Technology and Creativity
Curtis J. Bonk, Professor, Indiana University
cjbonk@indiana.edu
http://mypage.iu.edu/~cjbonk/

What is the definition of creativity?

Creative Process
(Paul Torrance, 1988)
"I tried to define creative thinking as a process of
(1) sensing difficulties, problems, gaps in information,
missing elements, something askew;
(2) making guesses and formulating hypotheses about
these deficiencies;
(3) evaluating and testing these guesses and
hypotheses;
(4) possibly revising and retesting them; and finally,
(5) communicating the results."

What’s unique about these 2 people?
15 Creativity Tools and Activities

1. Just Suppose a 6 year old girl could program a popular mobile application... S.T.E.M. education inspiring girls nationwide, February 10, 2013, Melissa Harris-Perry

2. Video Interviews and Documentaries

   Honk If You Love Someone, Sophia Pink, January 1, 2013
   http://www.youtube.com/watch?v=1EwYLZmkUxo&feature=youtu.be

3. Research Experiments and Presentations

   Are You Feeling Sleepy?, Sophia Pink, April 30, 2013
   http://www.youtube.com/watch?v=RSUTLoXg_38&feature=youtu.be

4. Digital Books

5. Virtualize Words Used (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)

http://shellyterrell.com/2010/02/14/12-word-cloud-resources-tips-tools/
6. Student Collaborative Knowledge Building and Sharing (e.g., Popplet: http://popplet.com/)

7. Concept Mapping and Timeline Tools (VUE, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

8. Videos of the Periodic Table
   Univ of Nottingham

9. History for Music Lovers
   The French Revolution ("Bad Romance" by Lady Gaga)
   Trojan War ("Tainted Love" by Soft Cell)
   Charlemagne ("Call Me" by Blondie)
   The Vikings ("Personal Jesus" by Depeche Mode)
   The Crusades ("Eye Without a Face" by Billy Idol)
   Constantine ("Come On, Eileen" by Dexy's Midnight Runners)
   http://www.youtube.com/user/historyteachers

March 9, 2012
10. Online Learning Polyglots

    http://www.nytimes.com/2012/03/11/nyregion/a-teenage-master-of-languages-finds-online-fellowship.html?_r=1&pagewanted=all

    Timothy posts videos of himself speaking several languages on YouTube.

February 24, 2012
11. Video Documentary in the Philippines

    Lorma International School, the Philippines
    (Hannah Kimberly Obar, First Grade teacher)

    http://www.youtube.com/watch?v=1C435UtGzA
    http://www.youtube.com/watch?v=JZp1rEjgAak
    http://www.youtube.com/watch?v=UHMuTfAc6Ec (1st grade kids)
12. Tracking the Life of a Scientist (e.g., Brian J. Ford, independent scientist)

Origin of Humans: http://www.youtube.com/user/tellymonitor

BBC programs omit living cells: http://www.youtube.com/watch?v=rdNpTh6Cx6Y

Secret Weapons: http://www.youtube.com/watch?v=FDeSrpJaJm&list=UUfHjicBwUQg8s9pE14SGKg&index=6&feature=plcp

Dinosaurs (Laboratory News, April 1, 2012): http://www.labnews.co.uk/news/prehistoric-revolution/

13. Traveling (YouTube) Office Hours (Chuck Severance U Michigan/Coursera) in Barcelona

October 27, 2012

http://www.youtube.com/watch?v=JzNHvmSv8TI

14. NASA’s spacey Google + Hangout shows off zero-G antics – and cats!

February 22, 2013

http://cosmiclog.nbcnews.com/_news/2013/02/22/17057588-nasas-spacey-google-hangout-shows-off-zero-g-antics-and-cats?lite

15. Google Art Project

NBC Nightly News, April 3, 2012

http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508

1. Course Readings are All Web Resources (and Free!)

- Post all articles to the Web or only use freely available ones.
- Let students select the ones that they want to read.
- Turn in final reflection papers.

Ten Creative Thinking and Exploration Activities
2. Explore and Reflect on Virtual Timelines with Media
(Dipity, Simile, Xtimeline, Timeglider, Meograph)

3. Flip Class with Webstreamed Lecture Reflections
• Ask students to watch weekly lectures.
• Reflect on key concepts.
• Instructors help moderate it.

4. Nominate Quotes (e.g., Shakespeare)
• Students can explore online quotes (Wikiquote).
• Suggest best ones.
• Respond to other suggestions.

5. Just Suppose or What If (L = Cost, L = Risk, M = Time)
• Imagine a situation or scenario and reflect on the consequences.
• “Just suppose this MOOC or one like it was available every month, what would online teaching be like?”

6. Wet Ink or Freewriting (L = Cost, M = Risk, M = Time)
Writing without reflecting or lifting your pen for a set period of time.
• Just imagine: imagine you have created a highly active teaching situation...What do you see? Can students wonder, question, speculate, take risks, active listening??
How is creativity fostered here? Describe environment. Physically, mentally, emotionally, etc...

7. Metaphorical thinking (L = Cost, M = Risk, M = Time)
• how is my class like:
  – a prison, a beehive, an orchestra, ghetto,
  – expedition, garden, family, herd, artist’s palette,
  – machine, military camp, Olympic games, hospital, theater, etc.
8. Reverse Brainstorming (L = Cost, L = Risk, M = Time)

- Generating ideas to solve the reverse of a particular problem, issue, or concern.
- More is better and the wilder the better.
- Hitchhiking or piggybacking as well as combining ideas is encouraged. However, there is no evaluation of ideas allowed.
- For example, How can we decrease the use of active learning ideas in college settings?

9. Mock Trials with Occupational Roles (L = Cost, H = Risk, M/H = Time)

a. Create a scenario (e.g., school reform, gov’t protest).
b. Get volunteers for diff roles (everyone must have role).
c. Perhaps consider having one key person on the pro and con side of the issue make a statement.
d. Discuss issues from role (instructor is moderator or one to make opening statement; he/she collects ideas on document camera or board). Come to compromise.

a. Online Option: volunteer for roles or assign roles to each team member or have them sign up for different roles.

10. Historical Role Play or Mock Trial (L = Cost, H = Risk, M/H = Time)

- Assign roles after a lecture.
- Have students read more about roles.
- Come back dressed in costume.
- Act out scene.

- Online Option: volunteer for roles or assign roles to each team member or have them sign up for different roles.

15 Creative Student Projects

1. Design Multimedia Glossaries
   Ozgur Ozdemir, December 2012
   http://r685glossary.shutterfly.com/
   Umida Khikmatillaeva, Dec. 2011, PS40
   http://learningplanet.shutterfly.com/
   Umida Khikmatillaeva, Dec. 2011, PS40
   http://learningplanet.shutterfly.com/

2. Design Reusable Web Resources
   Umida Khikmatillaeva, Creating a Global Classroom
   World is Open for Language Learners
   https://hikmatnoma.wix.com/globalclassroom#!home/c2df
3. Course Recap Prezi Presentations
Jeff Pankin, MIT, Prezi, Emerging Learning Technologies
http://prezi.com/tzbawrgjrnzf/emerging-learning-technologies/?auth_key=4ec2f45a718fab699b35ea460e91a46d9e1bdac7
Jeffrey Barnette, Today’s World
http://prezi.com/ijzyothst/r685-final-project

4. Interactive Timelines
(e.g., The Big Sleep, Kate Hurd)
http://hurdinsuranceagency.com/thebigsleep/

5. Uploading Mobile Books
(e.g., BookRix, http://www.bookrix.com/

6. Video Blogs

7. Online Article Portals and Databases
http://r685articledatabase.weebly.com/
http://ijb.sils.indiana.edu/~bahalloc/r685/

8. Wikibooks: International Collaboration (Web 2.0 and Emerging Learning Technologies (The WELT))
9. Student Class Documentaries
Umida’s R546 Documentary Project
http://www.youtube.com/watch?v=EMLTczqCV_5A

10. Mobile Audio Tours
Locacious Final Class Project
(Michele Kelmer, April 22, 2013)
http://www.locacious.net/

11. Student Mobile App Creation
The App Builder: http://www.theappbuilder.com/
Mintian Guo (April 2013): http://myapp.is/r685final

12. Podcasts for students of pronunciation class
(e.g., Tzu-Su Chen, Taiwan)

13. Reflect on Big Ideas
(on IQ Wall, April 22, 2013)
Final project, Mark Millard
Big Ideas in Distance and Flexible Learning (HD)

14. Final Product Video Summaries
Piercarlo Abate: http://www.youtube.com/watch?v=_cFwU3Y6cqI
Gagnam: http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cncCWf0WHR
15. Student Songs, Films, and Documentaries

http://vimeo.com/32090590  (Verily)
http://vimeo.com/33123125  (Anjali)
http://www.youtube.com/watch?v=IQZHvuZ3rbw  (Yue)
Daniel Halluska, P540, Fall 2011
http://www.youtube.com/watch?v=tOL7lrGsqnw

http://www.publicationshare.com/
http://www.trainingshare.com/

Questions and Comments?
Note: Curt Bonk’s papers and talks at: