Rigorous Learning with Technology

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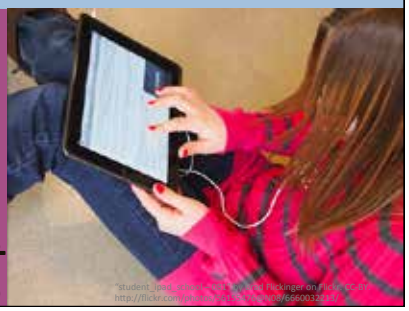
University of Michigan School of Information
Download slides: bit.ly/fontblog

Acamis @ AISG
14 March 2015
3-4pm



"student_ipad" Copyright 2013 by Fred Flickinger on Flickr. CC-BY-NC-SA. http://flickr.com/photos/fred_flickinger/6660032213/

Big Questions Road Map

Today

- What have we learned in our 35 years of bringing ed tech into the schools?
- How can we develop building-wide vocabulary to discuss tech-rich, thinking-rich work with one another?
- How do we go beyond, "Make a video! Be creative!" to identify and communicate what "good work" looks like in various multimedia genres?

Download today's slides:
http://bit.ly/fontblog

"Day 212, July 30th: Lego army" by Katy Stoddard on Flickr. CC-BY-NC-SA. http://flickr.com/photos/katy_bird/7680292828/

Which of these technologies have you used as either a student or a teacher?

http://www.digibarn.com/collections/systems/applell-bell-and-howell/CIMG2740.JPG

Image: 'hardcore gaming at the office'
http://www.flickr.com/photos/35448539@N00/5229554976
Lemonade
COPYRIGHT 1979 APPLE COMPUTER INC.

http://bebetoocool.files.wordpress.com/2010/06/macintosh_classic.jpg

AMERICA
Online

http://upload.wikimedia.org/wikipedia/commons/e/e7/PalmPilot5000.jpg

TURN AND TALK:

How have past technology initiatives improved student learning?

What made them succeed?

Where have we fallen short?

How far have we come in using computers to promote cognitive growth in the past 35ish years?

Image: http://en.wikipedia.org/wiki/File:Bell_and_Howell_Apple_II.jpg by Jeff Keyzer, used with a Creative Commons Generic Attribution 2.0 License

THEN
Paucity & High Cost
Careful Selection of Tools

NOW
Abundance & Low/No Cost
Careful choice doesn't matter…
Or does it?

http://bit.ly/bridger-ipad

TURN AND TALK!

If a two year-old can use an iPad, what are the implications for our work?

Image: 'whoa' http://www.flickr.com/photos/54021469@N00/653976303

I would add … what does reading mean to this kid?

What does an iPad represent to him?

What are *those* implications?

Image: 'whoa' http://www.flickr.com/photos/54021469@N00/653976303

Turn and Talk

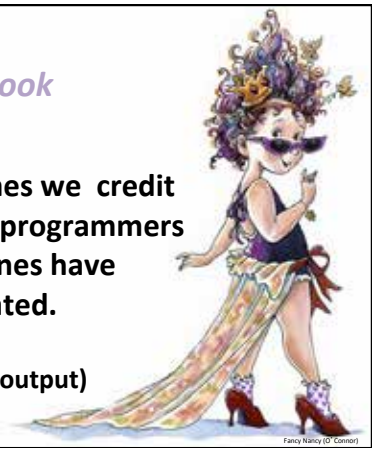
- **How effectively are we teaching students…**
  - to interpret the world beyond text?
  - to create multimedia products that effectively convey messages and content understandings?
  - about employing compelling aesthetics
  - about multimedia genres?

"Fossil Sitting in Sunlight" by A Guy Taking Pictures on Flickr. CC-BY. http://flickr.com/photos/80901381@N04/7649502498/

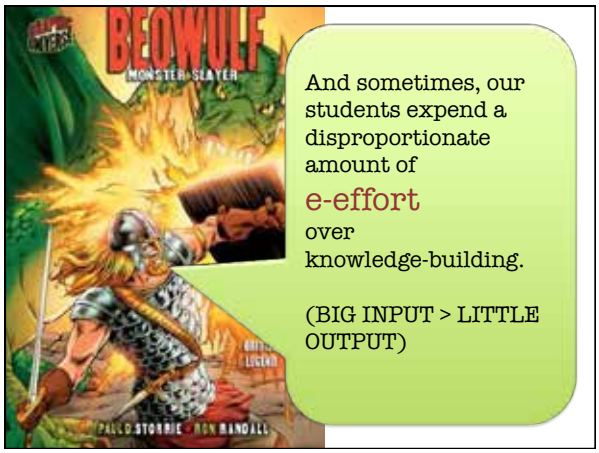
It's so easy to make things look fancy…

…that sometimes we credit students what programmers behind the scenes have actually facilitated.

(Little input > Big output)

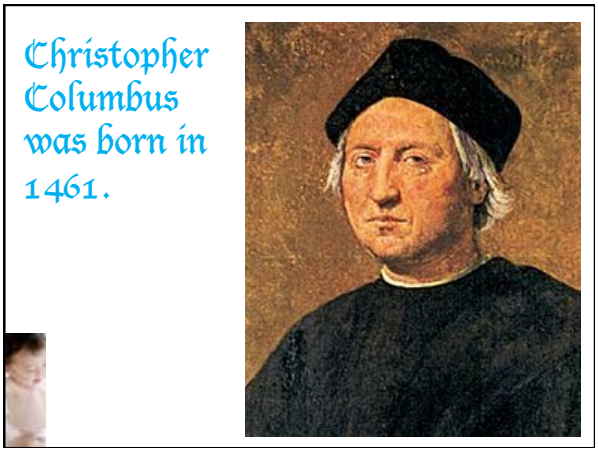


Fancy Nancy (O' Connor)


BEOWULF
MONSTER SLAYER
And sometimes, our students expend a disproportionate amount of
e-effort
over knowledge-building.
(BIG INPUT > LITTLE OUTPUT)

Let's look at a student work sample.
Which do you see: Fancy Nancy or E-Effort?
"Funny – A Hoot by @Doug8888 on Flickr. CC-BY-NC-SA
http://flickr.com/photos/doug88888/3295094303/

My Explorers Report!!!!!!!
BY KRISTIN FONTICHIARO


Christopher Columbus was born in 1461.

HE WAS BORN IN ITALY.

HOME OF PIZZA!!!!!!! YUM!!!!

HE HAD THREE BOATS:

NINA

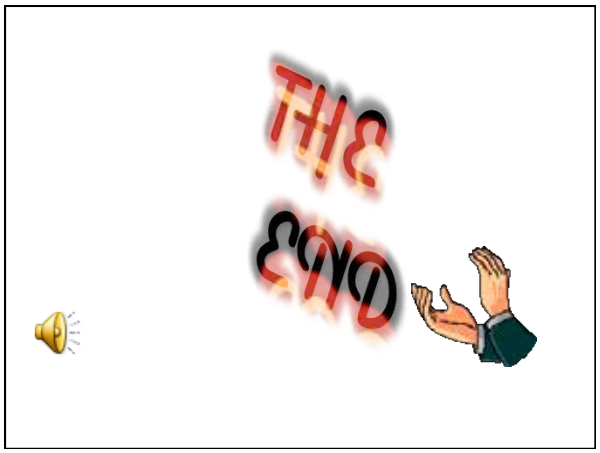
PINTA

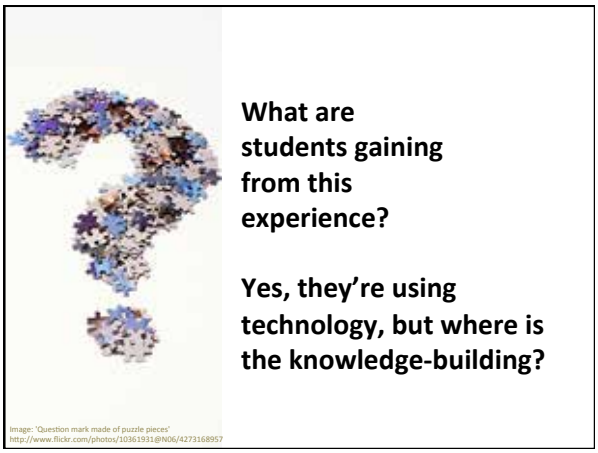
SANTA MARIA

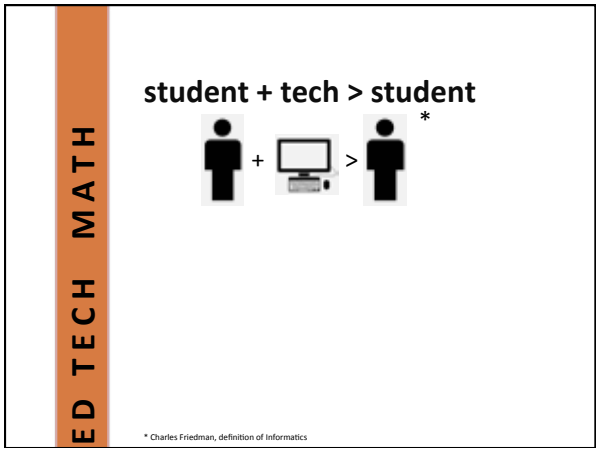
He discovered AMERICA!!!

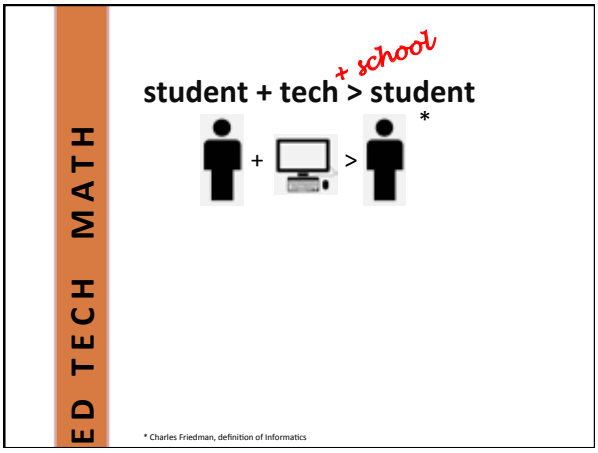
He died in 1506.

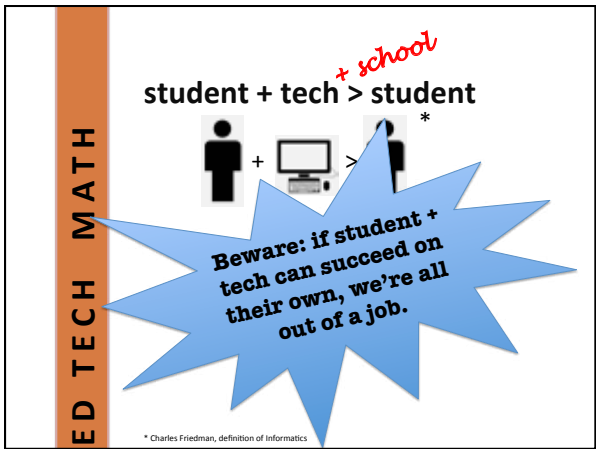
It was sad.


THE
END


What are students gaining from this experience?
Yes, they're using technology, but where is the knowledge-building?
Image: 'Question mark made of puzzle pieces' http://www.flickr.com/photos/10361931@N06/4273168957

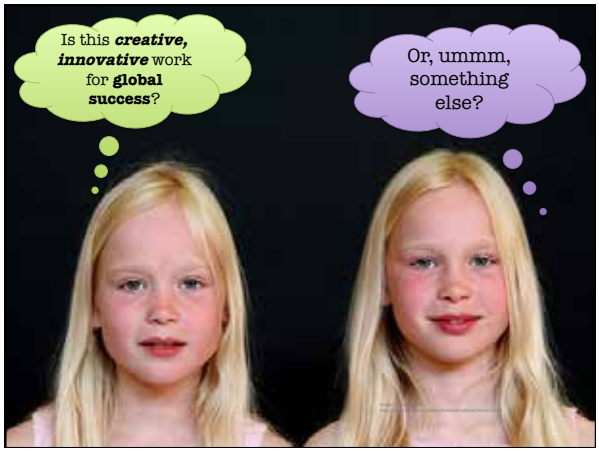

ED TECH MATH
student + tech > student
+
>
*
* Charles Friedman, definition of Informatics

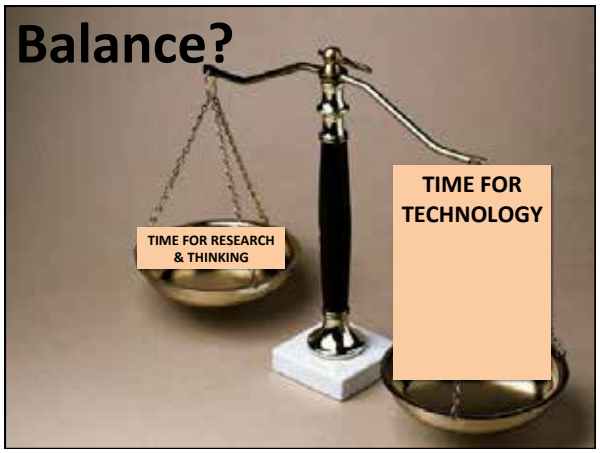

ED TECH MATH
student + tech + school > student
+
>
*
* Charles Friedman, definition of Informatics


ED TECH MATH
student + tech > student
+ school
*
Beware: if student + tech can succeed on their own, we're all out of a job.
* Charles Friedman, definition of Informatics

Sorry WE'RE CLOSED
Which parts of this project could NOT be outsourced to <insert country name>? (And who would buy it?)

If I had turned in this assignment as a paper-and-pencil product, would you have been proud of me?


Is this creative, innovative work for global success?
Or, ummm, something else?



Where's the Beef?*
How Do We Know ~~Rigor~~ Vigor** When We See It?

* Bernajean Porter; ** Joanne Yatvin

Norms Matter.

"Harrison Roses" by Susan Noakes McCord, around 1860.
From the collection of The Henry Ford.
http://www.thehenryford.org/exhibits/quiltinggenius/quilts/73_120_1.asp

Quilt for Bobby Unser by "Racing's Quilt Lady" Jeanette Holder.
From the collection of The Henry Ford.
http://www.thehenryford.org/exhibits/pic/2010/may/quilt.asp

You can't just push away the uncertainties; you have to push through them."

-Jeff Stanzler

So I started pushing ….

Rigor means exciting challenge, not rigor mortis! Insert VIGOR if you prefer*

Rigorous Learning with Technology

(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)

Rigorous Learning with Technology

* Charles Friedman, definition of Informatics

"Man" by Michael McMillan and "Computer" by Alyssa Mahlberg from thenounproject.com collection.
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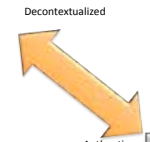
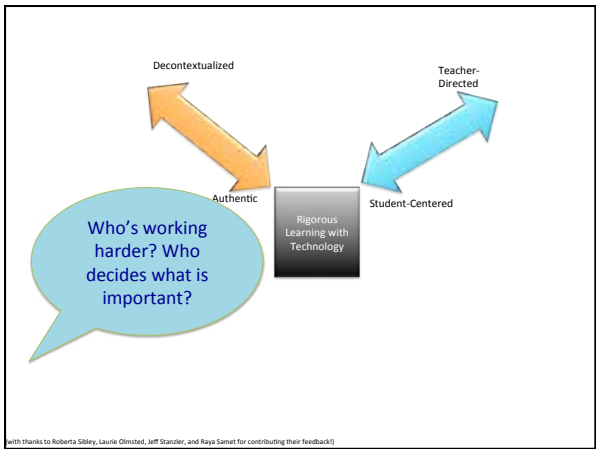
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)

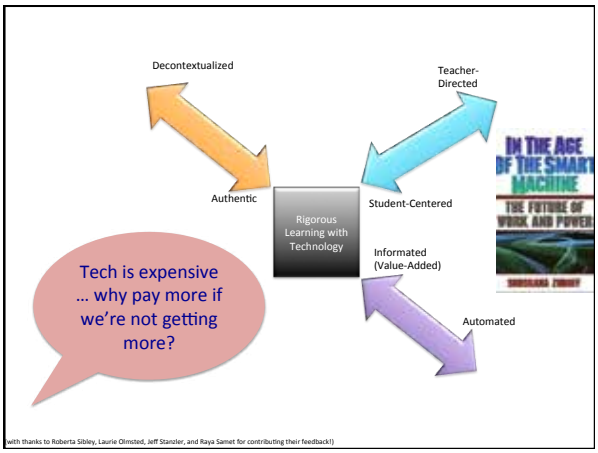


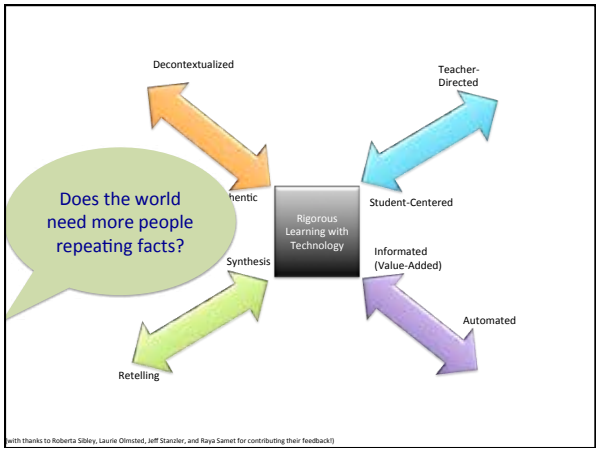
Rigorous Learning with Technology

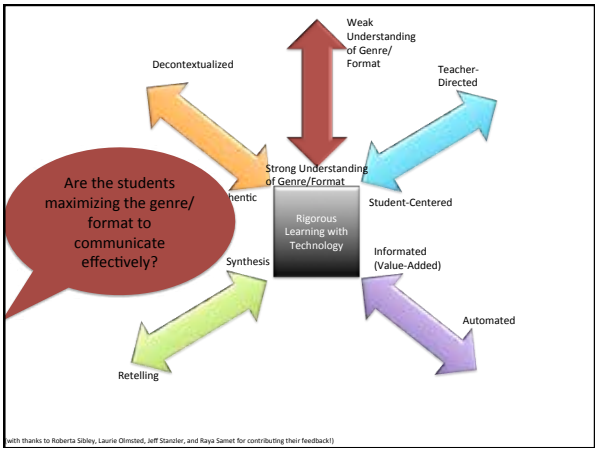
What's in it for me? How does this apply to me? Why does this matter to me?

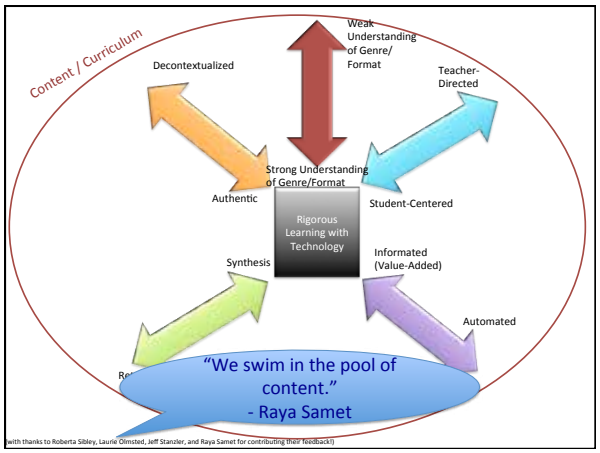
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)


Decontextualized
Teacher-Directed
Authentic
Rigorous Learning with Technology
Student-Centered
Who's working harder? Who decides what is important?
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)


Decontextualized
Teacher-Directed
Authentic
Rigorous Learning with Technology
Student-Centered
Informated (Value-Added)
Automated
Tech is expensive … why pay more if we're not getting more?
IN THE AGE OF THE SMART MACHINE
THE FUTURE OF WORK AND POWER
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)

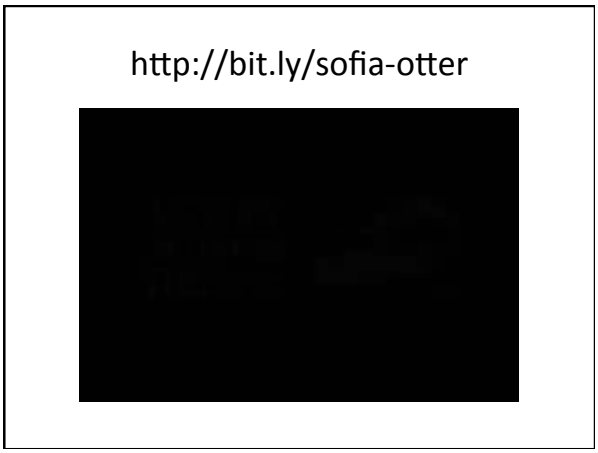

Decontextualized
Teacher-Directed
Does the world need more people repeating facts?
Rigorous Learning with Technology
Student-Centered
Synthesis
Informated (Value-Added)
Automated
Retelling
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)


Weak Understanding of Genre/ Format
Decontextualized
Teacher-Directed
Strong Understanding of Genre/Format
Are the students maximizing the genre/ format to communicate effectively?
Rigorous Learning with Technology
Student-Centered
Synthesis
Informated (Value-Added)
Automated
Retelling
(with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)


Content / Curriculum
Decontextualized
Weak Understanding of Genre/ Format
Teacher-Directed
Strong Understanding of Genre/Format
Authentic
Rigorous Learning with Technology
Student-Centered
Synthesis
Informated (Value-Added)
Automated
"We swim in the pool of content."
- Raya Samet
with thanks to Roberta Sibley, Laurie Olmsted, Jeff Stanzler, and Raya Samet for contributing their feedback!)

Testing Our Lens:
Student Work Samples
ZOOM LENS 3X

Sofia's Animal Report
http://bit.ly/ sofia-otter


http://bit.ly/sofia-otter

Wikis/ Collaborative Documents

In Maria's science class, students conduct experiments in small groups. Then, they go to the class wiki, where Maria has already set up a table with a row where each group can report its data. By pooling data onto a single table, students can clearly see if their data follows the patterns of other groups.

Hamlet goes to high school

bit.ly/hPn588

bit.ly/hPn588

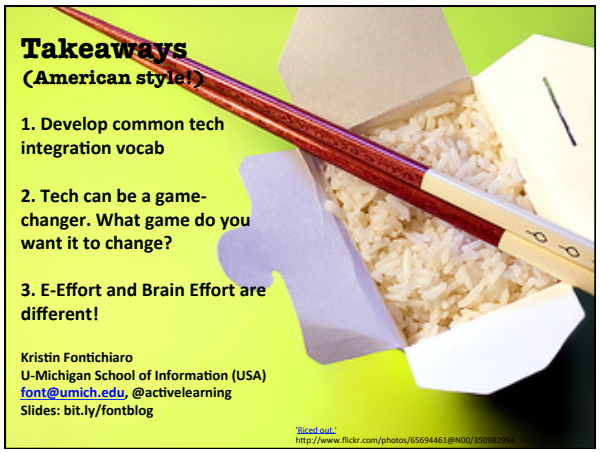
Social Media

Fred's students love social media. They use Instagram to post a weekly graphic they make summarizing the content for the week.

Do we have time for a Grand Finale?

How could we improve these projects?

- 'Grammed thought of the week
- science data wiki
- Sofia's animal report
- *Hamlet* report


Takeaways
(American style!)
1. Develop common tech integration vocab
2. Tech can be a game-changer. What game do you want it to change?
3. E-Effort and Brain Effort are different!
Kristin Fontichiaro
U-Michigan School of Information (USA)
font@umich.edu, @activelearning
Slides: bit.ly/fontblog
'Riced out.'
http://www.flickr.com/photos/65694461@N00/350982954