitudinal Connection:

Susie Jones, Age 6-10

Susie's mom, an Army officer, is assigned to Ft. Leavenworth so just before Christmas Susie's family moves again.

Susie goes to school at Ft. Leavenworth through the 5th grade.

■KIDS

- ☐ KIDS notifies both districts when Susie enrolls in her new school.
- ☐ The district reports information about Susie's enrollment and attendance to KIDS during her 1st – 5th grade years.

■LDS

- ☐ During Susie's 1st grade year, due to a large influx of military dependent children (including Susie), Fort Leavenworth qualifies for additional Military funding.
- ☐ Each year Susie's school attendance and demographic information linked to her SSID are loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones, Age 8

As a 3rd grader Susie takes the state assessments for the first time.

She takes state assessments again during her 4th and 5th grade years.

- **KIDS**
  - Each year the district sends information about what state assessments Susie will take to KIDS.

- **LDS**
  - Each year Susie logs in online and takes the state assessments. Her teacher is able to see Susie's performance results immediately.
  - Each year Susie's performance on the state assessments and her attendance information are included in calculation of the school and district's AYP.
  - Each year Susie's assessment data linked to her SSID, is loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones, Age 9

Susie is promoted to the 4th grade.

- ■**KIDS**
  - ☐ The district reports Susie's course enrollment information to KIDS, providing a link to her teacher.

- ■**LDS**
  - ☐ As Susie's 4th grade teacher prepares for the year he is able to see that Susie did well on the 3rd grade reading assessment, but had some problems with the math assessment. He plans some additional instructional resources during the year for Susie focused on math skills.
  - ☐ When Susie's 5th grade teacher prepares for the year she notes that although Susie's achievement results show she was struggling with math in the 3rd grade, her state assessment scores from the 4th grade indicate she is now on target both in math and in reading.

Longitudinal Connection:

Susie Jones, Age 10

During Susie's 5th grade year her teacher administers interim assessments.

■KIDS

- ☐ The district sends Susie's course enrollment information to KIDS.
- ☐ KIDS course enrollment information provides a link to her teacher and subject area, allowing interim assessments in math and reading to be made available for Susie.

■LDS

- ☐ During the year Susie logs in online and completes interim assessments.
- ☐ Results are available immediately to Susie's teacher, and that allows him to adjust his instruction to target any areas of weakness identified.
- ☐ Since interim assessment data are useful only for instructional purposes, interim assessment results are not loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones, Age 11-12

Susie's family leaves Kansas and she enrolls in a Missouri school for the 6th and 7th grades.

- **KIDS**
  - ☐ Her Kansas school reports the date she left the state.
  - ☐ No data is collected after her departure.
- **LDS**
  - ☐ Data indicating Susie moved to another state is loaded into the Enterprise Data Warehouse.

Longitudinal Connection:

Susie Jones-Hayes, Age 13

For 8th grade, Susie returns to Kansas and enrolls in a different school district, now with a hyphenated last name.

■KIDS

- ☐ Susie's new district gets her original SSID from KIDS and updates her grade level and last name.
- ☐ Susie's enrollment, completed courses, and attendance information are reported by the district, using her reactivated SSID.

■LDS

- ☐ By reactivating the same ID, Susie's district and teachers can have access to her previous data from Kansas schools.
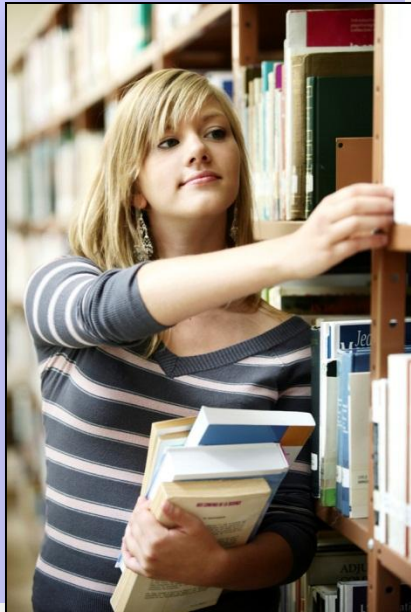
Longitudinal Connection:

■KIDS

- ☐ When Susie enrolls, her new high school gets her SSID from KIDS and uses that each year when reporting her demographic, enrollment, attendance, and course completion information.

■LDS

- ☐ Course data indicating Susie is taking Ms. Smith's PE course is made available to the K-Fit application where Susie reports her physical fitness data.

- ☐ Susie's physical fitness data linked to her SSID, is loaded into the Enterprise Data Warehouse.

- ☐ Data is extracted from the Enterprise Data Warehouse and de-identified for a research study regarding the link between physical fitness and student performance. The study includes Susie's (de-identified) data.

Susie Jones-Hayes, Ages 14

Susie matriculates from 8th grade to high school and takes PE her freshman year.

Susie Jones-Hayes, Ages 14-17

In high school, Susie participates in the district's career & technical education Teacher/Training Pathway.

Longitudinal Connection:

■KIDS

- ☐ Susie's school reports her completed courses and attendance information.

■LDS

- ☐ Data regarding Susie's courses for the Teacher/Training Pathway are included in the reporting for federal Perkins funding as well as state funding.

- ☐ Data regarding Susie's participation in the Teacher/Training Pathway is linked to her SSID and loaded into the Enterprise Data Warehouse.

Susie Jones-Hayes, Age 17

Susie took the ACT her junior year and at the end of her senior year she graduates from high school.

Longitudinal Connection:

■KIDS

□ The district reports Susie's graduation date and post graduation plans.

■LDS

□ Since Susie graduated with her original 9th grade cohort, she is included in the school and district graduation and dropout rate calculations as an on-time graduate.

□ Susie's graduation data linked to her SSID, is loaded into the Enterprise Data Warehouse.

□ The year after she takes the ACT Susie's results become available to KSDE. KSDE links the ACT results to Susie's SSID and loads the data into the Enterprise Data Warehouse.

Longitudinal Connection:

Susan Jones-Hayes, Age 18-22

Susan attends college in Kansas and as part of her curriculum completes a remedial math course her freshman year.

She transfers to another KS college as a sophomore, where she eventually graduates with a degree in education.

■ **LDS**

- ☐ Susan's college reports her enrollment, remedial coursework, and degree completion information to KBOR.

- ☐ The postsecondary data is linked to Susie's PK-12 SSID and loaded into the P20 Data Mart.

- ☐ KSDE provides High School Feedback Report information to Susie's high school and district administrators regarding the graduates who went to postsecondary, their performance on the ACT, completion of remedial coursework, and degrees earned.

Susan Jones-Hayes, Age 23+

Susan applies for and receives a Kansas teaching license. She begins work as an English teacher at a Kansas high school.

Longitudinal Connection:

■KIDS

- ☐ The students in Susan's classes are reported indicating Susan as the Teacher.

■LDS

- ☐ Susan receives an Educator ID and is granted a teaching license with an endorsement to teach high school English.
- ☐ Susan's Educator ID is linked to her PK-12 State ID.
- ☐ Susan's teaching assignments are reported by the district, and that data is included in the totals for state and federal reports.
- ☐ Susan's licensure and teaching assignment data linked to her Educator ID, are loaded into the Enterprise Data Warehouse.

Susan Jones-Hayes, Age 23+

Susan completes her first year of teaching and is evaluated by her supervisor.

Longitudinal Connection:

■ **KIDS**

☐ The students in Susan's classes are reported indicating Susan as the Teacher.

■ **LDS**

☐ The academic growth of Susan's students as demonstrated on their reading state assessments is included as part of her evaluation.

Susan's Longitudinal Data

- Includes snapshots of Susan's education career from preschool through postsecondary.

- Minimizes redundant data entry and data quality issues.

- Provides data to teachers, schools and districts to support instructional services for individual students.

- Allows teachers, schools, districts, and the state to see trends over time and to support data-driven decision making.

- Provides data to support evaluation of education programs.

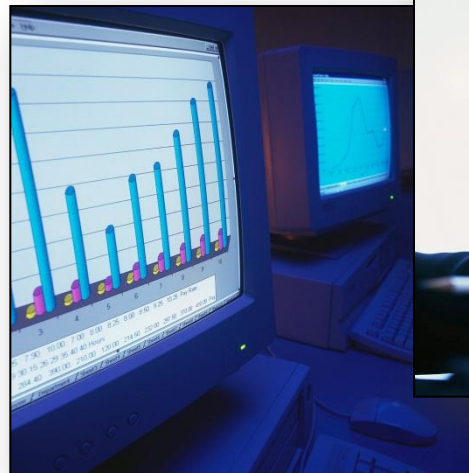- Provides feedback to schools and districts regarding their high school graduates.

LDS Considerations & Limitations

- KSDE collects only data required by the state or federal government.

- KIDS began in 2006 school year, so right now history is only 6 years!

- Privacy and confidentiality are a primary consideration and restrict how we can provide access to data.

- Data are useful only if it is of high quality. KSDE has implemented a number of initiatives to continuously address data quality.

- Timeliness – data are stored in the Enterprise Data Warehouse when it is finalized.

Using LDS Data – future plans

- Student Record Exchange
- Teacher Dashboard (Collaborative Workspace)
- Early Warning System
- Providing Postsecondary Qualified Admissions information schools.
- Predictive analytics for districts regarding PK-12 achievement and postsecondary success
- …

Questions?