FabLab@School

Paulo Blikstein
Twitter: @pauloblikstein, #fablabatschool

Transformative Learning Technologies Lab
http://tltl.stanford.edu
http://fablabatschool.org
I don't know
It helps clean the windows.

Window cleaner

Turns around

Spins around

Sticky note

Roto

Head

Body
STEM “Pipeline”
9 year old

Undergraduate at an elite university
Best predictor for STEM career choice:

Course taking

Performance and grades

Interest in science in 8th grade
Best predictor for STEM career choice:

Course taking

Performance and grades

Interest in science in 8th grade

(Maltese & Tai, 2011)
FabLab@School
stanford, moscow, palo alto, thailand, (and soon) east palo alto, finland.

in conversations with singapore, india south korea, brazil
"Inventing things is important for me"

High-income

Low-income

Strongly Disagree | Disagree | Slightly Disagree | Slightly Agree | Agree | Strongly Agree
"Inventing things is important for me"

- Strongly Disagree
- Disagree
- Slightly Disagree
- Slightly Agree
- Agree
- Strongly Agree

High-income vs Low-income
"When I see something broken, I immediately think of a way to fix it"
Intelligence as a fixed vs. maleable entity

- Fixed:
  - High-income: 2
  - Low-income: 3.5

- Maleable:
  - High-income: 5
  - Low-income: 4
Inventiveness metric

- Used lab
  - Disagree
  - Agree

- Didn't use lab
  - Disagree
  - Agree
Technological Literacy Test

Average of pre-test: Female 16.8, Male 18.6
Average of mid-test: Female 21.9, Male 21.0
Average of post-test: Female 23.4, Male 24.8
Technological Literacy Test (improvement)

Average of mid->post
- female
- male

Average of pre->post
Multimodal Learning Analytics: new forms of assessment for complex learning
Clustering Snapshots to Find Milestones
FabLearn 2012
II Digital Fabrication in Education Conference
design • build • make • learn

DATE | October 17, 18 2012
TIME | 9:00AM - 4:00PM

Transformative Learning Technologies Lab
520 Galvez Mall, Stanford, CA

Thank you!

FabLab@School

Transformative Learning Technologies Lab
http://tltl.stanford.edu
Additional Slides
I might show
N.J. Burger King Testing Energy-Producing Speed Bump

& Rick Leventhal - FOXNews
Would you like a charge with those fries?

Can a fast food drive-thru lane actually provide clean green electricity?

A company called New Energy Technologies is betting on it.

The firm has developed a prototype device it's now testing at a Burger King in Hillside, New Jersey.

Click here for a VIDEO report from FOX News Channel's Rick Leventhal

The “Motion Power Energy Harvester” is designed to capture kinetic energy from vehicles that would otherwise be lost when drivers hit the brakes to pick up their Whoppers.
4 min  
http://youtu.be/Vwdi2U2ngyg

1 min  
http://youtu.be/7Y7LlgJaw4c

Shakira  
http://youtu.be/sEVC9qs4HMg
EPAA Video
EPAA Student Video (Shakira)