

## Motivation and Technology

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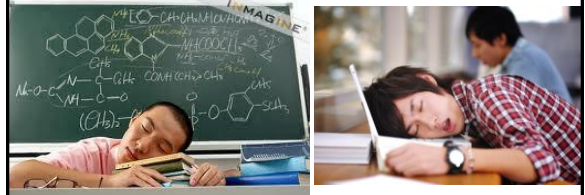
## MOTIVATION

If there is a better reason to paddle, I don't know what it is.

## University in Tokyo Students



## Do you ever sleep through your classes?



How do we engage online?



## What was it that he said?



## 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.



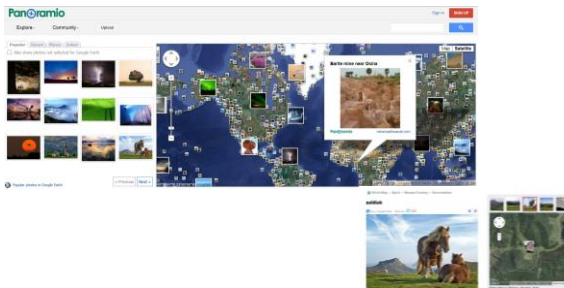
## Framework #1: TEC-VARIETY for Online Motivation and Retention

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

## Examples of TEC-VARIETY



### 1. Tone/Climate: A. Share Visuals (e.g., Panoramio, <http://www.panoramio.com/>)



### 1. Tone/Climate: B. Video Course Intros <http://www.youtube.com/watch?v=jWOUygSnKLO>



## 2. Encouragement, Feedback, etc.: A. Create Screencasts

(Jing, GoView, Screenr, slide from Zaid Ali Alsagoff [zaid.alsagoff@gmail.com])

### Create Screencasts!



## 2. Encouragement, Feedback, etc.: B. Voice Feedback

Vocaroo; <http://vocaroo.com/>  
<http://vocaroo.com/i/S0HLTzEwwtVN> (ICU)



## 3. Curiosity, Fun: A. Something in the News

(e.g., Fauja Singh, 101, finishes last race, February 24, 2013)  
[http://espn.go.com/sports/endurance/story/\\_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong](http://espn.go.com/sports/endurance/story/_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong)

### Fauja Singh, 101, finishes last race

**HONG KONG** — The world's oldest marathon runner ran his last race on Sunday at the age of 101.  
Fauja Singh finished the Hong Kong marathon's 10-kilometer (6.25-mile) race in 1 hour, 32 minutes, 28 seconds.  
Singh, a Sikh with a saffron turban and a flowing white beard, followed the route along the northern tip of Hong Kong island.  
He was accompanied by a group from the city's local Sikh community, joining about 72,000 other runners taking part in the marathon.  
The Indian-born runner, nicknamed the "Turkmen Tornado," had said that he would hang up his sneakers after the race in the southern Chinese city, just before his 102nd birthday.  
After Singh, the world's oldest marathon runner, runs his last race on the tip of HK, on Monday.



## 3. Curiosity, Fun: B. Create Cartoons, Movies, and Animations (e.g., Go Animate, xtranormal, PowToon, etc.)

### Create Cartoons, Movies & Animations!



## 3. Curiosity, Fun, Fantasy, Control: C. Online Database Activities

(e.g., WolframAlpha)  
<http://www.wolframalpha.com/>



A Quick Introduction to Wolfram|Alpha by Stephen Wolfram



## 4. Variety, Novelty, Fun: A. Random Lists

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



### 5. Autonomy, Choice: A. Web Exploration Assignments



### 6. Relevance, Meaningfulness: A. Video Scenario Learning

(Franklin University, cost and forensic accounting course)  
<http://video.franklin.edu/Franklin/acct/managerialAccounting/cost-behavior-player.html>  
<http://video.franklin.edu/Franklin/acct/342/common/fraudScenario02.html>  
<http://www.youtube.com/watch?v=cmost5UgQ8&list=TLzymmALKW1T>



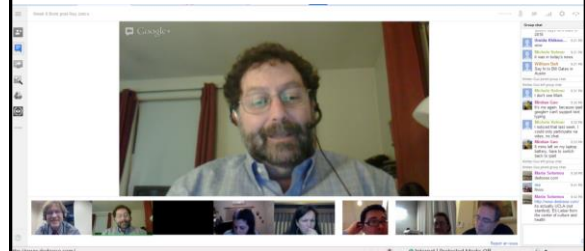
### 6. Relevance, Meaningfulness: B. Design Multimedia Glossaries

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



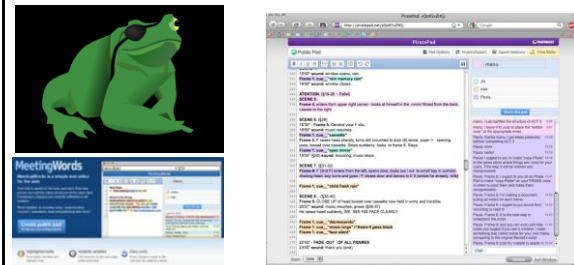
### 7. Interactive, Collaborative: A. Collaboration and Discussion in Google Hangouts

(January 29 and February 25, 2013)



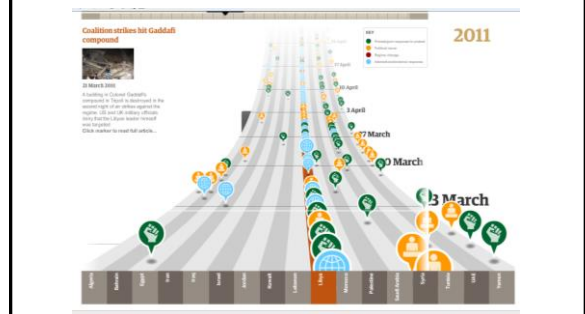
### 7. Interactive, Collaborative: B. Negotiate Meanings Online (e.g., PiratePad: <http://meetingwords.com/>)

MeetingWords is a simple text editor for the web.  
 Your text is saved on the web, and more than one person can edit the same document at the same time.  
 Everybody's changes are instantly reflected on all screens. Work together on meeting notes, brainstorming sessions, homework, team programming and more!



### 8. Engagement, Effort: A. Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight, and Sheila Pulham, July 12, 2011

<http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline>





**8. Engagement, Effort:**  
**B. Timelines with Oral Histories, Slavery and the Making of America Time and Place, PBS**  
<http://www.pbs.org/wnet/slavery/timeline/1857.html>



**8. Engagement, Effort:**  
**C. CNN (2011). Map: Impact of Japan tsunami and earthquake. CNN.**  
<http://www.cnn.com/SPECIALS/2011/japan.quake/map/>  
 also: Visualizing Emancipation



**9. Tension, Challenge, etc.:**  
**A. Game Show Final Project, April 25, 2011, Kim Seeber**  
 Website: <http://mypage.iu.edu/~kseeber/web2.0technology.swf>



**10. Yields Products, Goals:**  
**A. Final Product Video Summaries**

Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzH00aU>  
 Qi Li, Gangnam: <http://www.youtube.com/watch?v=7Q429lqxZaU&feature=youtu.be>  
 Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8cmCFW9lW8>



**Commitments:**

**Stop and Share:**

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

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

- Variety**
- Autonomy**
- Relevance**
- Interactive**
- Engagement**
- Tension**
- Yields Products**



**What did Jean-Luc Picard say?**



## How can technology address diverse learner needs?



## Framework #2: The R2D2 Model

Curtis J. Bonk | Ke Zhang

### Empowering Online Learning

100+ Activities for Reading, Reflecting, Displaying & Doing

## 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.

## Read 1a. Collect and Listen to Interactive Stories

(e.g., Meograph: <http://www.meograph.com/>)



## Read 1b. Listen to Open Access Podcast Shows (and write papers)

weekly podcasts

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

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

The image shows three different grammar checker websites. On the left is Grammarly, in the middle is PaperRater, and on the right is SpellCheckPlus. Each website highlights its features, such as grammar and spelling checks, online proofreading, and no downloads required.

### 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

The diagram illustrates a learning cycle with four stages: Reading (top), Reflecting (right), Displaying (bottom), and Doing (left). Each stage is represented by a colored arrow pointing clockwise. The center of the cycle lists various learning activities and skills.

### Reflect 2a. Big Issue Reflections (Big Questions Online (BQO)), January 8, 2013 (e.g., Do We Have Souls?)

<https://www.bigquestionsonline.com/content/dlc-we-have-souls>

The screenshot shows the 'Big Questions Online' website. The main article is titled 'Do We Have Souls?' and is dated January 9, 2013. The article discusses the philosophical question of whether the soul is a separate entity from the brain.

### Reflect 2b. Reflect on Virtual Timelines (Dipity, xtimeline, Simile, etc.)

<http://www.usatoday.com/tech/news/story/2011-09-22/steve-jobs-dies/50672498/1>  
<http://www.usatoday.com/news/Obituaries/2011-09-25/Martin-Luther-King-Jr.-Memorial-in-Washington-A-close-to-2013/3497137001300034news>  
<http://www.usatoday.com/story/life/movies/2013/04/15/turner-ford-jackie-robinson/2001753/>

The image shows three examples of virtual timelines. The first is for Steve Jobs, showing his life from childhood to the founding of Apple. The second is for Martin Luther King Jr., showing his early life and the civil rights movement. The third is for Jackie Robinson, showing his baseball career.

### Reflect 2c. Cultural Blogs (e.g., Dr. Kim Foreman, San Fran State University, Come and See Africa Blog; <http://comeandseeafrica.blogspot.com/>)

The image shows a blog post from 'Come and See Africa (CASA)'. The post is titled 'A Day in Butera, Rwanda' and discusses the author's experience in Rwanda. Below the text is a photograph of a woman standing in front of a group of children in a classroom, likely the author.

### 3. Visual Learners

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

The diagram illustrates a learning cycle with four stages: Reading (top), Reflecting (right), Displaying (bottom), and Doing (left). Each stage is represented by a colored arrow pointing clockwise. The center of the cycle lists various learning activities and skills. Below the diagram are screenshots from Star Trek: Voyager and Star Trek: Enterprise.



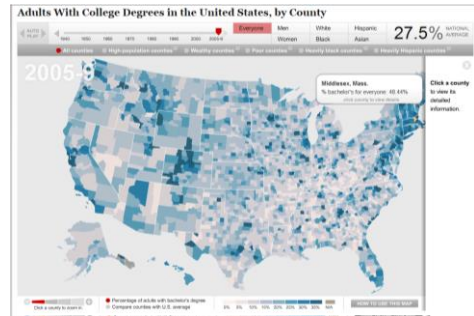
**Display 3a. Virtualize Words Used**  
 (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)

<http://shellyterrell.com/2010/02/14/12-word-cloud-resources-tips-tools/>



**Display 3b. Interactive Map Timelines**  
 (adults with college degrees by county, May 7, 2012)

[http://todaycampus.com/article/Kath\\_Hanson\\_interviews\\_Josh\\_Keter\\_on\\_Interactive\\_Graphics\\_for\\_Higher\\_Education](http://todaycampus.com/article/Kath_Hanson_interviews_Josh_Keter_on_Interactive_Graphics_for_Higher_Education)

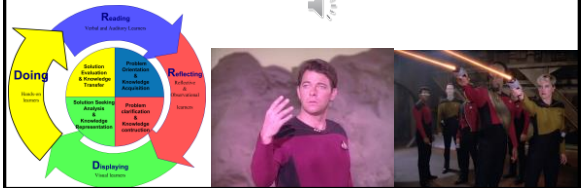


**Display 3c. Videos for clinical education**  
 (Sungkyunkwan University School of Medicine, [www.mededu.or.kr](http://www.mededu.or.kr))



**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. Student Class Documentaries**  
 Umida's R546 Documentary Project

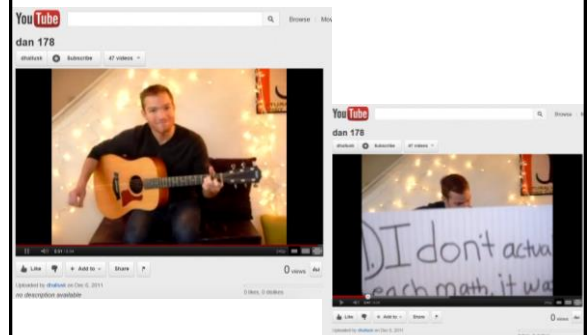
[http://www.youtube.com/watch?v=EMLTzqCV\\_5A](http://www.youtube.com/watch?v=EMLTzqCV_5A)



**Do 4b. Singing YouTube Summaries**

Daniel Halluska, P540, Fall 2011

<http://www.youtube.com/watch?v=tOL7rGsqnW>





**Poll #6:**  
**Any light bulbs going off in  
your head now...?**

- A. Yes definitely
- B. Maybe
- C. No



**Who is Motivated Now?**

Website: [www.Extreme-Learning.com](http://www.Extreme-Learning.com)

Slides at: [TrainingShare.com](http://TrainingShare.com)

Book: <http://worldisopen.com/>

Dr. Curt Bonk – [CJBonk@Indiana.edu](mailto:CJBonk@Indiana.edu)

