Harnessing Technology to Improve K-12 Education

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The future of the American economy depends on improving our K-12 education system

- Economic growth depends on our capacity to educate, innovate, and build
- U.S. economy is strong in many areas, most notably innovation, but K-12 performance is a weak link

How can we apply America’s strength in innovation to improve K-12 education?

Observation: New technologies have driven remarkable advances across a wide variety of sectors, including agriculture, transportation, manufacturing, IT, health, etc.

- Why not K-12 education?
Large barriers disrupt the creation and adoption of effective learning technologies

**K-12 Schools**

**Buyer uncertainty**
- Don’t know what works
- Can’t evaluate claims

**Buyer heterogeneity**
- 14k local school systems
- Different curricular goals, procurement systems, technology platforms

**Innovators, Entrepreneurs**
Large barriers disrupt the creation and adoption of effective learning technologies

K-12 Schools

Innovators, Entrepreneurs

Result
Every sale a custom effort, with huge marketing costs ($ and time)
⇒ Little innovative entry
⇒ Poor technology choices
Proposal: the creation of EDU STAR

K-12 Schools

Common Core State Standards

EDU STAR

Broadband Internet Platform

Innovators, Entrepreneurs
The EDU STAR system: Evaluation + Reporting

1. **AUTOMATED ASSESSMENT: BASELINE**
   - Students login to system
   - Take short test assessing relevant Common Core skill(s)

2. **AUTOMATED RANDOMIZED ASSIGNMENT**
   - Students randomly assigned among tools being tested

3. **INTERVENTION A**
   - Learning technology A dedicated to the Common Core skill(s)

4. **INTERVENTION B**
   - Learning technology B dedicated to the Common Core skill(s)

5. **PLACEBO**
   - Trial may include a “placebo” intervention as a control

6. **AUTOMATED REASSESSMENT**
   - Take short test assessing same Common Core skill(s)

7. **AUTOMATED ANALYSIS**
   - System analyzes results
By breaking down core barriers, EDU STAR can unleash the potential of education technology

- Funders
  - U.S. Department of Education’s i3 fund
  - Foundations investing in education technology

- Partners
  - Content (e.g. Khan Academy, etc.)
  - Technical Support (e.g. Google, Amazon, etc.)
  - Evaluation & Reporting (universities, Digital Promise, etc.)

- Catalysts
  - Teachers (as adopters, innovators, raters)
  - Entrepreneurs (with lower barriers to entry)
  - Parents/students (at home market, demand for best tools)