Robust data governance: Requirements for informed education policy, program improvement, and research

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My Background

❖ Texas P-12 state education agency
  – Research to inform state policy & programs
  – Built state's research data warehouse

❖ Texas State University–one of largest university-TPPs in America
  – Research, evaluation, program improvement
  – Data Governance - local & state
  – Co-lead Research-TPP partnership

❖ Research using Texas data for 15 years

❖ Quantitative and mixed-methods research

Texas Context

❖ Almost the size of NSW

❖ 5.5 million primary & secondary students in gov't schools (38% more than Australia)

❖ Majority non-White

❖ 125 different home languages

❖ Rural – one school district bigger than VIC but only 14 students enrolled

❖ Urban – largest has 210,000 students

❖ Robust statewide data system since 1991

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Today's focus

1. What data are needed to inform policy?

2. What data collection strategies are needed and by whom?

What Data are Needed?

❖ Data collections should align directly with educational goals

❖ What are your state & national goals for education?

Texas Goals:

1) Ensuring compliance with laws & rules
2) Providing schools with adequate funding
3) Ensuring student learning & equity
4) Ensuring teacher qualifications

State & Federal Laws
Drive Data Collection Strategies

Texas Education Code Sec. 7.021(b)

(1) The agency shall administer and monitor **compliance** with education programs required by federal or state law, including federal **funding** and state funding for those programs.

(2) The agency shall conduct research, analysis, and reporting to **improve teaching and learning**.

Seems similar to Victoria's Education and Training Reform Act 2006, Sec. 5.1.2 – Supply of Info

State & Federal Laws Drive Data Collection

❖ Sec. 48.008. PUBLIC EDUCATION INFORMATION MANAGEMENT SYSTEM (PEIMS).
(a) Each school district **shall participate** in the Public Education Information Management System (PEIMS) and **shall provide** through that system information required for the administration of this chapter and of other appropriate provisions of this code.

Seems similar to CASES21

PEIMS is an SLDS

❖ State longitudinal data system (SLDS)
❖ Up to 30 years of P-12 student data:
  – Enrollment & demographics
  – Services received
  – Classes taken & grades earned
  – Statewide assessments
❖ Up to 60 years of teacher data:
  – Educator licenses
  – Degrees
  – Classes taught & students (since 2011)
  – Salaries

Research Data Warehouse

❖ P-20W Research SLDS (TEC 1.005)

❖ Contains data from 3 state agencies

– Primary & secondary students & educators

– Post-secondary

– Workforce

❖ Longitudinally track person from preschool to retirement

❖ Detailed processes & rules to protect confidentiality

❖ NO personally identifiable information

Teaching Out-of-Field
American Context

❖ No Child Left Behind of 2001 (NCLB) – OOF teaching is <u>illegal</u> in core subjects

❖ Every Student Succeeds Act of 2015 (ESSA) – OOF teaching is <u>legal</u>

❖ But… Distribution of OOF teaching must be *<u>equitable</u>* under ESSA

– Equal for white and non-white students

– Equal for poor and wealthy students

– Equal for rural and urban and suburban

Teaching Out-of-Field

Van Overschelde & Piatt, 2020

❖ Dramatic increase in students taking OOF classes since ESSA passed

❖ Students not equitably taking OOF classes

❖ Teachers not equitably assigned OOF classes

❖ The longer ESSA in effect, the more classes are taught OOF

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Impacts on Students?

Van Overschelde, in press

Van Overschelde & Lopez, in preparation

❖ 235 million student-class-teacher records for <u>Secondary students</u> from 2011-2019

❖ Selected students in Math Grades 7 & 8, Algebra I, English/Reading Grades 7 & 8, English I, and English II

❖ State end-of-course exams

– Curricula & exams aligned

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Out-of-Field Determination

❖ Determined legal teaching status using detailed state rules

– Map of teaching license to course/subject

231.121. English I-IV, Grades 9-12.
An assignment for English I-IV, Grades 9-12, is allowed with one of the following certificates.

(1) **English Language Arts and Reading: Grades 7-12.**

(2) English Language Arts and Reading: Grades 8-12.

(3) Grades 6-12 or Grades 9-12--English.

(4) Grades 6-12 or Grades 9-12--English Language Arts, Composite.

(5) Junior High School (Grades 9-10 only).

(6) Secondary English (Grades 6-12).

(7) Secondary English Language Arts, Composite (Grades 6-12).

Is OOF Teaching Bad for Students?

❖ 3-level value-added model

❖ Controlled for differences among students, teachers, and schools

Results:

❖ Students **hurt** by OOF teaching in Math & English, all grade levels

❖ Eliminate poverty for 3.4 million students – half the effect of making OOF teaching illegal

TIMSS

Texas results applied to Australian context

❖ TIMSS Math – ACER report 2019

❖ Year 4 – Score 516 – Rank 27
  – No OOF teaching
  – **Score 548 – Rank 9**
  – Tied with Ireland
❖ Year 8 – Score 517 – Rank 10
  – **Score 571 – Rank 6**
  – Just above Russian Federation

An *Effective* Education System

Must Have

Clear Goals +

High-Quality, High-Actionable Data +

Research to Inform Practice & Policy

Contact Information

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