

Rigorous Learning with Technology

Kristin Fontichiaro, University of Michigan School of Information

SLAQ @ Bristbane

17 August 2013, 1:00 – 2:30pm

Download slides: bit.ly/fontblog

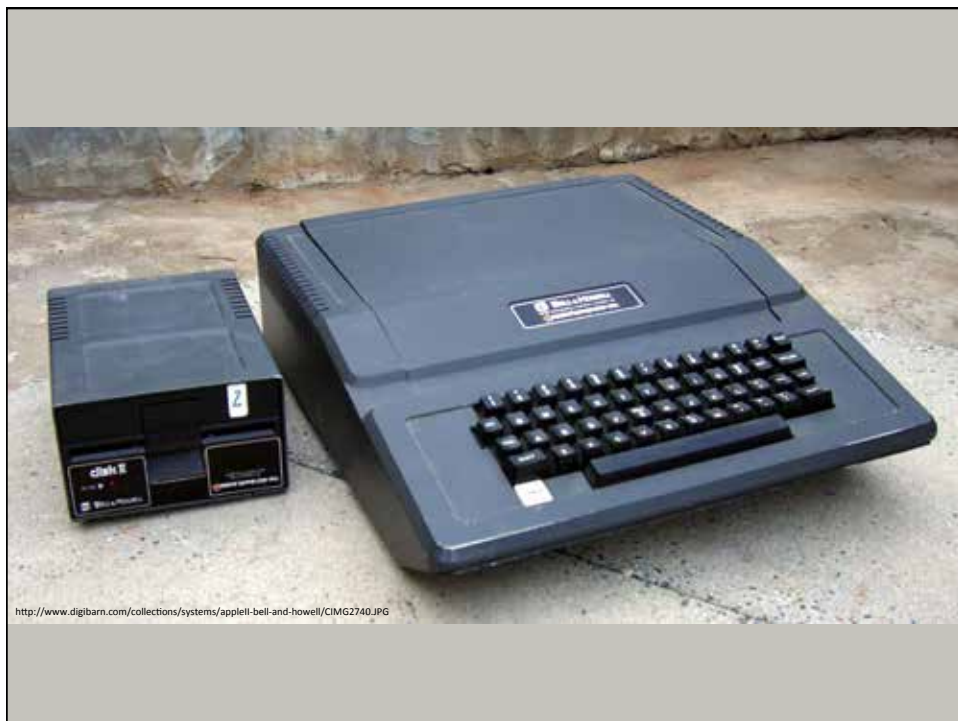


Big Questions Road Map

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>







<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?

**Scribe at
<http://todaysmeet.com/slaq>**

**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 'N' 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>



SHARE OUT!

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)



And sometimes, our
students expend a
disproportionate
amount of
e-effort
over
knowledge-building.

**(BIG INPUT > LITTLE
OUTPUT)**



Christopher
Columbus
was born in
1461.




HE WAS
BORN
IN
ITALY.

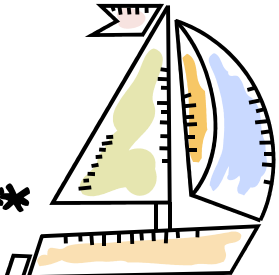


HOME OF PIZZA!!!!!!! yumm!!!!


HE HAD THREE
BOATS:




NINA




PINTA



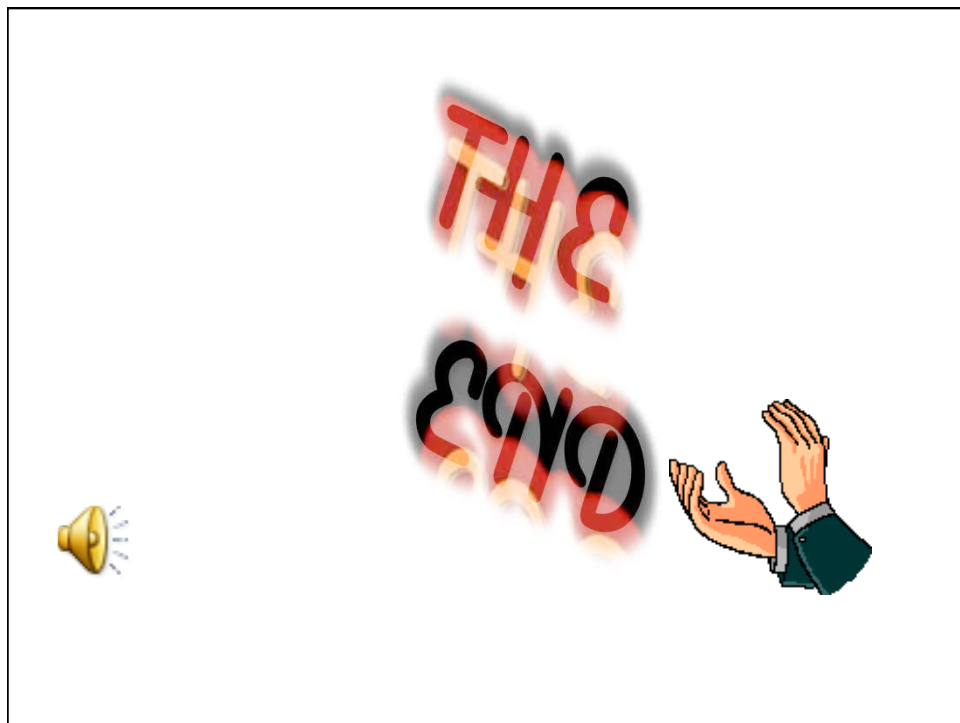
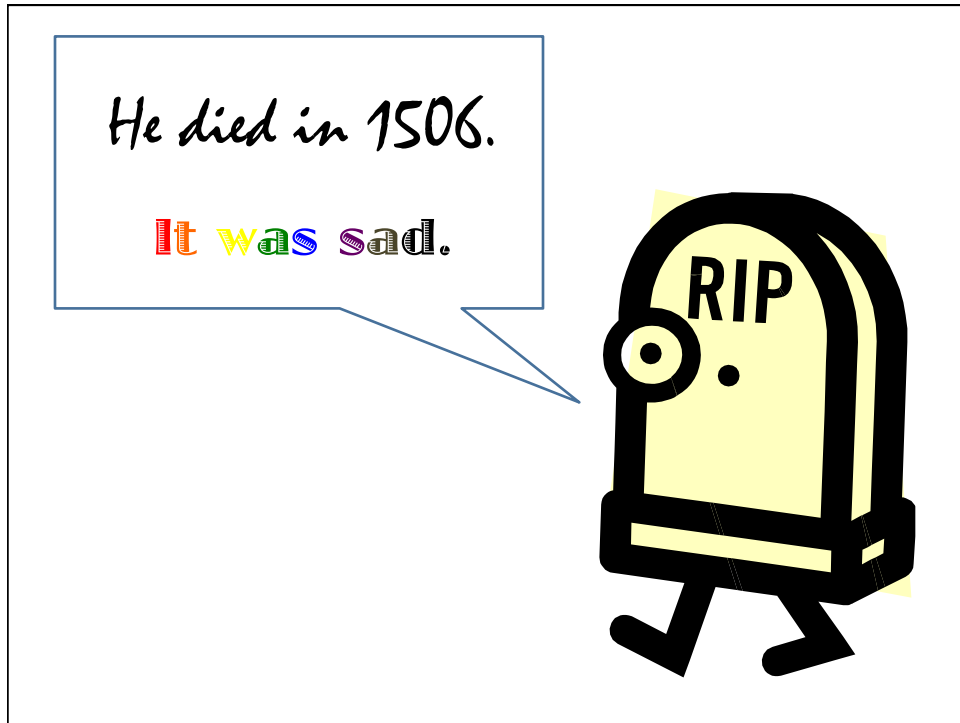
SANTA MARIA




Bon Voyage



He
discovered
AMERICA!!!





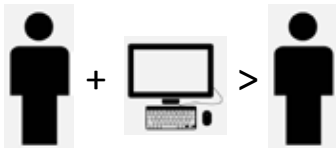
What are students gaining from this experience?

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

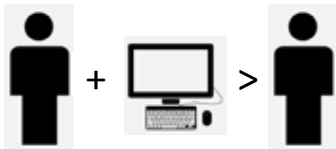
student + tech > student^{*}



* Charles Friedman, definition of Informatics

ED TECH MATH


student + tech ^{+ school} > student *



* Charles Friedman, definition of Informatics

ED TECH MATH

student + tech ^{+ school} > student *



Beware: if student + tech can succeed on their own, we're all out of a job.

* Charles Friedman, definition of Informatics



Which parts of this project could NOT be outsourced to India? (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?





* Bernajean Porter; ** Joanne Yatvin

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

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!)

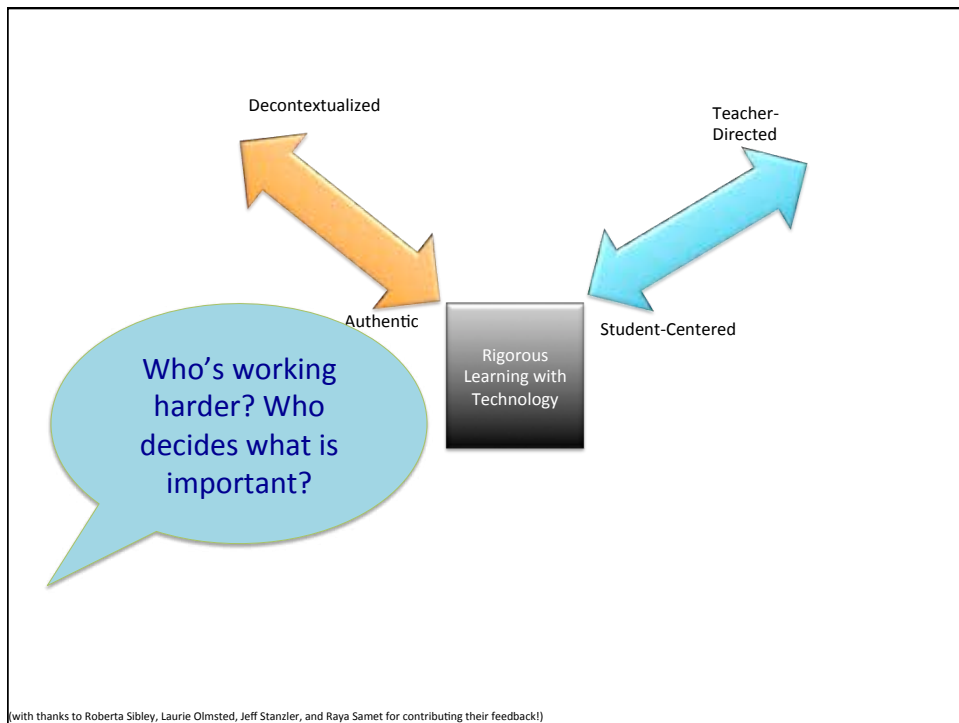
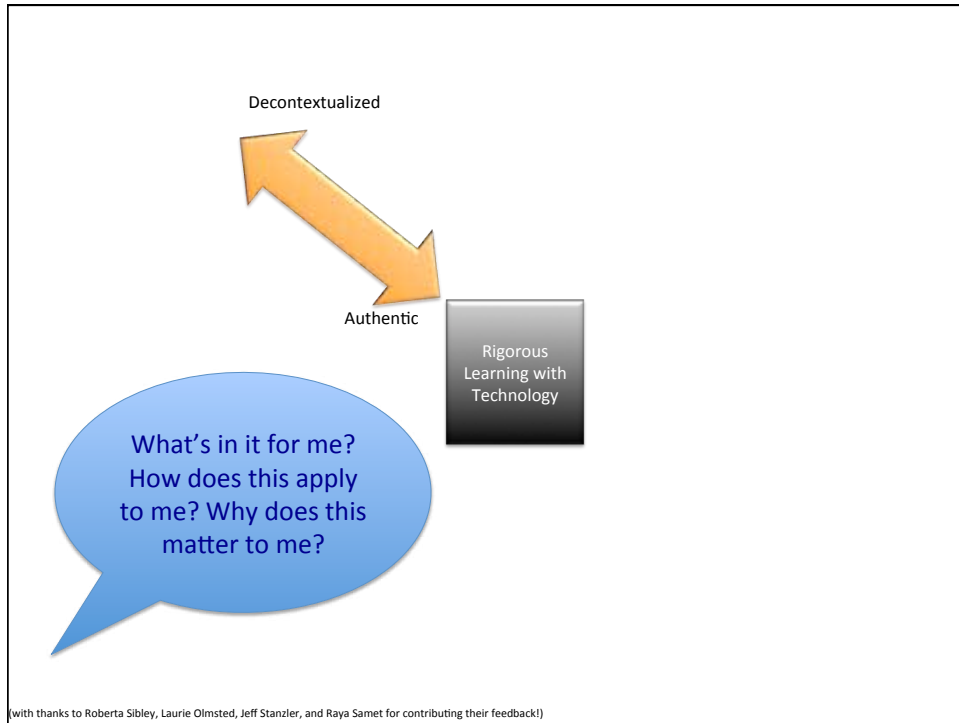
$\text{Man} + \text{Computer} > \text{Man}^*$

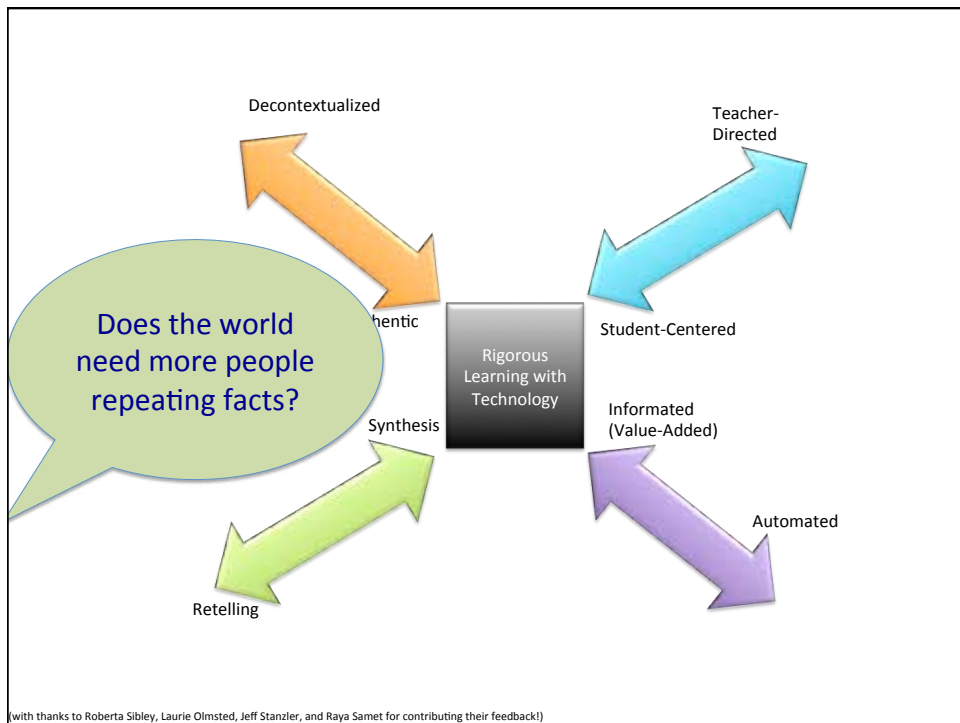
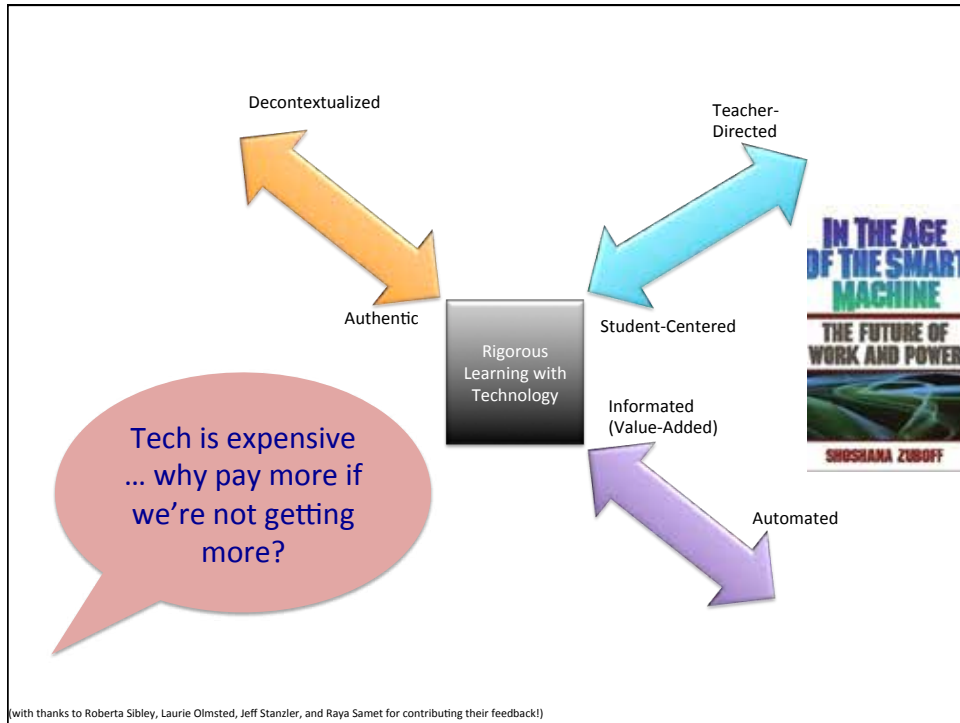
Rigorous Learning with Technology

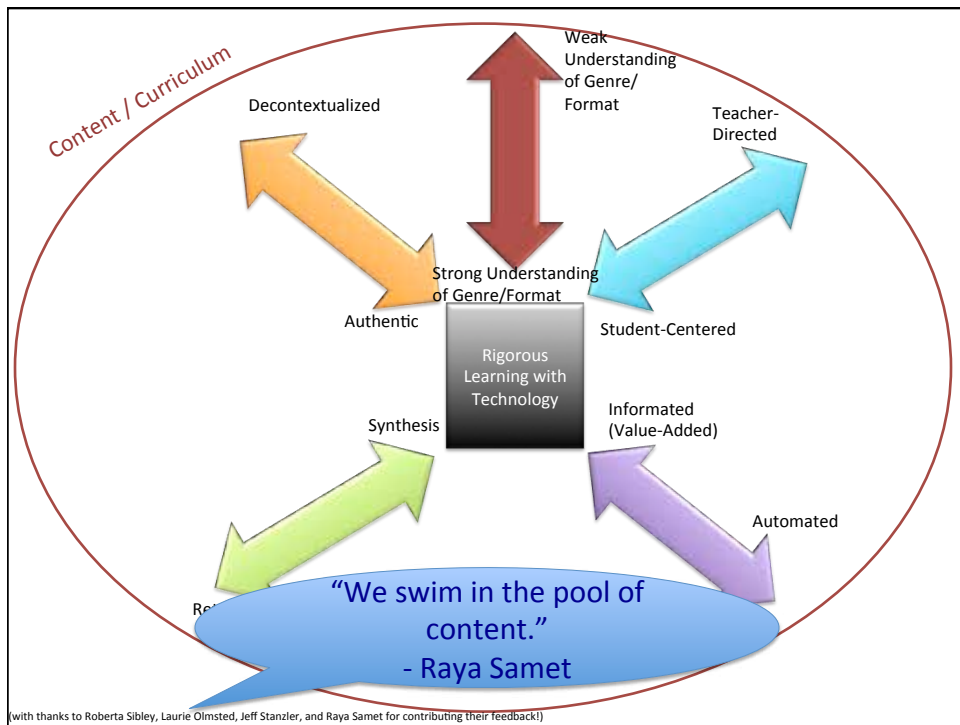
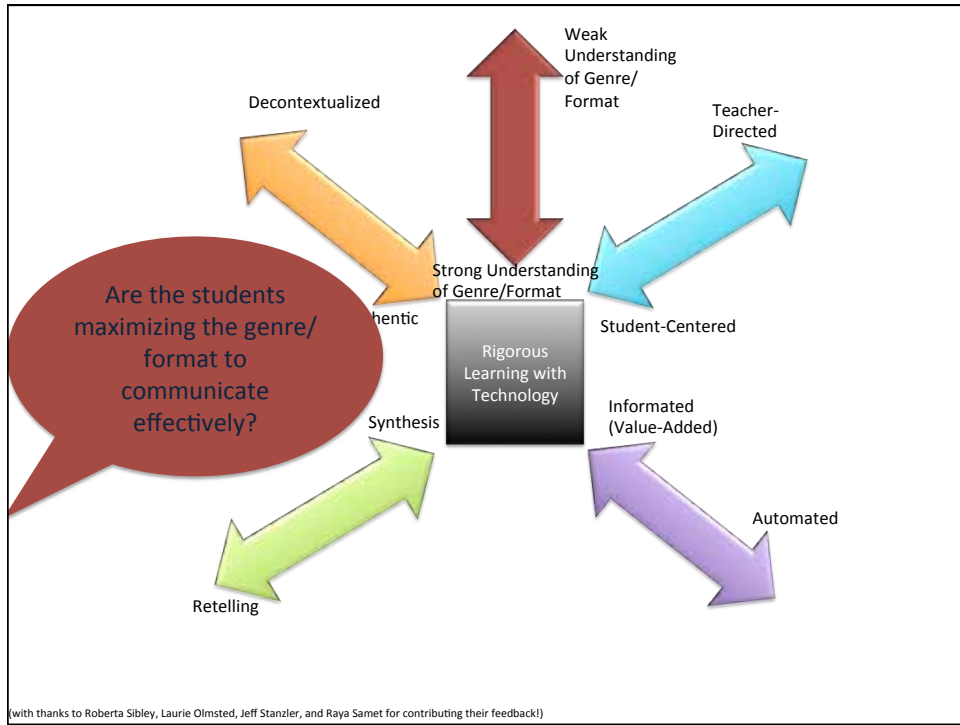
* Charles Friedman, definition of Informatics

"Man" by Michael McMillan and "Computer" by Alyssa Mahlberg from thenounproject.com collection. Used under a Creative Commons CC-BY 3.0 license.

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













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.



Sofia's
Animal
Report



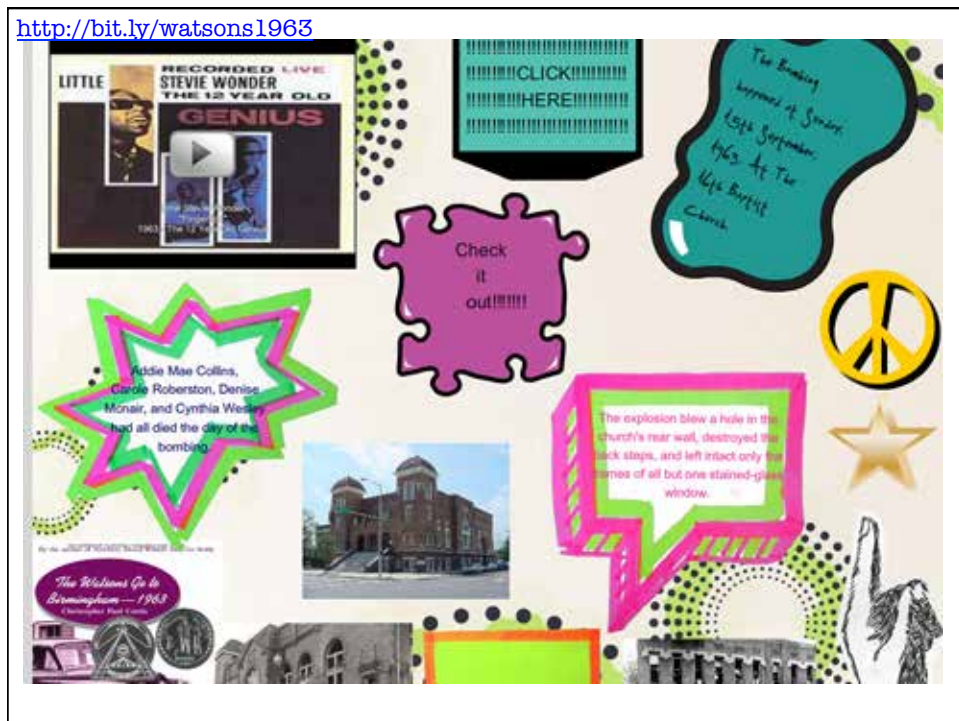
[http://bit.ly/
sofia-otter](http://bit.ly/sofia-otter)



Hamlet
goes to high
school



bit.ly/hPn588



<http://bit.ly/watsons1963>

CLICK
HERE!!!!

The bombing
happened at
Sunday, 15th
September,
1963. At the
16th Baptist
Church.

Check it
out!!!!!!!!!!

Addie May Collins,
Carole Roberston [sic],
Denise Mcnair, and
Cynthia Wesley had all
died the day of the
bombing.

The explosion blew
a hole in the
church's rear wall,
destroyed the back
steps, and left
intact only the
frames of all but
one stained glass
window.

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Copied verbatim from
Timelines.com



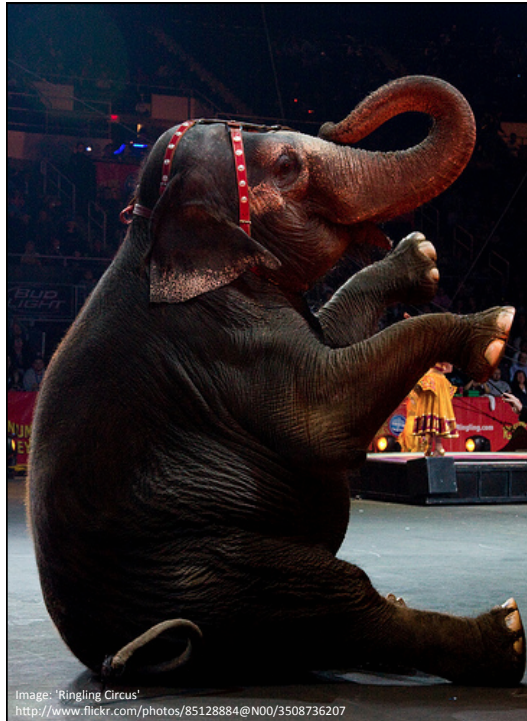
Reflective Blogging

Fred's students are required to blog weekly for history class. They summarize what they have learned and then are asked to think about how what they are learning relates to their lives today.

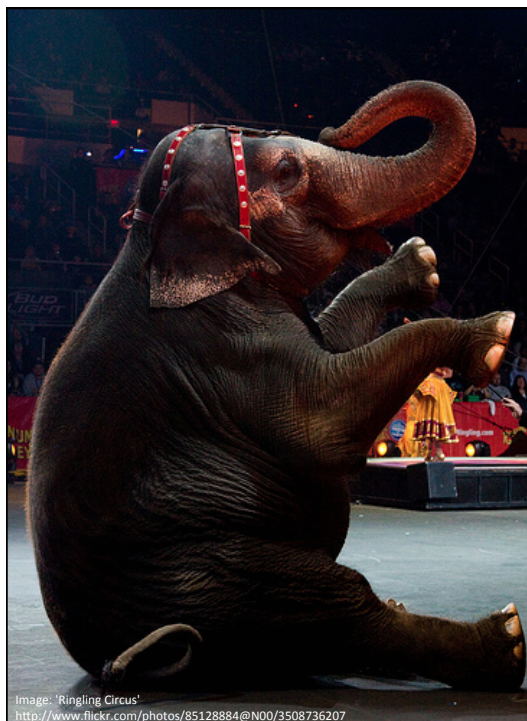
As part of their blogging task, they comment on one another's blogs. Fred has led discussions about productive commenting practices.



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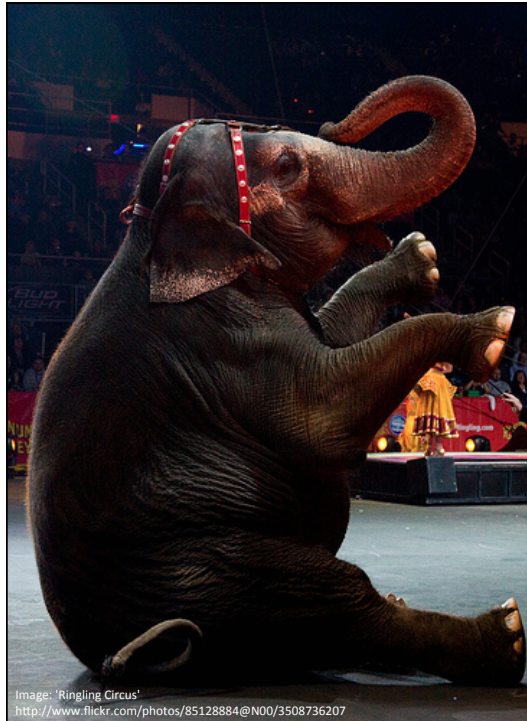
Do we have time for a Grand Finale?



Choose any of the projects we saw and discuss how you'd make it better. Use the Today's Meet backchannel!

- reflective blogging
- science data wiki
- Sofia's animal report
- literary allusions Glog

Share your ideas:
todaysmeet.com/slaq



Share out!

Image: 'Ringling Circus'
<http://www.flickr.com/photos/85128884@N00/3508736207>

Takeaways

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!

'Riced out.'
<http://www.flickr.com/photos/65694461@N00/350982994>



Questions?

font@umich.edu
@activelearning
<http://bit.ly/fontblog>

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Debbie Ablock, Kristin Fontichiaro, and Violet H. Harada, Editors

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