Week 8 Video 5

Conclusions and Future Directions

Whew…

- It's been a long semester

- We've laughed
- We've cried
- We've analyzed data

We've discussed

□ Key EDM/LA methods

□ And how they can be used

□ To promote
- New scientific discoveries & to advance learning sciences
- Better assessment of learners along multiple dimensions
- Better real-time support for learners

Lots of Methods

- There are a lot of methods for exploring the big data now available in education

- We've gone through most of the ones that are currently most prominent

- But this is always changing

To see what's most prominent next year

☐ Follow the EDM and LAK conferences and journals

The field of data mining is changing quickly

- And sub-areas like educational data mining are changing with it

- Some of the new ideas in other areas will eventually transform educational data mining
- And some won't

Final Notes

- When there's a research question, there's a good analytical or statistical method for it

- Occasionally you have to invent it

- But make sure to check first for a method that someone (or some research community) has already developed and refined

To put it another way

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- "Anything that's worth doing is worth doing badly" – Herb Simon

- But gosh, it's even better to do it well
  - And to be able to determine which way is better

Some potential future directions

- More and more constructs will be modeled
  - Making discovery with models ever more feasible and powerful
- The constructs we're already modeling will be modeled better
- The low-hanging fruit will disappear and we'll move towards the slog that characterizes more mature fields
  - We're already seeing this for knowledge inference

Some potential future directions

- Validation will become more and more stringent
- Educational data will get bigger
    - Making less conservative methods more feasible
- Big educational data will become easier to get

Some potential future directions

- We'll get better at using the results of EDM analyses
- Figuring out how to use it to drive more and more sophisticated automated personalization
- As well as how to incorporate instructors and other expert humans more effectively into the decision loop
  - Dashboards
  - Design

Some potential future directions

□ Educational inference and prediction will become more and more effective

  ■ And the societal questions of how and why we use these methods will become bigger than the technical questions

To learn more

☐ See Data, Analytics, and Learning

☐ Also on EdX

To learn more

- Follow @BakerEDMLab on Twitter
- Or "Baker EDM Lab" on Facebook

- Or come do a Masters in Learning Analytics at Teachers College

- Or just come to EDM or LAK!

Big Data in Education