Harnessing Big Data in Higher Education - Evaluators as Data Scientists

How'd we get here?

The Great Recession

- Increasingly tight budgets, shrinking funding
- Belt-tightening with no end in sight

Demands for a business-focus (particularly in for-profit colleges)

Rising college tuition costs and skyrocketing student debt without a commensurate rise in completions

Proving value instead of taking it for granted

Technological advances to accelerate analysis

What you need to know

Demands for evidence-based decision-making are increasing (paired quantitative with qualitative results)

Talk in their language (business/management)

Evaluators have the three key things (technical expertise, business acumen, communication finesse)

Common sense helps (evaluators have this)

- Intelligent data mining – not just-because-you-can

Funding will continue to be challenging, innovate to weather the storm

What is a data scientist?

3 key identifiers: business acumen, technical expertise, communication finesse

What is a data scientist? How is that the same or different from an evaluator?

- Evaluator competencies (business acumen, technical expertise, communication finesse)

What is Big Data?

- Structured and unstructured data to be mined for patterns and predictors of behavior
- Business intelligence (analysis of data - statistical and substantive)
- Dealing with noisy data and data in disparate places (the importance of synthesis)

Why should I apply data science to higher education? How do I do that?

- Storytelling and key questions

What does "big data" in higher education mean? (examples)

- ASU Article
- RMCAD – competencies, assessment, course evals, perf mgt, gainful employment systemic linkage – prepping the data for this
- Data-driven decision-making
- Upending tradition
- The importance of logic-modeling

Where do we go from here?

It's not going to get any easier

- Funding will continue to require justification and use of data

You already know this stuff

- Use your common sense
- Avoiding the creepy factor

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Working with what you have
- I don't have $/resources/time, here's what I CAN do
- Simple cleaning and screening can reveal interesting things
- Good process (logic models, evaluation plans, data collection guidelines)
- Relationships
- Context

What you can do today

Know your audience
- How do they make decisions?
- How do they collectively see the world?
- To what constraints are they beholden? (What do they have to prove and say?)
- How can you provide a bonus data tidbit? (some freebies are good)
    - Example – Clearinghouse data

Harness your data
- Clean it, screen it, organize it, reformat it
- Blend it together for analysis
- Find a good database analyst (DBA) to help you when possible

Be reasonable
- Use common sense to guide you

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