

## Masterclass Part 1: Adding Some TEC-VARIETY for Online Motivation and Retention

Curtis J. Bonk, Professor, Indiana University  
cjbonk@indiana.edu  
<http://mypage.iu.edu/~cjbonk/>



## February 23, 2017 CoConqr Online Learning Report 2017

<https://info.goconqr.com/files/2017/02/GoConqr-2017-Online-Learning-Report.pdf>

GoConqr  
Online  
Learning  
Report  
2017

### Key Regional Variances

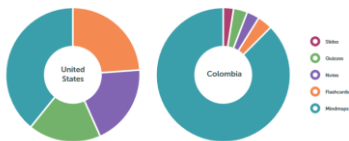


## February 23, 2017 CoConqr Online Learning Report 2017

<https://info.goconqr.com/files/2017/02/GoConqr-2017-Online-Learning-Report.pdf>

### Learning & Teaching Styles

Use of Learning Tools



## January 15, 2017

### 3 Reasons to Read the Higher Ed Supplement to National EdTech Plan (e.g., conversation starter, examples of innovation, cross-section of expertise)

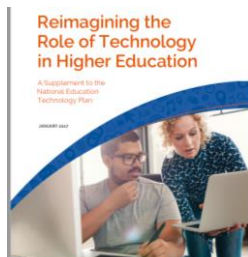
Joshua Kim, Inside Higher Ed

<https://www.insidehighered.com/blogs/technology-and-learning/3-reasons-read-higher-ed-supplement-national-edtech-plan>



## January 2017 Higher Education Supplement to the National Education Technology Plan U.S. Department of Education, Office of Educational Technology

<https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf>



## January 2017 Higher Education Supplement to the National Education Technology Plan U.S. Department of Education, Office of Educational Technology

<https://tech.ed.gov/files/2017/01/Higher-Ed-NETP.pdf>

### 'New Normal' Students in Higher Education

74% of all undergraduate students have  
at least one nontraditional characteristic

66% transfer between  
institutions prior  
to completion

62% work either  
full or part time

43% attend  
part time

28% have at least  
one dependent

35% are enrolled in  
two-year colleges

63% are first-gen  
students



Source: National Center for Education Statistics. (2015).<sup>1</sup>



**September 11, 2016**

## Welcome, Freshmen. Look at Me When I Talk to You

Jonathan Zimmerman, *The Chronicle of Higher Education*  
<http://www.gife.education/events/2017conference/>



### No, Banning Laptops Is Not the Answer

And it's just as pointless to condemn any form of electronic devices in the classroom

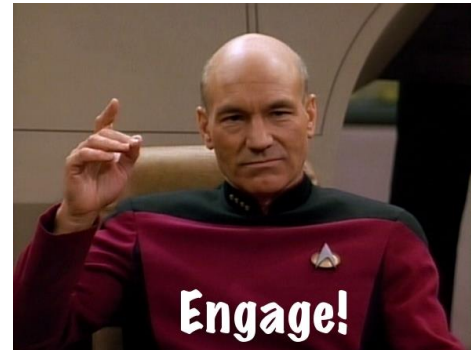
By James M. Lang | SEPTEMBER 11, 2016



Too many of our students are distracted by devices. We all know this. In recent months that perception has been repeatedly affirming evidence to solve that problem: by banning any and all electronic devices from the classroom. Laptops have been banned again in the classroom.

Most faculty members often condemn us: our cell phones, e-readers, and other hand-held devices are the very best pedagogical tools in the classroom. — Dr. J. Langman, the executive director of the Center for the Study of the History of the University of the Pacific

## What did Jean-Luc Picard say?



## Intrinsic Motivation

“...innate propensity to engage one’s interests and exercise one’s capabilities, and, in doing so, to seek out and master optimal challenges

(i.e., it emerges from needs, inner strivings, and personal curiosity for growth)

See: Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. NY: Plenum Press.



## Motivation Research Highlights (Jere Brophy, Michigan State University)

1. **Supportive**, appropriate **challenge**, **meaningful**, moderation/optimal.
2. Teach **goal** setting and self-reinforcement.
3. Offer **rewards** for good/improved performance.
4. Novelty, **variety**, **choice**, adaptable to interests.
5. Game-like, **fun**, fantasy, curiosity, suspense, active.
6. Higher levels, divergence, dissonance, **peer interaction**.
7. Allow to create finished **products**.
8. Provide immediate **feedback**, advance organizers.
9. Show intensity, **enthusiasm**, interest, minimize anxiety.
10. Make content **personal**, concrete, familiar.



## Poll #3: Million Dollar Question: What words come to mind when I say that I want to motivate learners?



## Framework #1: TEC-VARIETY for Online Motivation and Retention

1. **Tone/Climate**: Psych Safety, Comfort, Belonging
2. **Encouragement, Feedback**: Responsive, Supports
3. **Curiosity**: Fun, Fantasy, Control
- ...
4. **Variety**: Novelty, Intrigue, Unknowns
5. **Autonomy**: Choice: Flexibility, Opportunities
6. **Relevance**: Meaningful, Authentic, Interesting
7. **Interactive**: Collaborative, Team-Based, Community
8. **Engagement**: Effort, Involvement, Excitement
9. **Tension**: Challenge, Dissonance, Controversy
10. **Yields Products**: Goal Driven, Products, Success, Ownership

## Introducing the free "TEC-VARIETY" Framework...

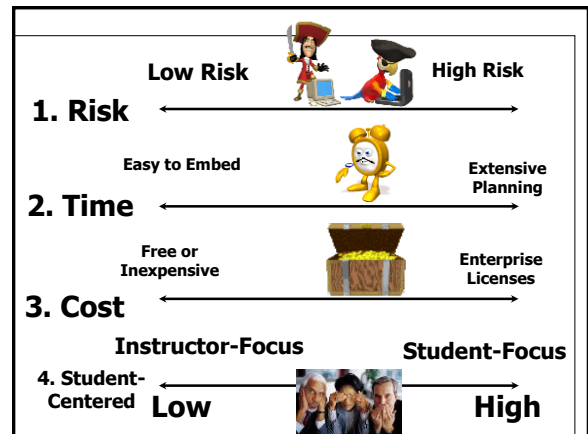
<http://tec-variety.com/>  
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>



## 在线学习动机与激励: TEC-VARIETY 模型

——激励和留住在线学习者的 100 个活动

作者: Curtis J Bonk & Elaine Khoo IU



## Examples of TEC-VARIETY



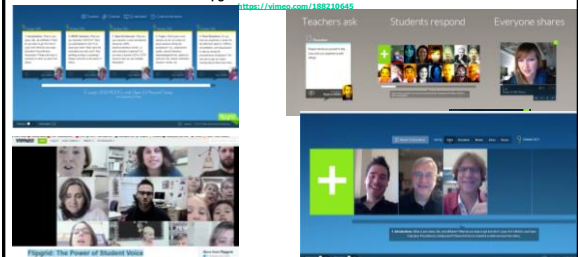
**November 10, 2016**

### 1. Tone/Climate:

#### A. Threaded Video Discussions and Questions (e.g., Flipgrid)

<http://flipgrid.com/#429f88c5>

Flipgrid: The Power of Student Voice



### 1. Tone/Climate: B. Share Visuals of Favorite Places (e.g., Panoramio)

<http://www.panoramio.com/>



### 1. Tone/Climate:

#### C. Instructor Course Introductions

(Theatre 10 Intro Video, October 7, 2014, Elizabeth Dale, West Valley College)

<https://www.youtube.com/watch?v=Wzbzc3QjiaA>

Chuck Severance, U Michigan/Coursera) in Barcelona

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

Chuck Severance, University of Michigan

<https://www.coursera.org/course/pythonlearn>





## 2. Encouragement, Feedback: A. Demonstrations and Tutorials

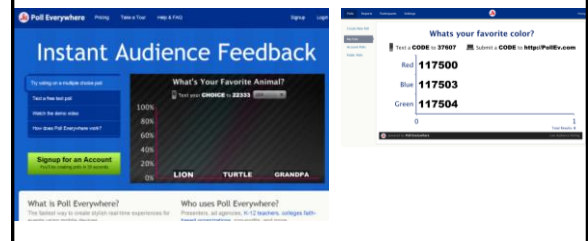
Emerging technology specialist, IU UITs, Nitocris Perez,  
May 29, 2014

<http://inside.iub.edu/features/videos/2014-05-29-inub-vid-cib.shtml>



## 2. Encouragement, Feedback: B. Blog and Website Polling

(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)  
<http://www.pollerywhere.com/>



## 3. Curiosity, Surprise, Intrigue, Unknowns: A. Summary and Comparison Maps

<https://twitter.com/geoawesomeness>

<https://www.instagram.com/p/BNwgv3fDq3/>

<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>



## 3. Curiosity, Intrigue, Unknowns: B. Multimedia News

(e.g., This may be the oldest surviving Photo of a human,  
November 7, 2014, CNN, Brandon Griggs; But this  
image, taken in Paris, France, in 1838)

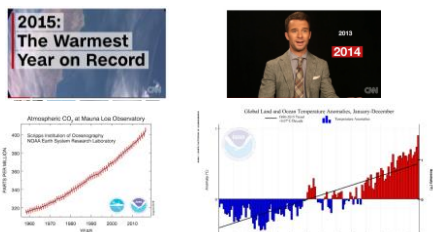
[http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp\\_14\\_kong](http://www.cnn.com/2014/11/06/living/oldest-photograph-human-daguerre/index.html?hpt=hp_14_kong)



## 3. Curiosity, Intrigue, Unknowns: C. Multimedia News

Changing opinions on climate change, from a  
CNN meteorologist, Chad Meyers, CNN

<http://www.cnn.com/2016/08/24/opinions/climate-change-weather/index.html>



## 3. Curiosity, Surprise, Intrigue, Unknowns: D. Something in the News

[http://www.cnn.com/2014/12/17/health/healthy-aging/index.html?hpt=hp\\_12](http://www.cnn.com/2014/12/17/health/healthy-aging/index.html?hpt=hp_12)

[http://espn.go.com/sports/endurance/story/\\_/id/18979487/fauja-singh-101-saps-career-10k-hong-kong](http://espn.go.com/sports/endurance/story/_/id/18979487/fauja-singh-101-saps-career-10k-hong-kong)

[https://en.wikipedia.org/wiki/Fauja\\_Singh](https://en.wikipedia.org/wiki/Fauja_Singh)



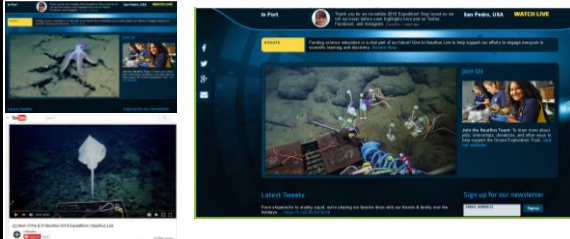
**September 16, 2016**

**3. Curiosity, Intrigue, Unknowns:**

**E. Live Science**

Best of the E/V Nautilus 2016 Expedition | Nautilus Live  
(video: 32:28)

<http://www.nautiluslive.org/>  
<https://www.youtube.com/watch?v=1-412PKHmU>



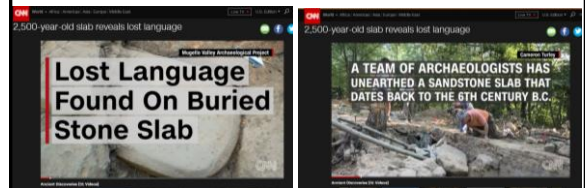
**April 1, 2016**

**3. Curiosity, Intrigue, Unknowns:**

**F. Groundbreaking Science**

(e.g., 2,500-year-old slab reveals lost language, CNN)  
(A team of scientists have uncovered a 2,500-year-old slab that may reveal details about the ancient Etruscan civilization; found in Temple foundation north of Florence, Italy.)

<http://www.cnn.com/videos/world/2016/04/01/italy-etruscan-slab-find-orig-vstan.cnn>



**November 19, 2015**

**3. Curiosity, Intrigue, Unknowns:**

**G. Immediate Science**



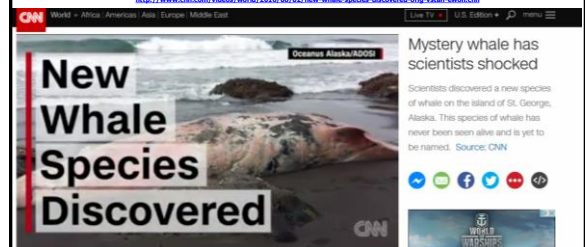
**August 2, 2016**

**3. Curiosity, Intrigue, Unknowns:**

**H. Immediate Science**

Mystery whale has scientists shocked,  
New Whale Species Discovered, CNN

<http://www.cnn.com/videos/world/2016/08/02/new-whale-species-discovered-orig-vstan.cnn>



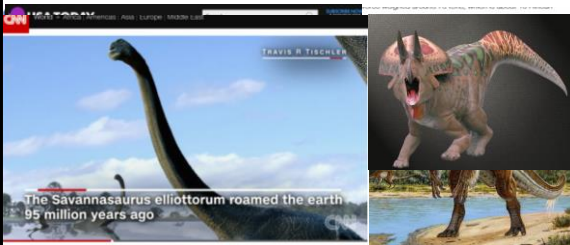
**January 5, 2017**

**3. Curiosity, Intrigue, Unknowns:**

**I. Immediate Science**

Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN

<http://www.cnn.com/2016/01/14/living/titanosaurus-new-dinosaur-on-display-new-york-kcp/>



**January 30, 2017**

**3. Curiosity, Intrigue, Unknowns:**

**J. Immediate Science**

Ancient human ancestor was a big mouth

Doyle Rice, USA Today

<http://www.usatoday.com/story/tech/sciencefair/2017/01/30/ancient-human-ancestor-big-mouth/97263458/>



**February 16, 2017**

**3. Curiosity, Intrigue, Unknowns:**

**K. Immediate Science**

**Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says**

Hillary Hansan, CNN (video: 3:22)

[http://www.huffingtonpost.com/entry/woolly-mammoth-de-extinct\\_us\\_58a6267e6037d17026477?hpid=hp\\_hp-top-table-main-de-extinct\\_6pm\\_1](http://www.huffingtonpost.com/entry/woolly-mammoth-de-extinct_us_58a6267e6037d17026477?hpid=hp_hp-top-table-main-de-extinct_6pm_1)  
[http://www.huffingtonpost.com/entry/woolly-mammoth-de-extinct\\_us\\_58a6267e6037d17026477](http://www.huffingtonpost.com/entry/woolly-mammoth-de-extinct_us_58a6267e6037d17026477)

**Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says**

The plan is to create a woolly mammoth-elephant hybrid.



**February 19, 2017**

**3. Curiosity, Intrigue, Unknowns:**

**L. We thought New Zealand was an island nation. Scientists say it's the tip of a 'hidden continent.'**

Avi Seik, The Washington Post

[https://www.washingtonpost.com/news/science/wp/2017/02/19/we-thought-new-zealand-was-an-island-scientists-say-its-the-tip-of-a-hidden-continent/?hpid=hp\\_hp-top-table-main-de-extinct\\_6pm\\_1](https://www.washingtonpost.com/news/science/wp/2017/02/19/we-thought-new-zealand-was-an-island-scientists-say-its-the-tip-of-a-hidden-continent/?hpid=hp_hp-top-table-main-de-extinct_6pm_1)  
<http://www.denverpost.com/2017/02/19/new-zealand-zealandia/>

We thought New Zealand was an island nation. Scientists say it's the tip of a 'hidden continent.'



**February 22, 2017**

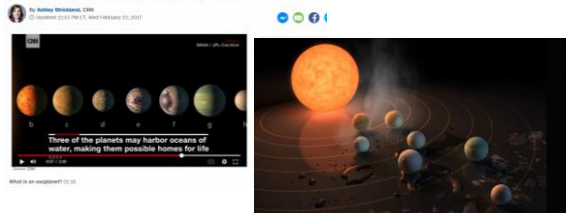
**3. Curiosity, Intrigue, Unknowns:**

**M. Astronomers discover 7 Earth-sized planets orbiting nearby star**

Ashley Strickland, CNN (1:18 video)

<http://www.cnn.com/2017/02/22/world/new-exoplanets-discovery-nasa/index.html>

Astronomers discover 7 Earth-sized planets orbiting nearby star



**February 16, 2017**

**3. Curiosity, Intrigue, Unknowns:**

**N. NASA wants you — to find a missing planet**

Doyle Rice, USA Today (includes 1:09 video)

<http://www.usatoday.com/story/tech/sciencefair/2017/02/16/planet-9-nasa/98007144/>

NASA wants you — to find a missing planet



NASA has helped fund a website called Backyard Worlds, where citizen scientists can search for new planets. Video provided by Newsy Newslook

**Poll #4:**

**Which of these ideas might you use?**

- A. Threaded video discussions (e.g., Flipgrid)
- B. Video introductions (instructor or student)
- C. Demonstrations and tutorials (Jing, Screenr, etc.)
- D. Voice/Audio feedback (Vocaroo)
- E. Online practice tests
- F. Something in the news
- G. Summary and Comparison Maps
- H. Immediate Science



**4. Variety, Novelty, Fun, Fantasy:**

**A. Random Lists**

(Random.org—clocks, coins, playing cards, dice, integers, passwords, jazz scales, lists, sequences, etc.)

**RANDOM.ORG**

Coin Flipper

You Request 2 coins of type Irish 41:



Timestamp: 2011-08-13 01:04:43 UTC

[Flip Again](#) [Go Back](#)

Dice Roller

You rolled 2 dice:



Timestamp: 2011-08-13 01:04:43 UTC

[Roll Again](#) [Go Back](#)

**RANDOM.ORG**

List Randomizer

There were 10 items in your list. Here they are in random order:

Random Sequence Generator

Here is your sequence:

1. Bill

2. Arthur

3. Thomas

4. Shelley

5. Sharon

6. Sharon

7. Sharon

8. Sharon

9. Sharon

10. Sharon

Timestamp: 2011-08-13 01:04:43 UTC

[Roll Again](#) [Go Back](#)

**October 5, 2016**  
**4. Variety, Novelty, Fun, Fantasy:**  
**B. Online Test/Quiz Review Games**  
 (e.g., Jeopardy Rocks)  
<https://www.jeopardy.rocks/r511merve/>



**4. Variety, Novelty, Fun, Fantasy:**  
**C. Voice/Audio Feedback**  
 Vocaroo: <http://vocaroo.com/delete/s0x8moQAYAiU/a37bbc9408bb8c95>  
 (Recorded by Curt Bonk for the Open University of China)



**4. Variety, Novelty, Fun, Fantasy:**  
**D. Video Editing and Commenting Tools**  
 (e.g., TubeChop)

**How Does It Work?**



1. Find the video you want to chop.
2. Select & cut interesting part of the video.
3. Share it with friends.

**Watch Examples**

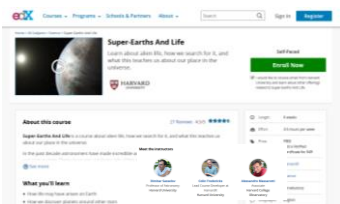
**5. Autonomy, Choice:**  
**A. Enroll in a MOOC and Reflect**  
 (e.g., see Class Central)



**February 2, 2017**  
**5. Autonomy, Choice:**  
**B. Explore/Browse a MOOC**  
**Super-Earths And Life**

Learn about alien life, how we search for it, and what this teaches us about our place in the universe.

<https://www.edx.org/course/super-earths-life-harvardx-spu30xc-1>



**February 17, 2017**  
**5. Autonomy, Choice:**  
**C. Explore Online Databases**  
 (e.g., OER World Map  
<https://oerworldmap.org/>)





**December 8, 2015**

## 5. Autonomy, Choice:

### D. Design Multimedia Glossaries

P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary

<http://natewynne1992.wikix.com/p540courseglossary>

Ozgur Ozdemir, December 2012

<http://r685glossary.shutterstock.com/>

Umida Khikmatillaeva, Dec. 2011, P540

<http://learningplanet.shutterstock.com/>

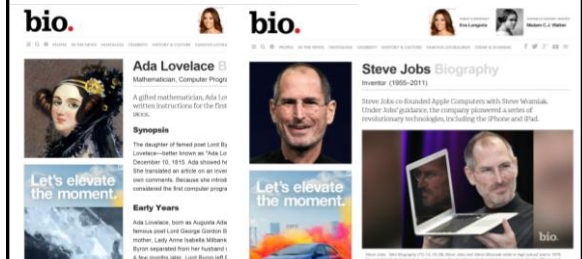


## 5. Autonomy, Choice:

### E. Tracking the Life of a Computer Scientist (e.g., bio.com)

<http://www.biography.com/people/steve-jobs-9354805>

<http://www.biography.com/people/ada-lovelace-20825323>



**March 13, 2015**

## 5. Autonomy, Choice:

### F. 20% Time in Education

Kendal Rasnake & Troy Cockrum, IU

[https://www.dropbox.com/s/tcsr50ae2icgwuk/20\\_Time\\_in\\_Education-Cockrum\\_and\\_Rasnake.mov?n=57312573](https://www.dropbox.com/s/tcsr50ae2icgwuk/20_Time_in_Education-Cockrum_and_Rasnake.mov?n=57312573)



## Poll #5:

**Any light bulbs going off in your head so far...?**

A. Yes definitely\*\*\*

B. Yes maybe!

C. Not yet (but hopefully soon...)



## 6. Relevance, Meaningfulness:

### A. Weekly Synchronous Guest Chats

(e.g., Emily Hixon, January 20, 2015)

<https://connect.iu.edu/p259wpiabg9/>



**Jan. 20, Oct. 13, & Nov. 2016 (Zoom)**

## 6. Relevance, Meaningfulness:

### B. Weekly Guest Expert Chats

R511 Chat with Mike Molenda, IU



## 6. Relevance, Meaningfulness: C. Case-Based Learning: Instructor Cases (e.g., Mark Braun, IU)



Stomach, endoscopic examination and biopsy:  
Poorly differentiated tubular adenocarcinoma

Final conclusion:  
Advanced gastric carcinoma with multiple lung metastasis with lymphangitic growth

## September 20, 2016 6. Relevance, Meaningfulness: D. Editing Wikipedia Pages

College students take to Wikipedia to rewrite the wrongs of Internet science, Rosanna Xia, LA Times  
<http://www.latimes.com/local/lanow/la-me-wikipedia-science-classes-adv-snac-story.html>



Samantha Erickson, left, of the Wiki Education Foundation; Tina Brock, a dean of the School of Pharmacy at UC San Francisco; and professor Amin Azzam discuss implementing the integration of Wikipedia pages on medical topics with students' work. (David Butow / For The Times)

## January 20, 2017 6. Relevance, Meaningfulness: E. The Changing Earth <http://thechangingearth.com/>



## 7. Interactive, Collaborative: A. Negotiate Meanings Online

(e.g., PiratePad: <http://meetingwords.com/>)  
<http://blogs.edon.edu/technology/6-collaborative-writing-applications-for-group-projects-or-papers/>  
MeetingWords, Google Docs, NowComment, MixedInk

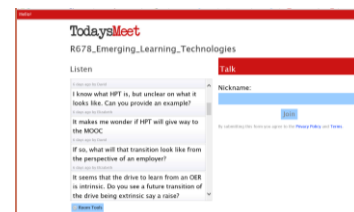


## 7. Interactive, Collaborative: B. Virtual Sharing Walls e.g., Padlet (What is your secret recipe to engage?) [http://padlet.com/zaid\\_alsagoff/engage](http://padlet.com/zaid_alsagoff/engage)

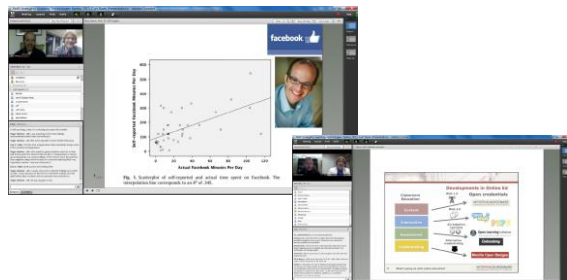


## 7. Interactive, Collaborative: C. Backchannel Chat (TodaysMeet)

<https://todaysmeet.com/>  
R678\_Emerging\_Learning\_Technologies  
[https://todaysmeet.com/R678\\_Emerging\\_Learning\\_Technologies](https://todaysmeet.com/R678_Emerging_Learning_Technologies)



## 7. Interactive, Collaborative: D. Guest Speaker Quotes (Rey Junco, February 25, 2013)



## Poll #6:

### Which of these ideas might you use?

- A. Student designed multimedia glossaries
- B. Edit Wikipedia pages
- C. 20 percent time learning
- D. Guest chats with former students
- E. Negotiate meanings online (e.g., PiratePad)
- F. Enroll in a MOOC
- G. Discussion in Zoom
- H. Guest speaker quotes



## 8. Engagement, Involvement: A. Interactive Maps Timelines

**October 22, 2014**, Second immigration wave lifts diversity to record high, Edward Greg Toppo and Paul Overberg, USA Today

<http://www.usatoday.com/story/news/nation/2014/10/22/immigration-race-ethnicity-changes-100-years/1421113/>

Rising diversity, state by state

The USA TODAY Diversity Index shows on a scale from 0-100 the chance that two random people are different by race and ethnicity.



Source: USA TODAY analysis by Paul Overberg of data from Census Bureau, NHGIS at University of Minnesota and ProximityOne. Frank Pompa, USA TODAY.

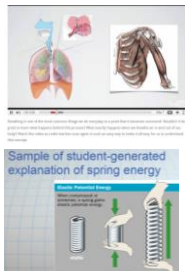
## 8. Engagement, Involvement: B. Interactive Timelines (Dipity, xtimeline, Simile, etc.)

<http://www.usatoday.com/story/news/nation/2014/10/22/immigration-race-ethnicity-changes-100-years/1421113/>  
<http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>  
<http://www.cnet.com/news/steve-jobs-a-timeline/>



## 8. Engagement, Involvement: C. Interactive Labs and Simulations

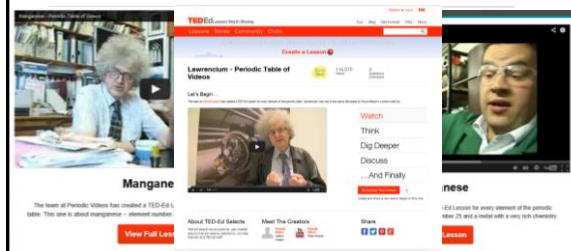
<http://phet.colorado.edu/en/simulation/energy-skate-park>



## 8. Engagement, Involvement: D. Videos with Test Questions (e.g., TEDEd)

(Lessons about every single element on the periodic table)

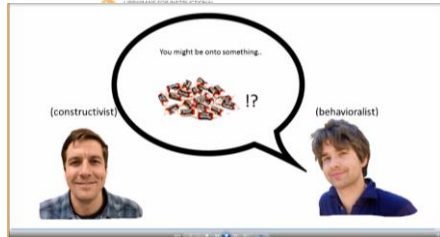
[http://ed.ted.com/periodic-table-video?source=TED-Ed+Subscribers&utm\\_campaign=520185&utm\\_medium=email&utm\\_term=.0\\_1a0cc048-92054e0f-49762201](http://ed.ted.com/periodic-table-video?source=TED-Ed+Subscribers&utm_campaign=520185&utm_medium=email&utm_term=.0_1a0cc048-92054e0f-49762201)



**December 13, 2016****9. Tension, Challenge, Controversy, etc.:****A. Controversial Issue Debates**

Librarians for Instructional Technology, Latrice Booker, R511, Fall 2016

<http://bookerlr2000.wixsite.com/librariansforit/cognitivism>  
[https://www.youtube.com/watch?v=8u2\\_7\\_AET\\_A0&list=PL8u2\\_7\\_AET\\_A0](https://www.youtube.com/watch?v=8u2_7_AET_A0&list=PL8u2_7_AET_A0)

**October 16, 2015****9. Tension, Challenge, Controversy, etc.:****B. Case Learning from the News**

(e.g., Newseum Ed)

<https://newseumed.org/>

**10. Yields Products, Goals:****A. Facebook Course Page (R546)**

<https://www.facebook.com/JennyBELTT/>

**10. Yields Products, Goals:****B. Database Collection Tools**

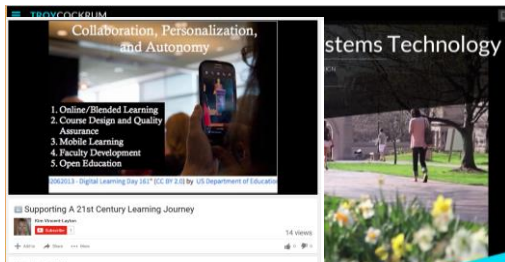
Design Article Database in Pinterest,

Meina Zhu and Jennifer Weebek

<https://www.pinterest.com/zhuaina000/r-678-emerging-learning-technology/>  
<https://www.pinterest.com/jennifertweebek/emerging-learning-technologies/>

**10. Yields Products, Goals:****C. Student Created Recap Videos**

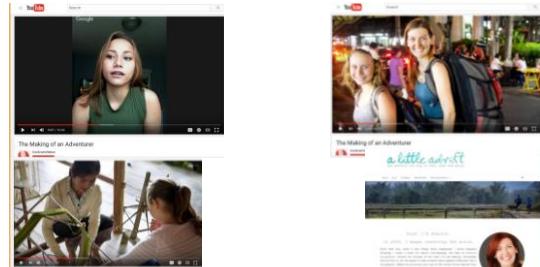
Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzH00aU>  
 Qi Li, Gangnam: <http://www.youtube.com/watch?v=7Q429qzaU8&feature=youtu.be>  
 Miguel Lara (Web 2.0 FREEDOM!): <http://www.youtube.com/watch?v=8cmCFW0W18>  
 Kendal Rasmake (Is IT Right For You?): <https://www.youtube.com/watch?v=M3GUD1CIGW>  
 Kimberly Vincent: [https://www.youtube.com/watch?v=4G2R\\_7Y1218&list=PL8u2\\_7\\_AET\\_A0](https://www.youtube.com/watch?v=4G2R_7Y1218&list=PL8u2_7_AET_A0)

**10. Yields Products, Goals:****D. Student Created Documentaries**

R678 Final Projects, April 2016

The Making of an Adventurer (video), Troy Cockrum

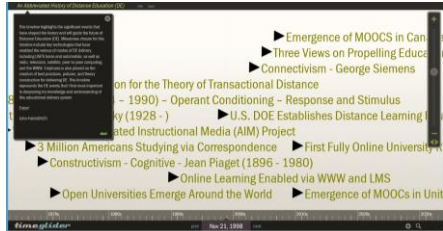
<https://www.youtube.com/watch?v=ew6e7Chd9I8>





**March 12, 2016**  
**10. Yields Products, Goals:**  
**E. Student Generated Timelines,**  
**Taxonomies, and Concept Maps**

R678 John Falchi, Timeglider, An Abbreviated History of Distance Education  
[http://timeglider.com/L/50843d8903a48087min\\_zoom=1&max\\_zoom=100](http://timeglider.com/L/50843d8903a48087min_zoom=1&max_zoom=100)



**December 13, 2016**  
**10. Yields Products, Goals:**  
**F. Student Infographics, Charts, and Maps**  
**(e.g., Piktochart)**

Brittany Campbell, Brooke Welti, Kevin McCracken, R511, Fall 2016  
<https://magic.piktochart.com/output/18501778-r511?presentation=true>



**Poll #7:**

**Which of these ideas might you use?**

- A. Interactive map timelines
- B. Facebook course page (or Pinterest)
- C. Issue challenges, role plays, and debates
- D. Student designed course recap videos
- E. Student created websites
- F. Student infographics
- G. Interactive timeline tools
- H. Videos with test questions



**Commitments:**  
**Stop and Share:**

Which principle(s) of TEC-VARIETY will you use?

**Tone/Climate**  
**Encouragement, Feedback**  
**Curiosity**

**What motivates?**

- Variety**
  - Autonomy**
  - Relevance**
  - Interactive**
  - Engagement**
  - Tension**
  - Yields Products**
1. Tone/Climate: Psychological Safety, Comfort, Sense of Belonging
  2. Encouragement: Feedback, Responsiveness, Praise, Supports
  3. Curiosity: Surprise, Intrigue, Unknowns
  4. Variety: Novelty, Fun, Fantasy
  5. Autonomy: Choice, Control, Flexibility, Opportunities
  6. Relevance: Meaningful, Authentic, Interesting
  7. Interactivity: Collaborative, Team-Based, Community
  8. Engagement: Effort, Involvement, Investment
  9. Tension: Challenges, Dissonance, Controversy
  10. Yielding Products: Goal Driven, Purposeful Vision, Ownership

**Masterclass Part 2:**

**Where are You R2D2?: Addressing Diverse Online Learner Needs with the Read, Reflect, Display, and Do Model**

Curt Bonk, Professor, Indiana University  
 cjbonk@indiana.edu

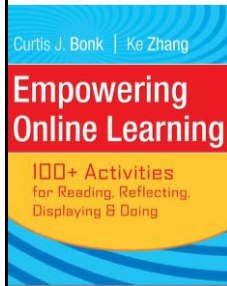
<http://mypage.iu.edu/~cjbonk>



**Addressing Learning Styles with R2D2**



## Model #2: The R2D2 Model: Read, Reflect, Display, Do...



## The R2D2 Method

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)



## 1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



**January 20, 2016**

**Read 1a. Podcasts**

**IU Bloomington podcast series to launch Jan. 24, Steve Hinnefeld, IU Newsroom**

<http://inside.iuindiana.edu/newslines/2016-01-20-iu-bloomington-podcast-series-launch>  
<http://newsroom.iu.edu/content/2016-01-20-iu-bloomington-podcast-series-launch>



IU's Media School dean James Shanahan, at left, will host a new campus podcast. Senior Luqmann Ruth will read the news for the inaugural podcast.  
| PHOTO BY JENNIFER PIUREK, OFFICE OF THE PROVOST

## Read 1b. Collect Oral Histories

e.g., Joan Kang Shin, George Mason University, has her students write "This I believe" Statements.  
(EFL teachers around the world interview elders in their community for a rich database of oral histories and documentaries for social change)

Oral History Society: <http://www.ohs.org.uk/>



## Read 1c.

**Exploring Various Resources to Track the Life of a Prominent People**

(e.g., Vannevar Bush in Atlantic Monthly, Wikipedia, Time, etc.)  
[http://en.wikipedia.org/wiki/Vannevar\\_Bush](http://en.wikipedia.org/wiki/Vannevar_Bush)

JULY 1945

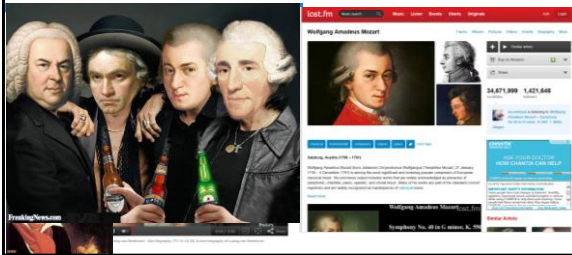
**As We May Think**

VANNEVAR BUSH | JUL 1 1945, 12:00 PM ET



**Read 1d.**

**Reading Life Histories**  
(OER, bio.com; Mozart:  
<http://www.mozartproject.org/>)  
<http://www.biography.com/people/bob-marley-9399524>

**May 28, 2015****Read 1e. Open Access Scientific Reports/Studies**

**New species from Ethiopia further expands Middle Pliocene hominin diversity, Nature**

<http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html>  
<http://www.nature.com/nature/journal/v521/n7553/full/nature14448.html>

**ARTICLE****New species from Ethiopia further expands Middle Pliocene hominin diversity**

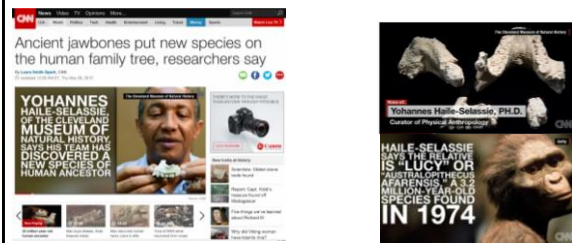
Yohannes Haile-Selassie, Ph.D. / University of Texas at Austin / yohannes@utmsi.utexas.edu / yohannes@utmsi.utexas.edu

Middle Pliocene hominins have been a subject of debate over the past few decades, particularly after the discovery of non-ergaster, non-afarensis hominins in Ethiopia in the mid 1990s. During this time period, there was a general consensus that hominins descended from a single lineage. However, the discovery of a new hominin species, *Kenyanthropus rudolfensis*, in 2001, challenged this view. The new species, *Kenyanthropus rudolfensis*, was found in the same region as the other hominins, but it was much larger and had a different brain structure. This discovery led to a new understanding of the hominin lineage, and it is now believed that there were multiple lineages of hominins during the Middle Pliocene.

Recent fossil discoveries from eastern and central Africa have led to a new understanding of the hominin lineage. In 2001, a new hominin species, *Kenyanthropus rudolfensis*, was discovered in Kenya. This species was much larger than the other hominins of the time, and it had a different brain structure. This discovery led to a new understanding of the hominin lineage, and it is now believed that there were multiple lineages of hominins during the Middle Pliocene.

**May 28, 2015**  
**Read 1e. Immediate Science**

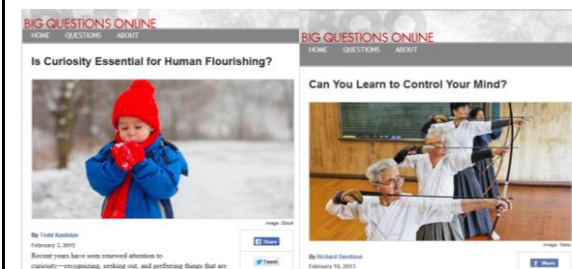
**Ancient jawbones put new species on the human family tree, researchers say, Laura Smith-Spark, CNN**  
<http://www.cnn.com/2015/05/28/africa/ethiopia-fossil-hominin-ancestor/index.html>

**2. Reflective and Observational Learners**

- Reflective and observational learners prefer to reflect, observe, view, and watch learning; they make careful judgments and view things from different perspectives



**Reflect 2a. Big Issue Reflections**  
(Big Questions Online (BQO)), Feb 3, 2015  
(e.g., Is curiosity essential for human flourishing?)  
<https://www.bigquestionsonline.com/content/do-we-have-souls>

**October 6, 2016**

**Reflect 2b. What-if Reflections**  
**What if Aaron Burr had missed Alexander Hamilton?, Thomas Fleming, CNN**  
<http://www.cnn.com/2016/10/06/politics/alexander-hamilton-aaron-burr-duel-missed/index.html>

What if Aaron Burr had missed Alexander Hamilton?



## September 21, 2016 Reflect 2c. Discussion Starter News Stories

(e.g., Aboriginal Australians are Earth's oldest civilization: DNA study, [Emiko Jozuka, CNN](http://edition.cnn.com/2016/09/22/asia/indigenous-australians-earths-oldest-civilization/index.html))

<http://edition.cnn.com/2016/09/22/asia/indigenous-australians-earths-oldest-civilization/index.html>



Elder Thomas Wales, of the Thanakwith Pine River People, is one of the co-authors of the study.

## January 12, 2017 Reflect 2d. Sharing Future Forecasts and Projections

Meet the giants of tomorrow: The tallest buildings rising in 2017, Ian Spula, CNN

<http://www.cnn.com/2017/01/11/architecture/tallest-buildings-top-out-2017/>

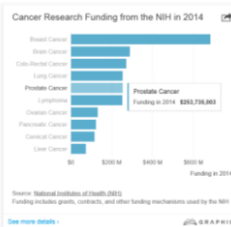
Meet the giants of tomorrow: The tallest buildings rising in 2017



## April 13, 2016 Reflect 2e. Interpreting Interactive Graphs

Tech billionaire announces \$250 million in cancer immunotherapy funding, Jayne O'Donnell, USA Today

<http://www.usatoday.com/story/news/2016/04/13/billionaire-announces-250-million-cancer-immunotherapy-funding/82821136/>



Dr. Jedd D. Wolchok, Chief, Melanoma and Immunotherapeutics Service at Memorial Sloan Kettering Cancer Center in Photo by John OBoyle, Freelance ORG XMIT: JO 134700 seanparkar 4/7/2016 (Via MerlinFTP Drop)

## 3. Visual Learners

- Visual learners prefer diagrams, flowcharts, timelines, pictures, films, and demonstrations.



## Display 3a. Interpreting Infographics August 5, 2015

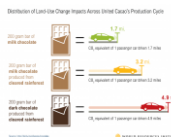
How much rainforest in that chocolate bar? Global Forest Watch, Nancy Harris, Octavia Payne and Sarah Mann  
<http://blog.globalforestwatch.org/2015/08/how-much-rainforest-is-in-that-chocolate-bar/>

Land-Use Change Emissions in Miles Driven



<http://bit.ly/rainforest-chocolate>

WORLD RESOURCES INSTITUTE



## Display 3b. Virtualize Words Used (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)







[illegible]

**Live long and prosper**

Life expectancy at birth in selected rich countries, years

Legend: US (orange line), South Korea (dark blue line), Others (light blue shaded area)

**Women**

**Men**

Y-axis: Life expectancy at birth in years (65 to 90). X-axis: Year (1970 to 2030). The dashed line indicates the forecast period.

Source: "Future life expectancy in 35 industrialised countries", by M. Kazi et al. *The Lancet*, February 2017

**Pinkcast 2.**  
**Advice from Adam Grant: Look for “disagreeable givers”**



The screenshot shows a video player interface. The main video frame displays Adam Grant, a man with dark hair, wearing a dark jacket over a light-colored shirt. He is speaking and gesturing with his hands. Behind him are several framed posters on a wall. One poster on the left is titled 'War of the Worldviews' and features a globe. Another poster on the right is titled 'The Power of Vulnerability' and features a portrait of a man. To the right of the main video frame, there is a grid of smaller video thumbnails, each showing a different person. The video player controls at the bottom include a play button, a progress bar, and the text 'HD vimeo'.

**Penguin Science**  
 The science of a warming world and the lives of penguins

Home Research Climate & Penguins Education Penguin Cart

Penguin Science | Exploring Species Climate Change Options

How is the world's favorite seabird responding to global warming?

**penguin**  
 science

NSF

SPONSORED BY THE NATIONAL SCIENCE FOUNDATION

**THE DIGITAL ERA**

One of the first electronic calculators, the ENIAC, was built in 1946 at the University of Pennsylvania. It was the first general-purpose electronic digital computer.

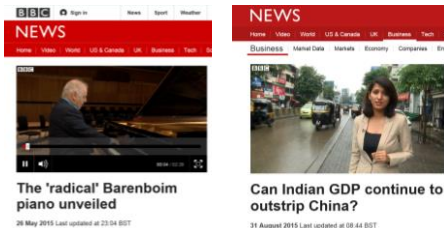
The first personal computer, the Apple II, was introduced in 1977. It was the first mass-produced, affordable, and easy-to-use personal computer.

The first laptop computer, the Osborne 1, was introduced in 1981. It was the first portable, mass-produced, and affordable laptop computer.

The first tablet computer, the iPad, was introduced in 2010. It was the first mass-produced, affordable, and easy-to-use tablet computer.

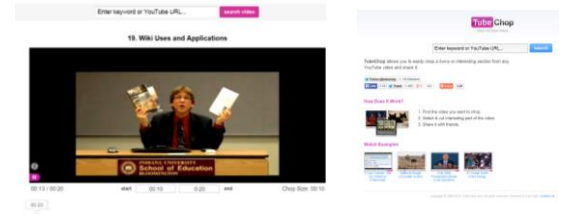
## Display 3o. Short Educational Videos:

CNN, BBC, TED, TED-Ed, ForATV  
BBC One-Minute World News (August 31, 2015)  
<http://www.bbc.com/news/business-34105708>



## Display 3p. Short Video Anchors (e.g., TubeChop of V-PORTAL: Video Primers in an Online Repository of e-Teaching and Learning)

Curt Bonk: <http://www.tubechop.com/watch/378752>



## 4. Tactile/Kinesthetic Learners

- Tactile/kinesthetic senses can be engaged in the learning process are role play, dramatization, cooperative games, simulations, creative movement and dance, multi-sensory activities, manipulatives and hands-on projects.



## Do 4a. Goal Setting Tools

(e.g., I Done This, Milestone Planner, and 43 Things)



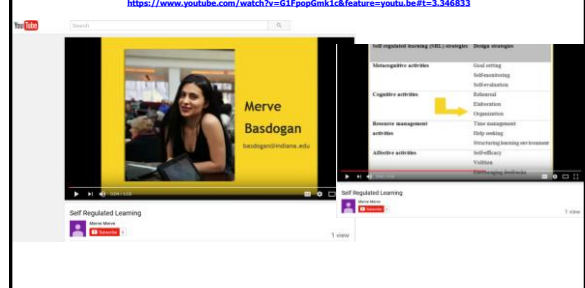
## October 26, 2016 Do 4b. Student Created Marketing and Explanatory Videos

R511, Kai Westerfield, Jennifer Blankenship, And Colbi Lehman,  
Online Degree Programs, (11:54) Go Animate



## October 26, 2016 Do 4c. Student Exploration Video

R511, Merge Basdogan, Self-Regulated Learning (6:08)  
<https://www.youtube.com/watch?v=g1fpopGmk1c&feature=youtu.be#t=3.346823>

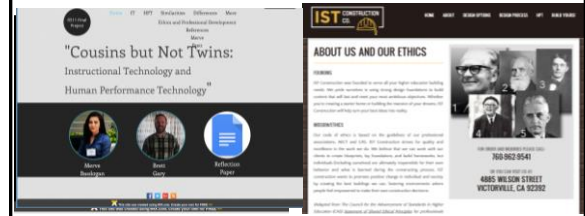


**October 26, 2016**  
**Do 4d. Student Research Recap Video**  
**R511, Rob Elliot, Erin Milanese, and Patrick Walsh**  
**Traditional Textbook (8:11)**  
<https://drive.google.com/file/d/0B25dACR9Dd85NE90a516RipHw/view>



**Do 4e. Student Website Development**  
**R511 Final Projects, April 2016**

**IT and HPT Comparison (Website), Doug Hsu**  
<http://dougandindra.wix.com/r511finalproject>  
**"IST Construction, Co."**  
 Rob Elliot, Patrick Walsh, Erin Milanese, R511, **December 2016**  
<http://reliott.net/istconstruction/index.php>  
**"Cousins but Not Twins: Instructional Technology and Human Performance Technology,"**  
 Merve Basdogan and Brett Gary, R511, **December 2016**  
<http://educbasdogan.wixsite.com/511final>



**Poll #8: Which do you prefer...**  
**(A) TEC-VARIETY or (B) R2D2?**



**What motivates?**

1. **TenseClimate:** Psychological Safety, Comfort, Sense of Belonging
2. **Encouragement:** Feedback, Responsiveness, Praise, Supports
3. **Curiosity:** Surprise, Inquire, Uncertainty
4. **Variety:** Novelty, Fun, Fantasy
5. **Autonomy:** Choice, Control, Flexibility, Opportunities
6. **Relevance:** Meaningful, Authentic, Interesting
7. **Interactivity:** Collaborative, Team-Based, Community
8. **Engagement:** Effort, Involvement, Investment
9. **Tension:** Challenge, Dissonance, Controversy
10. **Yielding Products:** Goal Driven, Purposeful Vision, Ownership

**Poll #9: How many ideas did you get from this talk?**

1. 0 if I am lucky.
2. Just 1.
3. 2, yes, 2...just 2!
4. Do I hear 3? 3!!!!
5. 4-5.
6. 5-10.
7. More than 10.



**Poll #10: Three Words from this Session...?**

**e.g., "I am happy!" and...**  
**My minions are happy!**



**Any Questions or Comments?**

**Slides at: TrainingShare.com**  
**Papers: PublicationShare.com**  
**Free book: <http://tec-variety.com/>**  
**Dr. Curt Bonk – [CJBonk@Indiana.edu](mailto:CJBonk@Indiana.edu)**

