This is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning
– Winston Churchill

I do not envy people who think they have a complete explanation of the world, for the simple reason that they are obviously wrong
– Salman Rushdie
Today

1. Some quick thoughts
2. Looking to the future (a conversation
3. Conclusion: How to think of innovation
What surprised us!
How do you get 2 Higher Ed institutions to work together? 
(Much less ALL!)
And a whole host of NEW acronyms (even worse than TPCK)
Actual TPACK cases

I know it when I see it!
(Justice Potter Steward 1964)
Connected to National Standards, illustrated in practice, connected with research
WOW!
It is time...
... to shut up!
... and start a conversation!
TTF to the Future
Some key topics
Scaleability
potential issues as the project grows

Sustainability
how to sustain effort over time

Project Research
what research should the project be doing

Developing TPACK
how to develop it in pre- and in-service teachers

Developing Leaders
how to develop ICT leaders in our schools

Advocacy
sharing work with other stakeholders
The rules!
Scaleability
potential issues as the project grows

Sustainability
how to sustain effort over time

Project Research
what research should the project be doing

Developing TPACK
how to develop it in pre- and in-service teachers

Developing Leaders
how to develop ICT leaders in our schools

Advocacy
sharing work with other stakeholders
10 minutes !!

List long term and short term ideas related to your topic

Write on the big sheets of paper
5 minutes!!

Of all your ideas, decide which

ONE long-term idea, and

ONE short-term idea

that you will share with the whole group
Each table has 1 minute to report

Their topic, and their

**ONE** long-term idea

**ONE** short-term idea

https://docs.google.com
21ST CENTURY KNOWLEDGE AND SKILLS IN EDUCATOR PREPARATION

September 2010

This paper has been funded as part of a collaborative project by the American Association of Colleges of Teacher Education and the Partnership for 21st Century Skills (P21). Funding for this project was generously provided by AT&T, the Bill and Melinda Gates Foundation, the Carnegie Corporation of New York, the Ford Foundation, and the W.K. Kellogg Foundation.

AACTE
1. The goal: To provide all students with 21st Century education

2. Redesign of TE programs based on collaboration between Higher Ed, schools, & communities (each organization to develop 21st Century blueprint to meet needs of learners)

3. Teachers & Admin will possess, teach and assess 21st Century Skills/Knowledge

4. New teachers as agents of change - for all subjects and all grades - possess, teach and assess 21st Century Skills/Knowledge

5. TE programs will be sources of leadership, research and evaluation on 21st Century Skills/Knowledge
21st Century Skills/Knowledge
What are they?
21st century learning

The 21st Century Learning Initiative
Oct 1, 2010 ... "These are confusing times...We know we have to do something, but what exactly?" What the 21st Century Learning Initiative is all about. ...
www.21learn.org/ - Cached - Similar

The Partnership for 21st Century Skills - Framework for 21st ...
The Framework presents a holistic view of 21st century teaching and learning that combines a discrete focus on 21st century student outcomes (a blending of ...
www.p21.org/index.php?option=com_content&task...id... - Cached

The Partnership for 21st Century Skills - Home
By attending the Program, participants will leave with a firm understanding ...
www.p21.org/ - Cached

Show more results from p21.org
21st Century Learning?
But what does this 21st Century Learning look like?
21st Century Resources To Enhance Student Learning

So You Can Surf...Now What? Web 2.0

Web 2.0 is the latest version of the web where users are interacting and collaborating real-time. Participants will be presented with the best Web 2.0 free resources and websites, as well as ideas for implementation into both their classrooms and personal lives. They will be able to identify the characteristics of a Web 2.0 resource, demonstrate an understanding of Web 2.0 and its uses by brainstorming on how they can be incorporated into the classroom. Participants will also learn to use the information provided to access free resources and websites designed with students and teachers in mind and explore the 21st Century Resource page for hands-on Web 2.0 experiences.
Googlios: A 21st – Century Approach to Teaching, Learning, & Assessment

By Jose Rodriguez · December 18, 2009 · Email this post · Print this post · Post a comment

Presenter: G. Alex Ambrose
Location: South Bend, Indiana, USA
Link to presenter's K12Online Ning Profile page

Presentation Title: Googlios: A 21st – Century Approach to Teaching, Learning, & Assessment

Presentation Description: As the first decade of the 21st century comes to end and blogs, wikis, and podcasts have become more mainstream, it is important that educators step back to see how we, as professionals, are best using these tools to serve our students' learning needs. If these modern technologies are going to be sustained in contemporary education, it follows that we "kick it up a notch"
21st Century PD is on wikis

I am becoming convinced that all, or at least most, of the professional development sessions we participate in as educators and share with others who are organized via linked wikis. Dean did a great job modeling this last month in his multi-day digital storytelling workshop. I attempted this in June when several workshops with teachers in College Station, Texas (Bryan ISD) focused on digital literacy—primarily the use of blogs and podcasts to help develop both traditional and 21st century literacy skills. I started a blogging tools wiki a few weeks ago after an engaging skypecast on this topic at 2006 conference I attended 2 weeks ago in Winfield, Kansas utilized a conference wiki that a fair number of folks have contributed to successfully.

So, why all this educational wiki-use? I think the answers are pretty straightforward:

1. Wikis are collaborative, and one of the ideas we want students and teachers to both understand and live is the idea that groups of people can come up with better ideas and solutions than people working in isolation.
2. Wikis are iterative, meaning that they improve over time. They are not a single snapshot or a static creation, but rather a dynamic, living creature that continue to grow as ideas change and evolve over time.
3. Wikis are free. As teachers, we like free stuff. And wikis don’t cost anything to create in our present climate of abundant web 2.0 free tools.
4. Wikis are RSS subscribable, which makes them easier to track and update. More information services in the coming years will embrace RSS as a reason: Pulling information of interest to you is much more preferable than having information PUSHED to you that may or may not be desired.
5. We learn best by experiencing pedagogy and technology: Using wikis permits teachers to take on the role of learners, and directly experience but yet simple wikis are and can be for instruction— and especially group work.
6. Wikis are fast to create and update. I’ve been making webpages to accompany my educational technology workshops since the mid-1990s, and it is much faster and easier to edit as a wiki. Yes, using a tool like Dreamweaver I can create a website, but that usually takes time, and it isn’t quite as easy as editing an existing document. And wikis are easy to read and write on.
Compare to the first decade (or so) of the 20th Century
<table>
<thead>
<tr>
<th>Year</th>
<th>Inventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>Zeppelin, escalator</td>
</tr>
<tr>
<td>1901</td>
<td>Radio, vacuum cleaner</td>
</tr>
<tr>
<td>1902</td>
<td>Air conditioner, neon light, teddy bear</td>
</tr>
<tr>
<td>1903</td>
<td>Crayons, first flight, tungsten for bulbs</td>
</tr>
<tr>
<td>1904</td>
<td>Teabags, vacuum diode</td>
</tr>
<tr>
<td>1905</td>
<td>Theory of relativity</td>
</tr>
<tr>
<td>1906</td>
<td>Cornflakes, sonar, triode</td>
</tr>
<tr>
<td>1907</td>
<td>Synthetic plastic (bakelite), color photo, helicopter</td>
</tr>
<tr>
<td>1908</td>
<td>Cellophane, geiger counter</td>
</tr>
<tr>
<td>1909</td>
<td>Instant coffee</td>
</tr>
<tr>
<td>1910</td>
<td>Talking motion picture</td>
</tr>
<tr>
<td>1911</td>
<td>Electrical ignition system for cars</td>
</tr>
<tr>
<td>1912</td>
<td>Motorized movie cameras, life savers candy, tank</td>
</tr>
<tr>
<td>1913</td>
<td>Crossword puzzle, bra, zipper</td>
</tr>
</tbody>
</table>
Imagine basing 20th century learning on these technologies...
21st Century Learning?
A synthesis
Disclaimer: We couldn’t include all 23 Million Google hits
21st Century Thinkers

Yong Zhao  Howard Gardner  Daniel Pink
21st Century Organizations

The Center for Public Education

International Society for Technology in Education

American Association of Colleges and Universities

European Union
14 Frameworks
3 big ideas emerged
21st Century Learning

1. Foundational Knowledge
   Content, Information Literacy, Cross-disciplinary knowledge

2. Meta Knowledge
   Problem Solving / Critical Thinking, Communication / Collaboration, Creativity

3. Humanistic Knowledge
   Life/Job skills, Cultural competence, Ethical/Emotional Awareness
Nothing has changed
Nothing has changed

Everything
How do new technologies change teaching & learning?
How does TTF change teaching & learning?
Are we asking the wrong question?
Bertram “Chip” Bruce
Technological determinism
Figure 1-1. A Platonic view of the realization process
Technological determinism
Technology as social practice
“Missed call”
Social practices “shape” the ways in which technology is understood & used
Meaning making as a transactional process - between the innovation & social structures & relationships

Beauty lies in the eye of the beholder, but is inseparable from the flower – Bob Stake
The design of any technology must be understood not simply as the construction of a physical artifact to meet a functional specification, but as a process in which relations among people are realized.
We cannot specify the pure, or ideal, case for the use of an innovation, only its idealization in the minds of the developers.

Users inevitably interpret an innovation in distinctive ways, apply it idiosyncratically in their own contexts, and even recreate it to satisfy their own needs.
Figure 1-2. A Wittgensteinian view of the realization process
... but it is more complicated than that!
Figure 1-3. Alternate realizations of an innovation
What is TTF?

Teaching Teachers for the Future
One innovation
(with 41 instantations?)

OR

41 different innovations
(with one idealization)
Why is this important?
It has to do with...

What we learn...

& what we contribute to the broader conversation...
Early 1990’s

The Electronic Networks For Interaction (ENFI) project as it played out in different contexts (elementary and secondary schools and colleges and universities)
Faculty development in Higher Ed

Learning Technology by

+ Problems of practice

Friday, March 16, 2012
Case studies of faculty development
How do you “see” the big picture?
Finally...
Learning from facebookisms

Done is better than perfect
Code wins arguments
Move fast and break things
The riskiest thing is to take no risks
This journey is 1 percent finished.
Explore | Create | Share
This is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning
— Winston Churchill

I do not envy people who think they have a complete explanation of the world, for the simple reason that they are obviously wrong
— Salman Rushdie
Thank you!

http://tpack.org

punya.educ.msu.edu
mailto: punya@msu.edu

mkoehler.educ.msu.edu
mailto: mkoehler@msu.edu

Stink Different