

Luncheon Conversation:

Adding Some TEC-VARIETY in the Blended Classroom

Curtis J. Bonk, Professor, Indiana University
cjbonk@indiana.edu; <http://curtbonk.com/>



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

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

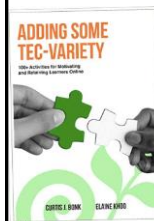
(Jere Brophy, Michigan State University)

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.



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

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



What motivates?

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**: Challenge, Dissonance, Controversy
10. **Yielding Products**: Goal Driven, Purposeful Vision, Ownership

在线学习动机与激励:
TEC-VARIETY 模型

1. Risk

Low Risk

High Risk



2. Time

Easy to Embed

Extensive Planning



3. Cost

Free or Inexpensive

Enterprise Licenses



Instructor-Focus

Student-Focus

4. Student-Centered

Low

High



Examples of TEC-VARIETY



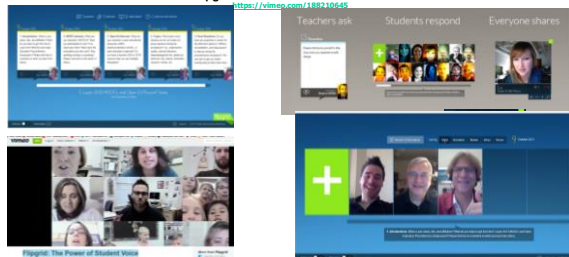
November 10, 2016

1. Tone/Climate:

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

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

Flipgrid: The Power of Student Voice
<https://vimeo.com/169716646>



1. Tone/Climate:

B. Instructor Course Introductions

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

<https://www.youtube.com/watch?v=Wzbzc30iIA>

Chuck Severance, U Michigan/Coursera) in Barcelona

<http://www.youtube.com/watch?v=3zNHvmSv8Tl>

Chuck Severance, University of Michigan

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

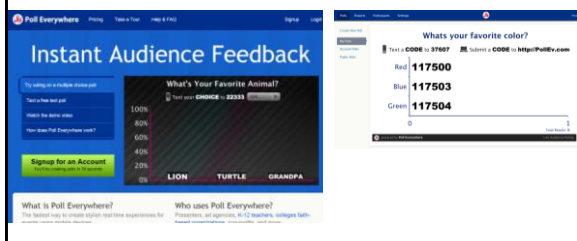


2. Encouragement, Feedback:

A. Blog and Website Polling

(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)

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



2. Encouragement, Feedback:

B. Voice/Audio Feedback

Vocaroo: <http://vocaroo.com/>

<http://vocaroo.com/delete/s0x8moQAYaiu/a37bbc9408bb8c95>

(Recorded by Curt Bonk for the Open University of China)



3. Curiosity, Surprise, Intrigue, Unknowns:

A. Summary and Comparison Maps

A Map Showing How Much Time It Takes to Learn Foreign Languages: From Easiest to Hardest, Open Culture

<http://www.openculture.com/2012/11/a-map-showing-how-much-time-it-takes-to-learn-foreign-languages-from-easiest-to-hardest.html>

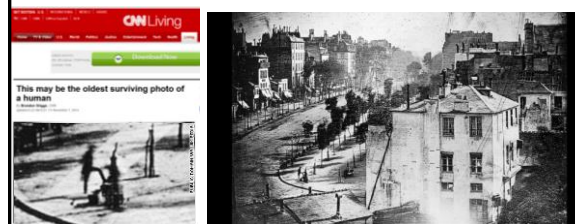


3. Curiosity, Intrigue, Unknowns:

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-daguerra/index.html?hpt=hp_4_kong



April 17, 2017

3. Curiosity, Intrigue, Unknowns:
C. 1st woman to officially run Boston Marathon
 does it again, 50 years later
 Emanuella Grinberg, CNN, USA Today

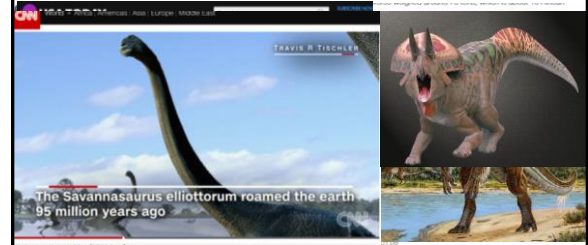
<http://www.cnn.com/2017/04/17/us/boston-marathon-kathrine-switzer-trnd/index.html>
<http://www.usatoday.com/story/tech/science/2017/04/17/1st-woman-to-run-boston-marathon-50-years-later/1075419001/>



January 5, 2017

3. Curiosity, Intrigue, Unknowns:
D. Immediate Science

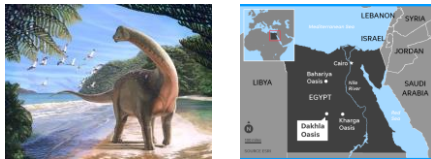
Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN
<http://www.cnn.com/2016/01/14/immag/titanosau-new-dinosaur-on-display-new-york-trip/>



January 31, 2018

3. Curiosity, Intrigue, Unknowns:
E. Dinosaur Discoveries
 'Holy Grail' of dinosaur fossils
 discovered in Egyptian desert
 Doyle Rice, USA Today

<https://www.usatoday.com/story/tech/science/2018/01/30/holy-grail-dinosaur-fossils-discovered-egyptian-desert/1075419001/>

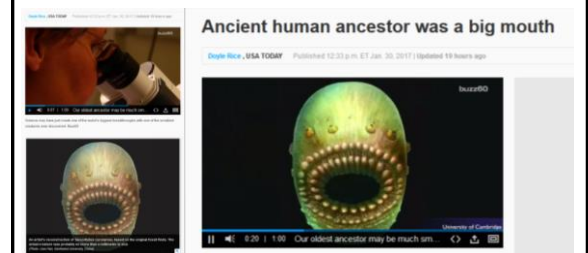


A new species of dinosaur has been discovered in Sahara Desert. It's an extremely rare discovery because dino fossils are not known to be in that part of the world. USA TODAY

January 30, 2017

3. Curiosity, Intrigue, Unknowns:
F. Immediate Science

Ancient human ancestor was a big mouth
 Doyle Rice, USA Today
<http://www.usatoday.com/story/tech/science/2017/01/30/ancient-human-ancestor-big-mouth/97243458/>



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 flipped 2 coins of type Irish 43:



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

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

Dice Roller

You rolled 2 dice:



Timestamp: 2011-08-13 01:14

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

RANDOM.O

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. 9 Arthur
3. 10 Thomas
4. 2 Shelley
5. 7 Stanley
6. 3 Sherman
7. 5 Sander
8. 8 Stephanie
9. 4 Ned
10. 6 Brian

Timestamp: 2011-08-13 01:01

[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/>



April 3, 2017

**4. Variety, Novelty, Fun, Fantasy:
C. Kahoot!**

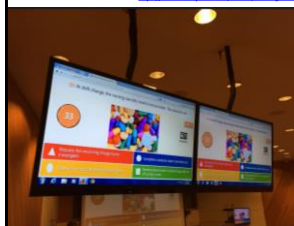
<https://getkahoot.com/>

July 31, 2017

I'm in 'Kahoots' with Technology in the Classroom

Cassandra OSullivan Sachar, Faculty Focus

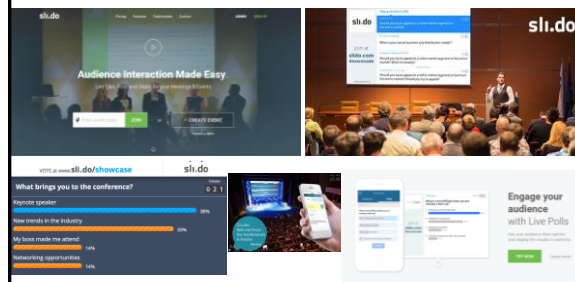
<https://www.facultyfocus.com/articles/technology-in-the-classroom/i-am-in-kahoots-with-technology-in-the-classroom/>



April 3, 2017

**4. Variety, Novelty, Fun, Fantasy:
D. Sli.do**

<https://www.sli.do/>



July 17, 2017

**4. Variety, Novelty, Fun, Fantasy:
E. Learning Chemistry in Virtual Reality,**

Sarah Hardman, New Learning Times

<https://newlearningtimes.com/cms/article/4519/learning-chemistry-in-virtual-reality>

1:38 video: <https://vialogues.com/vialogues/play/38337/>

All: <http://curtbonk.com/chemistry-vr.html>

01-41: <http://curtbonk.com/chemistry-vr-1.html>

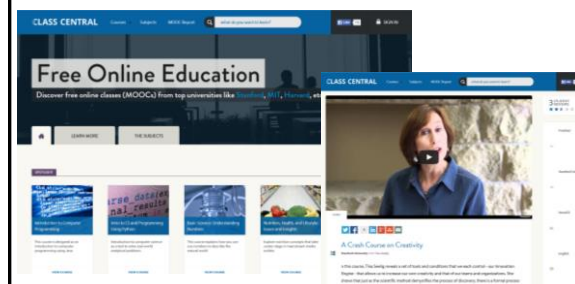
41-1:16: <http://curtbonk.com/chemistry-vr-2.html>

1:16-1:36: <http://curtbonk.com/chemistry-vr-3.html>



5. Autonomy, Choice:

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



5. Autonomy, Choice:

B. Design Multimedia Glossaries

P540 Final Assignment: Nate Wynne, Supersized Personal Course Glossary

<http://natwynne1982.wix.com/p540courseglossary>

Ozgur Ozdemir, December 2012

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

Umida Khikmatillaeva, Dec. 2011, P540

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



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

6. Relevance, Meaningfulness:

A. Weekly Guest Expert Chats

R511 Chat with Mike Molenda, IU



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

Slide 126, gastric adenocarcinoma.

Slide 127, colon with pseudo membrane colitis.

Slide 128, colon with pseudo membrane colitis.

Slide 129, bone marrow with erythrocyte infiltration.

Slide 130, bone marrow with erythrocyte infiltration.

I'd like to take the quiz now.

Stomach, endoscopic examination and biopsy: Poorly differentiated tubular adenocarcinoma

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

July 28, 2017 6. Relevance, Meaningfulness: C. Case-Based Learning: Modern medicine breathes new life into virtual training

<https://www.usatoday.com/videos/tech/2017/07/28/modern-medicine-breathes-new-life-into-virtual-training/104073696/>

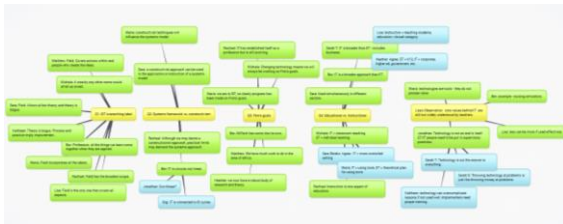
Videos

2:34 (entire video): <http://curtbonk.com/vr-medicine4b.html>
 .01-.21: <http://curtbonk.com/vr-medicine.html>
 .37-.56: <http://curtbonk.com/vr-medicine2.html>
 .57-1.29: <http://curtbonk.com/vr-medicine3.html>
 1:30-2:27: <http://curtbonk.com/vr-medicine4.html>



September 3, 2017 6. Relevance, Meaningfulness: D. Mindmap Recaps of Online Discussions Mindmap of Week 2 of R511

<https://zaidit.us/?p=29&id=Q849D1YH6L4J0U0Q049Q8R7U2Z1xQwC2mN0E32W0Z0W7xftb0mT32-X>



7. Interactive, Collaborative: A. Negotiate Meanings Online

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

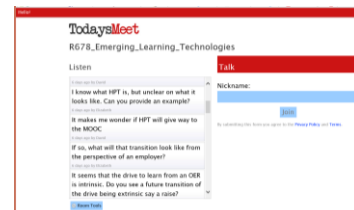


7. Interactive, Collaborative: B. Virtual Sharing Walls e.g., Padlet (What is your secret recipe to engage?) http://padlet.com/zaid_alsagoff/engage



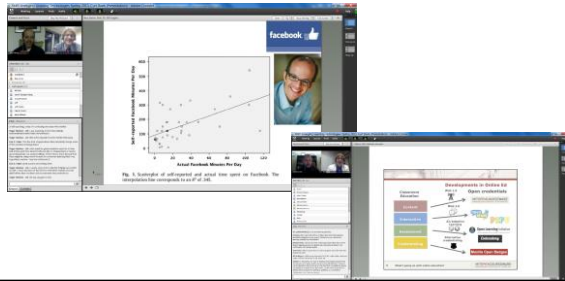
7. Interactive, Collaborative: C. Backchannel Chat (Today'sMeet)

<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)



8. Engagement, Involvement:

A. Interactive Maps Timelines

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

<http://www.usatoday.com/story/nation/2014/10/22/immigration-diversity-change-100-years/111131/>

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 Pompea, USA TODAY

February 14, 2018

8. Engagement, Involvement:

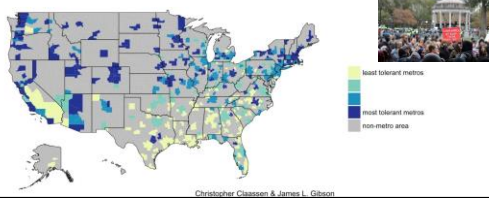
B. Maps

This map shows where more Americans are willing to support free speech

The Monkey Cage, The Washington Post

<https://www.washingtonpost.com/news/monkey-cage/wp/2018/02/13/does-free-speech-help-democracy-we-did-the->

Political Tolerance by US Metropolitan Area
Estimated using 2007-11 Freedom and Tolerance Survey Data



Christopher Cusumano & James L. Gibson

8. Engagement, Involvement:

C. 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

December 13, 2016

9. Tension, Challenge, Controversy, etc.:

A. Controversial Issue Debates

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

<http://bookeri2000.wixsite.com/librariansforit/cognitivism>

R511: Pedagogical Values from the Classroom to the Library: A Conversation with Dr. Latrice Booker, R511, November 16, 2016



9. Tension, Challenge, Controversy, etc.:

B. Yes, Mr. President, We Remade Our Atlas to Reflect Shrinking Ice

Christine Dell'Amore, National Geographic, August 3, 2015

<http://www.nationalgeographic.com/2015/08/03/atlas-to-reflect-shrinking-ice/>



February 16, 2017

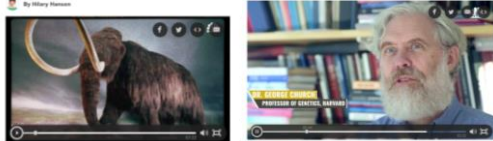
**9. Tension, Challenge, Controversy, etc.:
C. Immediate Science**

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_58a6267e4037a1721645779e4b5d25050e8k
https://www.huffingtonpost.com/entry/woolly-mammoth-de-extinct_us_58a6267e4037a1721645779e4b5d25050e8k

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

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

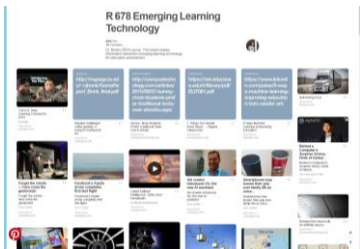


**10. Yields Products, Goals:
A. Facebook Course Page (R546)**
<https://www.facebook.com/JennyBELTT/>



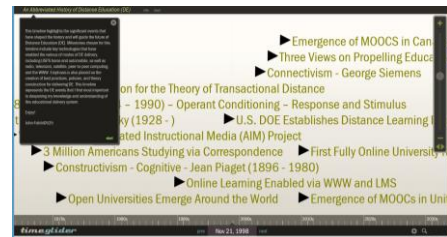
**10. Yields Products, Goals:
B. Database Collection Tools**
Design Article Database in Pinterest,
Meina Zhu and Jennifer Weebeck

<https://www.pinterest.com/zumeina000/r-678-emerging-learning-technology/>
<https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/>



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

R678 John Falchi, Timeglider, An Abbreviated History of Distance Education
http://timeglider.com/r/508438993a48087mm_wcom-318max_wcom-100



10. Yields Products, Goals:

D. Goal Setting Tools
(e.g., I Done This, Milestone Planner, and 43 Things)



**10. Yields Products, Goals:
E. Student Website Development**

R511 Final Projects, April 2016

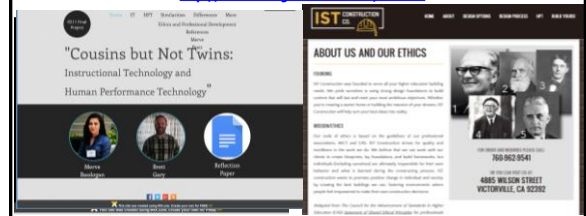
IT and HPT Comparison (Website), Doug Hsu
<http://dougandindra.wix.com/r511finalproject>

"IST Construction, Co."

Rob Elliot, Patrick Walsh, Erin Milanese, R511, December 2016

"Cousins but Not Twins: Instructional Technology and Human Performance Technology,"

Merve Basdogan and Brett Gary, R511, December 2016
<http://educbasdogan.wixsite.com/511final>



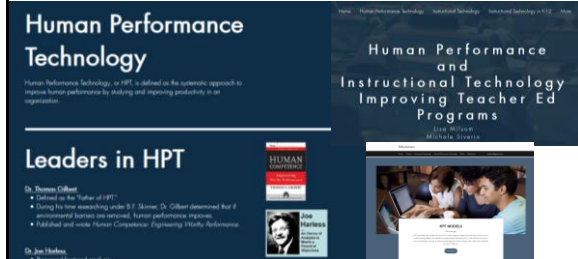
December 12, 2017

Yields Products, Goals:

F. Student Website Development

R511 Student Final Projects, Lisa Milsom and Michale Siverio:

<https://msiverio.wixsite.com/r511>



TEC-VARIETY Recap

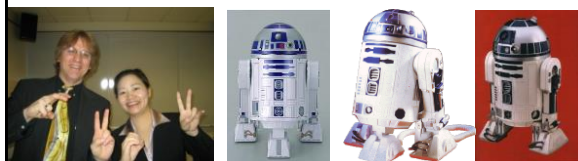


What motivates?

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:** Challenge, Dissonance, Controversy
10. **Yielding Products:** Goal Driven, Purposeful Vision, Ownership

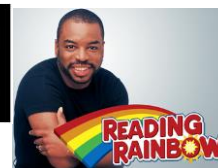
The R2D2 Method

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.iu.edu/headlines/2016-01-20-new-campus-podcast-ahnrtutn_source-2016-01-20&utm_medium=newsletter&utm_content=something-in-the-air&utm_campaign=2016-inside-sub-distribution



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/>

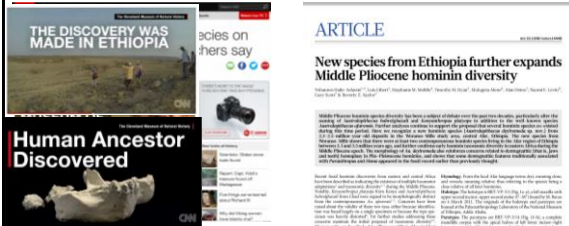


May 28, 2015

Read 1c. Immediate Science and Open Access 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>
<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>



January 28, 2015 Read 1d. Twitter Fed Class Discussions

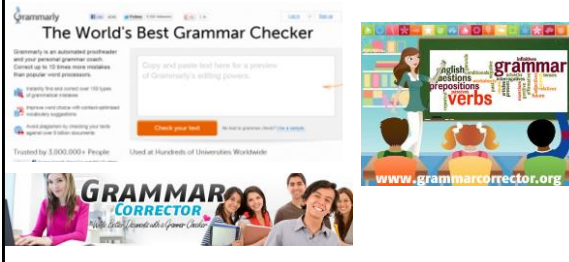
Live-Tweeting Assignments: To Use or Not to Use?
 the Chronicle of Higher Education, Adeline Koh

<http://chronicle.com/blogs/profhack/live-tweeting-assignments-to-use-or-not-to-use/58949>



Read 1e. Grammer Checkers (e.g., Grammarly, Ginger, GrammarCheck, PaperRater, and SpellCheckPlus)

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



February 14, 2018 Read 1f. Reading Online News racing the tangled tracks of humankind's evolutionary journey

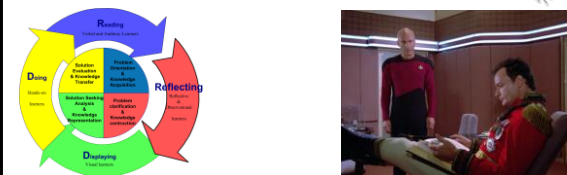
Hannah Devlin, The Guardian

<https://www.theguardian.com/news/2018/feb/12/tracing-the-tangled-tracks-of-humankind-evolutionary-journey>



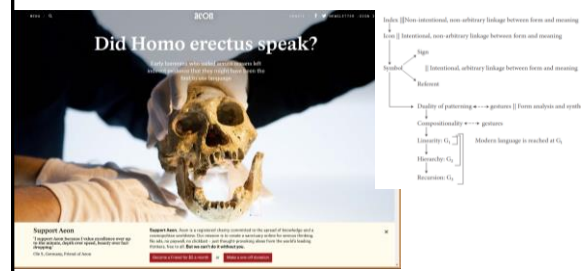
2. Reflective and Observational Learners

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



February 28, 2018 Reflect 2a. Reflect on and Debate News Did Homo erectus speak?

Daniel Everett, Bentley University, Aeon
<https://aeon.co/essays/tools-and-voyages-suggest-that-homo-erectus-invented-language>



4. Tactile/Kinesthetic Learners

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



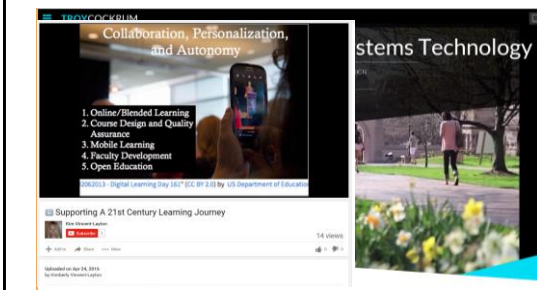
Do 4a. Student Music Recordings of Course Content

IST Groove Song, Jeffrey Jenkins, R511: <https://soundcloud.com/jeffjenkins25/ist-groove>
 The World is Open, Jill Kaufman, R678: <https://www.youtube.com/watch?v=Z8GV0Mg5Ymy&feature=youtu.be>
 Daniel Halluska, P540: <http://www.youtube.com/watch?v=IOL71rGsQnw>
 Weipeng (William) Yang: IST History (1:40): <https://drive.google.com/file/d/0B9YDNkNTIa4DwNSYxOeDM1SkU/view>
 IST Paradise (2:52) (It all started with IST) <https://drive.google.com/file/d/0B9YDNkNTIa4DwNSYxOeDM1SkU/view>



Do 4b. Student Created Recap Videos

Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzh0GaU>
 Qi Li, Gangname: <http://www.youtube.com/watch?v=7Q429tpZaU8&feature=youtu.be>
 Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8cmCFW9Iw8>
 Kendal Rasnake (Is IT Right For You?): <https://www.youtube.com/watch?v=MJ3GUDICGw>
 Kimberly Vincent-Layden: https://www.youtube.com/watch?v=6fz3L_7U1UM&feature=youtu.be



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



What motivates?

1. Tone/Climate: Psychological Safety, Comfort, Sense of Belonging
2. Encouragement: Feedback, Responsiveness, Praise, Supports
3. Curiosity: Surprise, Intrigue, Unknown
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: 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.



Any Questions or Comments?

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

