

Masterclass:

Engaging Online and Blended learning: Introducing the TEC-VARIETY Model

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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.



Framework: 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

TEC-VARIETY Recap

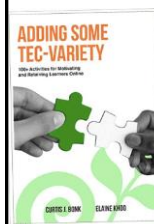


What motivates?

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

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

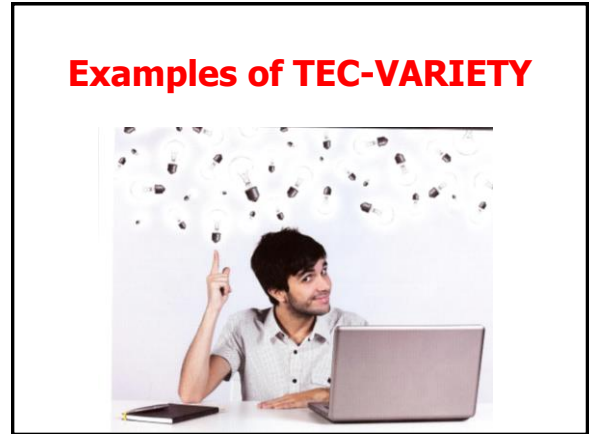
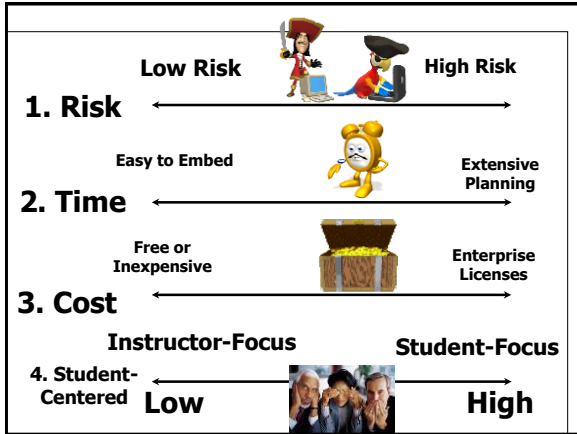
<http://tec-variety.com/>
<http://tec-variety.com/TEC-VARIETY-Chinese.pdf>



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

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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/189210649>

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=Wzbc3QiiA>
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. 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)

March 27, 2017

3. Curiosity, Surprise, Intrigue, Unknowns:
A. Summary and Comparison Maps
#GeoawesomeMapOfTheDay
<https://twitter.com/geoawesomeness>
<https://www.instagram.com/p/BNwgvJfDAq3/>
<https://twitter.com/hashtag/GeoawesomeMapOfTheDay?src=hash>

The States Where It's Legal To Smoke Marijuana
 Look at recreational and medical marijuana use in the U.S.
 Legend: Legalized for recreational & medical use (dark green), Medical use only (light green)

Legalized for recreational & medical use: Washington, Washington D.C., Oregon, Alaska, Colorado, California, Massachusetts, Nevada, Maine

what would remain of Europe's promise...
 ...if all agreed...
 ...separate parties stop

November 29, 2017

3. Curiosity, Surprise, Intrigue, Unknowns:
B. 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/2017/11/a-map-showing-how-much-time-it-takes-to-learn-foreign-languages-from-easiest-to-hardest.html>

FOREIGN SERVICE INSTITUTE
 LANGUAGE DIFFICULTY RANKINGS

Category I (easiest)
 Category II (moderate)
 Category III (difficult)
 Category IV (very difficult)
 Category V (hardest)

3. Curiosity, Intrigue, Unknowns:
C. 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_14kong

CNN Living
 This may be the oldest surviving photo of a human

April 17, 2017

3. Curiosity, Intrigue, Unknowns:
D. 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-tml/index.html>
<http://www.usatoday.com/story/tech/science/2018/01/29/holy-grail-dinosaur-fossil-discovered-egyptian-desert/1075418001/>

July 16, 2017
 Julia Hawkins Sets 100-Meter Dash Record for Women 100 Years or Older
 Boston Marathon
 104 year old Frank Smith runs the Boston Marathon

January 5, 2017

3. Curiosity, Intrigue, Unknowns:
E. Immediate Science
Move over T. rex, new dinosaur unveiled, Amanda Jackson, CNN
<https://www.cnn.com/2016/01/14/living/titanosau-new-dinosaur-son-display-new-york-12p2/>

The Savannasaurus elliotorum roamed the earth 95 million years ago

January 31, 2018

3. Curiosity, Intrigue, Unknowns:
F. Dinosaur Discoveries
'Holy Grail' of dinosaur fossils discovered in Egyptian desert
Doyle Rice, USA Today
<http://www.usatoday.com/story/tech/science/2018/01/29/holy-grail-dinosaur-fossil-discovered-egyptian-desert/1075418001/>

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:
G. 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/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

RANDOM.ORG

Coin Flipper

You flipped 2 coins of type 1 and 41:



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

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

Dice Roller

You rolled 2 dice:



Timestamp: 2011-08-13 01:11

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

List Randomizer

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

Item	Random Sequence Generation
1. Bill	10
2. Arthur	10
3. 30 Thomas	10
4. 2 Shirley	10
5. 7 Stacy	10
6. 2 Sharon	10
7. 5 Susan	10
8. 8 Stephanie	10
9. 4 Ned	10
10. 8 Brian	10

Timestamp: 2011-08-13 01:10

[List 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/>

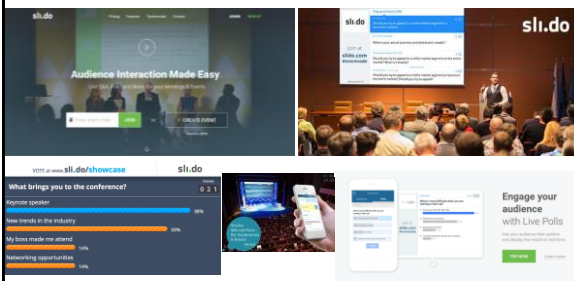


April 3, 2017
4. Variety, Novelty, Fun, Fantasy:
C. Kahoot!
<https://getkahoot.com/>
July 31, 2017

I'm in 'Kahoots' with Technology in the Classroom
 Cassandra OSullivan Sachar, Faculty Focus



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://natewynne1987.wik.com/p540courseglossary>
 Ozgur Ozdemir, December 2012
<http://r685glossary.shutterfly.com/>
 Umida Khikmatillaeva, Dec. 2011, P540
<http://learningplanet.shutterfly.com/>



5. Autonomy, Choice:
C. 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>



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)

This complex slide presents a case-based learning activity. It includes several microscopic images of tissue. Text on the slide reads: 'Stomach, endoscopic examination and biopsy: Poorly differentiated tubular adenocarcinoma'. Below this are two endoscopic images showing the stomach. A 'Final conclusion:' box states: 'Advanced gastric carcinoma with multiple lung metastasis with lymphatic growth.' At the bottom, there is a portrait of Mark Braun and a 'I'd like to take the quiz now.' button.

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-medicine2.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 RS11
<https://www.mindmeister.com/1310000/08910210w2h1m323230v74686b743>

September 20, 2016
6. Relevance, Meaningfulness:
F. Editing Wikipedia Pages
College students take to Wikipedia to rewrite the wrongs of Internet science, Rosanna Xia, LA Times
<http://www.latimes.com/local/la-me-wikipedia-science-classes-adv-20160920.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)

7. Interactive, Collaborative:
A. Negotiate Meanings Online
(e.g., PiratePad: <http://meetingwords.com/>)
<http://blogs.elon.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

7. Interactive, Collaborative:
C. Backchannel Chat (TodaysMeet)
<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 Toppo and Paul Overberg, USA Today

<http://www.usatoday.com/story/news/2014/10/22/diversity-race-ethnicity-growth-109-years/2411117/>

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.



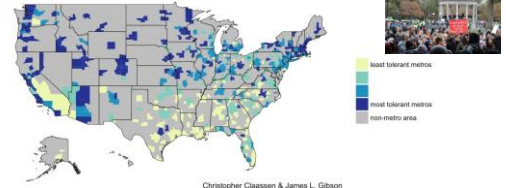
Source USA TODAY analysis by Paul Overberg of data from Census Bureau, NHGIS at University of Minnesota and ProximityOne Frank Pappa, USA TODAY

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



March 30, 2017 8. Engagement, Involvement: C. Interactive Timelines

(Dipity, xtimeline, Simile, TimeLineCurator, etc.)

<http://usatoday30.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>

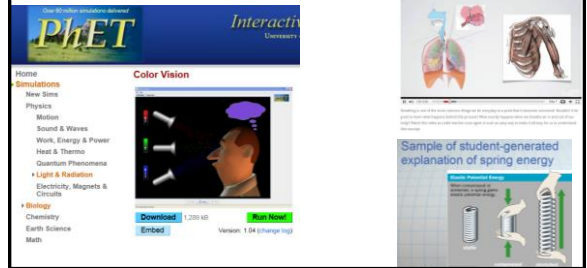
Amy Cavender, The Chronicle of Higher Education

<http://www.civicsite.com/33063/professor-simile-timeline-creation-with-timeliner.com/153622>



8. Engagement, Involvement: D. Interactive Labs and Simulations

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



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

(Lessons about every single element on the periodic table)

http://ed.ted.com/periodic-table/lesson/TEDEd-Ed-Subor/periodic-table-campaign-2013-09-23-2013k-atm-medium-email/utm_term=9..._Laaocof8-9201054ed-46761201



8. Engagement, Involvement: F. 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



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>
R511 Members voted to Create an Advisory Environment in a Content-Driven School; R511, Rick and Rick
https://www.youtube.com/watch?v=Bo2_AJT_A08&ducr=youtu.be

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
https://www.nationalgeographic.com/2015/08/03/ice-shrinking-atlas/
science?utm_content=buffer&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

February 16, 2017
9. Tension, Challenge, Controversy, etc.:
C. Immediate Science
Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
 Hillary Hanson, CNN (video: 3:22)
http://www.huffpost.com/entry/woolly-mammoth-elephant-us_58a62fa7e68037617d264772?no-rt=0&vq2ystpouso&h
http://www.huffpost.com/entry/woolly-mammoth-stephan-us_58a62fa7e68037617d264477

Woolly Mammoth Could Be 'De-Extinct' In 2 Years, Scientist Says
 The plan is to create a woolly mammoth-elephant hybrid.

By Hillary Hanson

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

10. Yields Products, Goals:
B. Database Collection Tools
Design Article Database in Pinterest, Meina Zhu and Jennifer Weebek
<https://www.pinterest.com/zumeina0000/r-678-emerging-learning-technology/>
<https://www.pinterest.com/jennifertwebeck/emerging-learning-technologies/>

10. Yields Products, Goals:
C. Student Created Recap Videos
 Piercarlo Abate: <https://www.youtube.com/watch?v=-TURzH0BaU>
 Qi Li, Ganganme: <http://www.youtube.com/watch?v=7Q42Bqz2aU8&feature=youtu.be>
 Miguel Lara (Web 2.0 FREEDOM): <https://www.youtube.com/watch?v=5cmCFW9jW8>
 Kendal Rasnake (Is IT Right For You?): <https://www.youtube.com/watch?v=M3JGUd1C1Gw>
 Kimberly Vincent-Layton: <https://www.youtube.com/watch?v=45239...78123&feature=youtu.be>

March 12, 2016
10. Yields Products, Goals:
D. Student Generated Timelines, Taxonomies, and Concept Maps
 R678 John Falchi, Timeglider, An Abbreviated History of Distance Education
http://timeglider.com/?5085458992a48086min_zoom=1&max_zoom=100

Emergence of MOOCs in Can
 Three Views on Propelling Educa
 Connectivism - George Siemens
 on for the Theory of Transactional Distance
 - 1990) - Operant Conditioning - Response and Stimulus
 (1928 -) U.S. DOE Establishes Distance Learning Related Instructional Media (AIM) Project
 3 Million Americans Studying via Correspondence
 Constructivism - Cognitive - Jean Piaget (1896 - 1980)
 Online Learning Enabled via WWW and LMS
 Open Universities Emerge Around the World
 Emergence of MOOCs in Unit

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
<http://relliott.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>

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

ABOUT US AND OUR ETHICS

December 12, 2017
Yields Products, Goals:
F. Student Website Development
 R511 Student Final Projects, Lisa Milsom and Michale Siverio:
<https://msiverio.wixsite.com/r511>

Human Performance Technology
 Leaders in HPT

Human Performance Technology, or HPT, is defined as the systematic approach to improve human performance by analyzing and improving productivity in an organization.

Human Performance and Instructional Technology
 Improving Teacher Ed Programs

TEC-VARIETY Recap

What motivates?

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Any Questions or Comments?

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

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MAKE IT SO