EDM 2018 Policy & EDM: Norms, Risks, and Safeguards

Collin F. Lynch

North Carolina State University, Raleigh North Carolina.

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Our Goal(s)

Our goal is education: to mine educational data to extract pedagogically-relevant information to support students, educators, communities, and educational institutions.

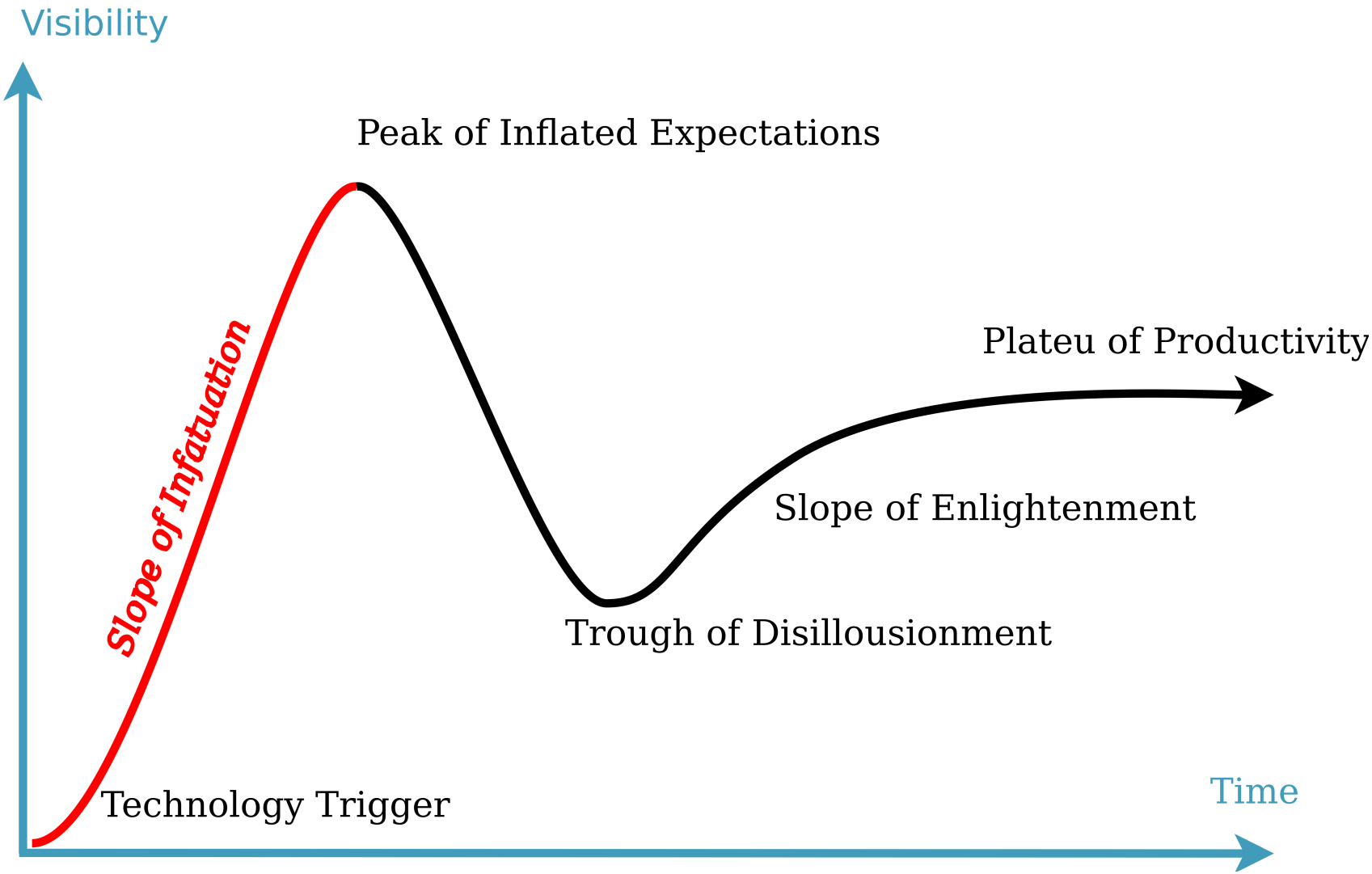
Our Successes

- Student modeling.
- Data Driven Feedback.
- Student/Class monitoring.
- Recommender systems.
- Open Learner Models.
- etc.

But...

- As EDM has become commonplace so to has data retention.
- As data becomes more widespread so too can abuse.
- As data becomes more widespread so do metrics.
- As data grows valuable issues of ownership and security arise.
- *EDM has grown out into the world,*
  but it still needs to grow up.

The Hype Cycle (Where are we?)



Some questions

- Who *owns* the educational data? Is it the property of service providers who 'manage' it, schools that 'harvest' it or students and teachers that 'generate' it and who are its subjects? (Lynch 2017)

- Can student data be treated as *proprietary* information? Should schools be dependent upon third party providers to manage, evaluate, even vet crucial records?

- How do we judge the effectiveness of educational models *in context*, and how can we ensure that their use meets our normative goals? Can such systems be judged in isolation?

Some questions (2)

- Should students, parents, or educators be permitted to access and even to challenge the contents of online profiles or data driven assessments as is permitted under some laws (Reidenberg et al. 2013)? - If so how could they do so?
- Can students, parents or educators opt-out of data-driven decisions or monitoring tools? If so at what cost?
- How should schools pay for mandated data retention? Should schools be allowed to sell records as a form of *surveillance capitalism?* (Zuboff 2015)
- Should educational data be portable? If so how do we balance the commercial needs of vendors with the rights of students?

Some questions (2)

- What, if any, safeguards can be put in place to mitigate harms, and at what level should they be imposed?
- What *standards* should we meet before we use our tools with real students? And who gets to decide?

Some questions (2)

- What are we *doing* to education?

Some questions (2)

- The history of ethics/law is a history of horrors.
- Harms are not always as obvious as making a kid drink radioactive milk.
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  - Privacy *from whom*?
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- Harms to opportunities & outcomes.
- Harms to society.

EDM 2017: Panel

- Ma. Mercedes Rodrigo: Ateneo De Manila University
  - Recent changes in privacy laws in the Philippines.
- Danielle McNamara: Arizona State University
  - Inconsistencies between restrictions on schools, companies, and governments.
  - Double-standards of data.
- Robby Robson: Eduworks Corporation
  - IEEE Standard for "Ethically-Aligned Design"

EDM 2017: Panel

- Yong Zhao: University of Kansas
  - How do you issue warnings for education?
  - How does EDM deal with unproductive success vs. productive failure?
- Neil Heffernan: Worcester Polytechnic University
  - Open science vs. data privacy.
  - It is always possible to de-anonymize data.

Questions for today

1. What are the *norms* that should govern EDM, and what are the goals that we should have when developing and deploying it?

2. What are the *risks* that unplanned adoption can have to students, parents, educators, and communities?

3. And what *policies* or safeguards can be put in place to address them?

Schedule

- *8:30 - 9:00* Opening Remarks and summary of past events.
- *9:00 - 9:15* Ethics in AIED/EDM a summary of the workshop.
- *9:15 - 9:35* Taking Student Data for Granted? A Multi-Stakeholder Analysis of a Learning Analytics System
- *9:35 - 9:55* Student Privacy State Legislation: Trends Since 2013
- *9:55 - 10:15* Breakout 1: Norms & Risks
- *10:15 - 10:30* **Caffene**
- *10:30 - 10:40* Norms, Compliance & Credit Evaluating EDM in Context
- *10:40 - 10:50* An Overview of Algorithmic Harm Types in Education
- *10:50 - 11:20* Experience Panel: Working with policies.
- *11:20 - 11:40* Breakout 2: Policies
- *11:40 - 12:00* Closing Wrapup.

Lynch, Collin F. (2017). "Who Prophets from Educational Data Mining? New insights and new challenges". In: *Theory and Research in Education* 15.3. Ed. by Ben Kotzee, pp. 249–271.

Reidenberg, Joel et al. (2013). *Privacy and Cloud Computing in Public Schools*. Fordham University Center on Law and Information Policy. URL: `http://ir.lawnet.fordham.edu/clip/2`.

Zuboff, Shoshana (2015). "Big other: surveillance capitalism and the prospects of an information civilization". In: *Journal of Information Technology* 30, pp. 75–89.