Data-Process Mapping

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- Created in 1899 as normal school
- 750-900 graduates per year
- 3,500 students seeking initial certification

- Banner is student info system
- TK20 is e-portfolio system
My Roles

Split appointment

• 50% Director of evaluation & research for Office of Educator Preparation (OEP)
• 50% Tenure-track faculty in C&I

• Leading formative evaluation of our initial and professional certification programs
• CAEP committee
• Member of Data Governance Council, 12-person presidential council
Our Data Needs

- Formative evaluation
- State and federal government reporting
- CAEP accreditation
- Grants
- Research studies
Need to Know!

- What data do we **have**?
  - Systems, types of data (*SIS, survey*), formats

- Who uses data and for what purpose?
  - Reports, screens, exports, decisions

- Who enters or changes data and why?
  - Under what conditions

- What kinds of data errors are introduced?
  - Macro: business rules not followed
  - Micro: typo, wrong person, error in source

- What do the data elements mean?
Data-Process Map?

- A visual representation (flow chart) of how data moves through an organization that includes:
  - Inputs
  - Outputs (reports, data lookup)
  - Transformations (changing data or moving data from one system to another)
  - Decision points (use of data)
- Different colors represent different data systems
Step 1

- Interview all folks involved
  - What do you do for educator preparation?
  - What data systems do you work with, including Excel, Banner, ePortfolio, etc?
  - What reports do you use or generate?
  - Do you move data from one system to another? If so, when and how?
  - If there was one process we could improve, which one would have the greatest positive impact on your job?

- Question assumptions!!!
Step 2

- After *each* interview, update the data-process map
- Clarify any points with interviewee, if needed.
- Make list of One-Changes

- Meet with interviewee again to confirm accuracy of revised map (short meeting)
Step 3

- Identify manual data processes
  - Includes data entry or data change
  - These are ERROR prone, even with very detail-oriented people
  - Usually a major source of process inefficiencies
Identify Errors & Inefficiencies

Verify Degree Audit for Prereq Courses, & Calculate GPA

Web form sends email, copy to excel, type data from Banner

Student Applies For Field Experiences

Change to DENIED

Add TCERT “Cohort Code”

Students Takes Ed Core Courses

Profs indicate # of placements per school

Manual Check Prereqs & Overrides

Yes

APPROVED, but no record of placement

Overrides

Grade Assigned
Errors

1)

2)

3)

4)

5)
Inefficiencies

1)

2)

3)

4)

5)
Pick Low Hanging Fruit

Which process changes would

1) Increase data quality
2) Increase process efficiency
3) Reduce staff stress
4) Easy/quick to accomplish
Change 1

Create ePortfolio Field application

- Pre-populate with Banner student info based on login and export all applications to excel

- Eliminated all 4 sources of errors, increasing data quality

- Eliminated 3 of 4 inefficiencies, saving 160+ staff hours per semester
Change 2

TCERT cohort code did not mean what we thought it meant

- We thought it meant *successful admission* to program, as required by state law
- But, anyone in advising could set it

Solution:

- IT created .net application so only our office can add/remove TCERT code
- TCERT now means *successful admission*
Change 3

Certification codes did not uniquely identify certification sought (T1F, TCER)

- Made state/federal/accreditation reports less accurate than desired

Solution: Create new codes & fix student records

- Impacts most down-stream data systems
- Requires cross-university team to fix
- 18-month process
- Must run reports weekly to identify bad certification code/major combinations
Need External Data Linked to Internal

- State Board of Educator Certification
  - Certifications
  - Certification test results
    - State will NOT release high quality data

- Texas Education Agency
  - Principal survey data
    - Teacher quality & effectiveness
  - Employment data
    - Rate, mobility, attrition

- Must share IDs for optimal match