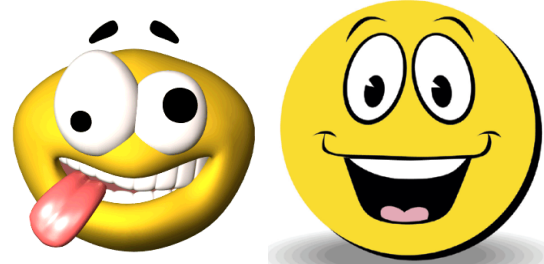


## Active Learning with Technology: Myths, Magic, and Mucho Motivation

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



## Poll Question #1: I'm Happy...Are you Happy?



## The End of Shovelware?

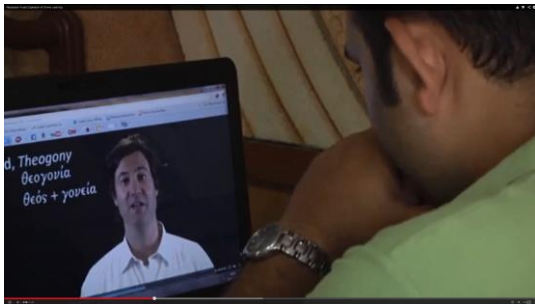


## Tech #1. MOOCs

August 5, 2013,

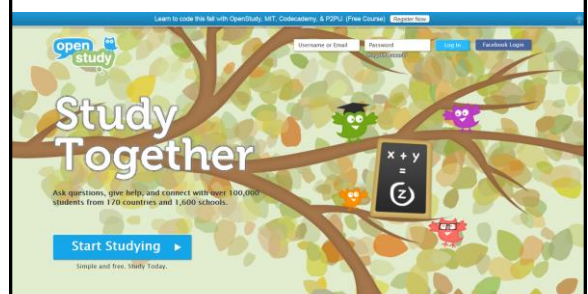
By Kannan Sankaran, Epoch Times

<http://www.theepochtimes.com/n3/229640-5-best-moocs-for-free-online-higher-education/>



## Tech #2. Online Study Groups Open Study

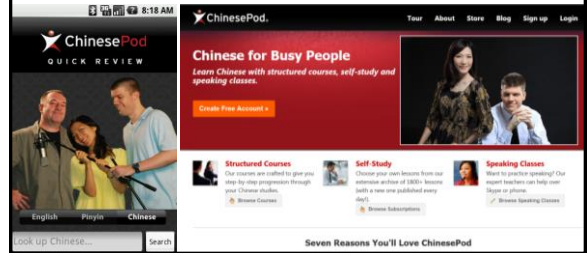
<http://openstudy.com/>



### Tech #3. Digital Books



### Tech #4. Online Language Learning (e.g., 300,000 people per month listening to ChinesePod, co-hosted by Jenny Zhu, John Pasden, and Ken Carroll)



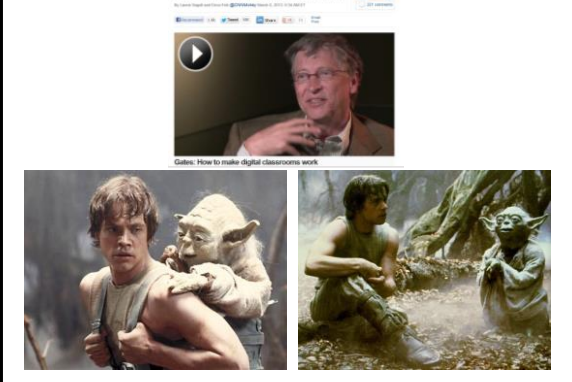
### Tech #5. Learning Portals, April 3, 2012 Google Art Project, NBC Nightly News <http://www.msnbc.msn.com/id/3032619/vp/46945508#46945508>



### Tech #6. Experts Apprenticeship via Our Glasses



### Bill Gates' classroom of the future



### Poll #2: Is this a revolution in education today?

- A. Yes...
- B. No...



Learning Delivery



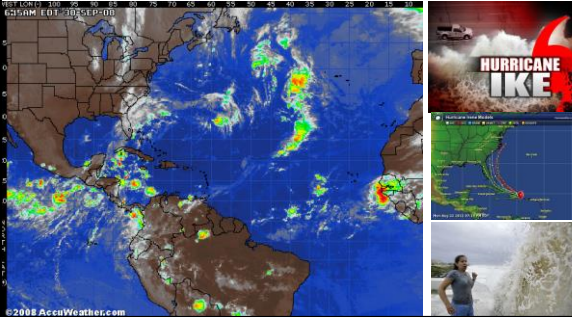
**My dog is content....**



**I am not Content!!!**



**Who needs online and blended learning?**  
 (Katrina, August 2005; Ike, Sept 2008; Irene, August 2011; Isaac, August 2012)



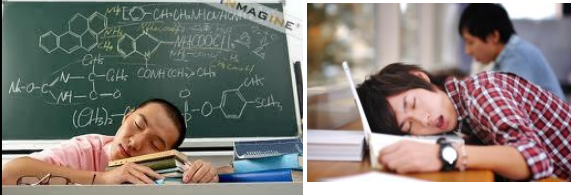
**Those where there are diseases and outbreaks...(SARS, 2003; H1N1, 2009-2010)**



**May 24, 2010**  
 Author Nicholas Carr, The Web Shatters  
 Focus, Rewires Brains, Wired  
[http://www.wired.com/magazine/2010/05/ff\\_nicholas\\_carr/](http://www.wired.com/magazine/2010/05/ff_nicholas_carr/)



## 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.



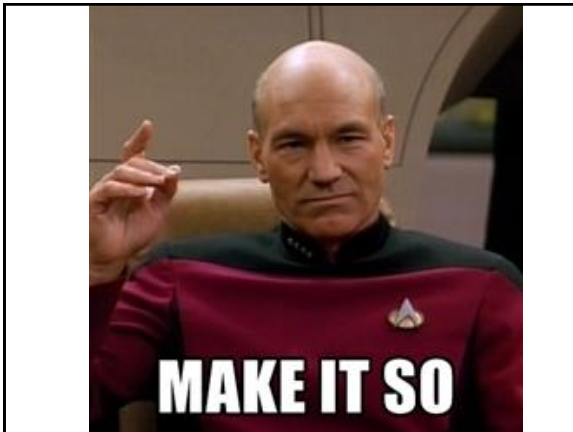
## Ok, Million Dollar Question: What words come to mind when I say that I want to motivate learners?



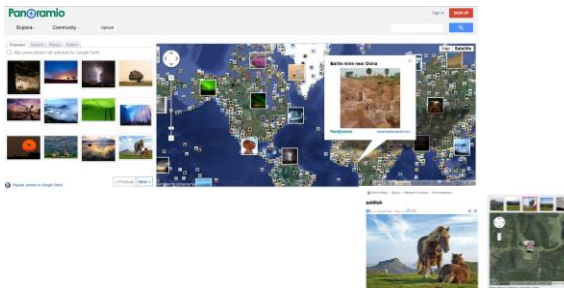
## Framework #1: TEC-VARIETY for Online Motivation and Retention

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

## Examples of TEC-VARIETY



1. **Tone/Climate:** B. 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!**

URL: <http://zaidali.blogspot.com/2009/11/11-screen-capturing-tools-for-education.html>

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

Vocaroo; <http://vocaroo.com/>  
<http://vocaroo.com/i/s0HLtZEwwtVN> (ICU)

© 2007-2013 Vocaroo | [Help](#) | [Info](#) | [Widgets](#) | [@vocaroo](#)

## 2. Encouragement, Feedback, etc.: C. Blog and Website Polling

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

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

What is Poll Everywhere? The fastest way to create and poll real-time experiences for your website and social media.

Who uses Poll Everywhere? Teachers, all agencies, 91-12 teachers, colleges, faith-based organizations, researchers, and more.

## 2. Encouragement, Feedback, etc.: D. Quizlet (online quiz tools)

<http://quizlet.com/>

Quizlet: The world learns on Quizlet.

Literature Vocabulary: swanky, fancy, elegant, stylish.

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

(e.g., Fauja Singh, 101, finishes last race, February 24, 2013)  
[http://espn.go.com/sports/enurance/story/\\_/id/8979487/fauja-singh-101-caps-career-10k-hong-kong](http://espn.go.com/sports/enurance/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, finished 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 23,000 other runners taking part in the marathon.

The Indian-born runner, nicknamed the Turbaned Tornado, had said that he would hang up his sneakers after the race in the southern Chinese city, just before his 102nd birthday.

Fauja Singh, the world's oldest marathon runner, runs his last race at the age of 101 on Sunday.

## 3. Curiosity, Fun: B. Create Cartoons, Movies, and Animations

(e.g., Go Animate, xtranormal, PowToon, etc.)

**Create Cartoons, Movies & Animations!**

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

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

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

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

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

### 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

### Poll #3: Which of the first 5 motivational principles will you use the most?

- A. Tone/Climate
- B. Encouragement/Feedback
- C. Curiosity/Fun
- D. Variety/Novelty
- E. Autonomy/Choice/Flexibility



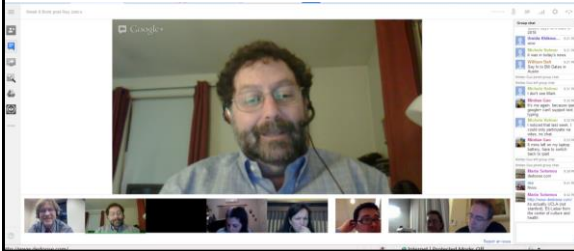
### 6. Relevance, Meaningfulness: A. Video Scenario Learning

(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=c3most5UgQ8&list=TLyymmAKW1T>

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

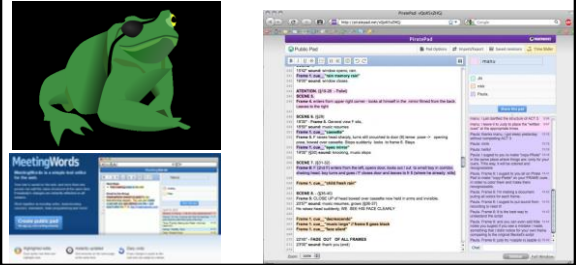
Ozgur Ozdemir, December 2012  
<http://r685glossary.shutterfly.com/>  
Umida Khikmatillaeva, Dec. 2011, P540  
<http://learningplanet.shutterfly.com/>

**7. Interactive, Collaborative:**  
**A. Collaboration and Discussion in Google Hangouts**  
 (January 29 and February 25, 2013)

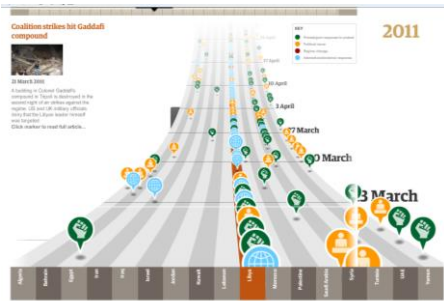


**7. Interactive, Collaborative:**  
**B. Negotiate Meanings Online**  
 (e.g., PiratePad: <http://meetingwords.com/>)

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!



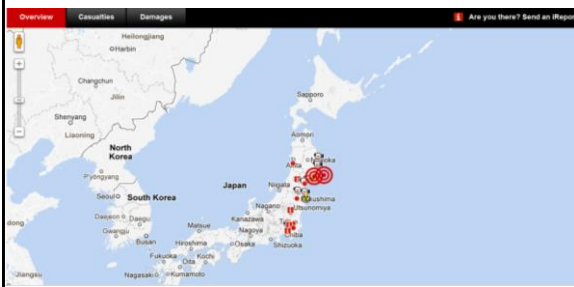
**8. Engagement, Effort: A. Arab spring: an interactive timeline of Middle East protests, The Guardian, Garry Blight, and Sheila Pulham, July 12, 2011**  
<http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline>



**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>





**9. Tension, Challenge, etc.:**  
**B. Decision-Making Scenarios**  
 (e.g., Articulate Storyline)

[http://articulate.demos.s3.amazonaws.com/broken\\_co-worker/story.html](http://articulate.demos.s3.amazonaws.com/broken_co-worker/story.html)



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

Piercarlo Abate: <http://www.youtube.com/watch?v=-TURzHO0aU>  
 Qi Li, Gangnam: <http://www.youtube.com/watch?v=ZQ429lqzZaU&feature=youtu.be>  
 Miguel Lara (Web 2.0 FREEDOM): <http://www.youtube.com/watch?v=8cmCFW9Iw8>



**Poll #4:**

**Which of the last 5 motivational principles will you use the most?**

- A. Relevance/Meaningfulness**
- B. Engagement/Effort**
- C. Interactive/Collab/Community**
- D. Tension/Challenge/Dissonance**
- E. Yielding Products/Goals**



**Commitments:**

**Stop and Share:**

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

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

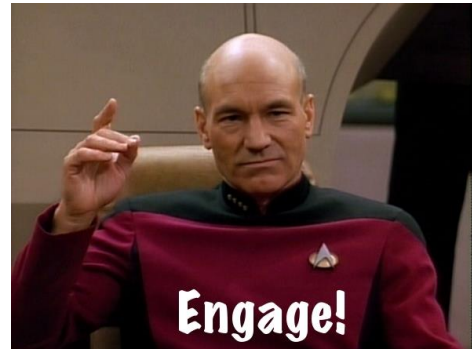
- Variety**
- Autonomy**
- Relevance**
- Interactive**
- Engagement**
- Tension**
- Yields Products**



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



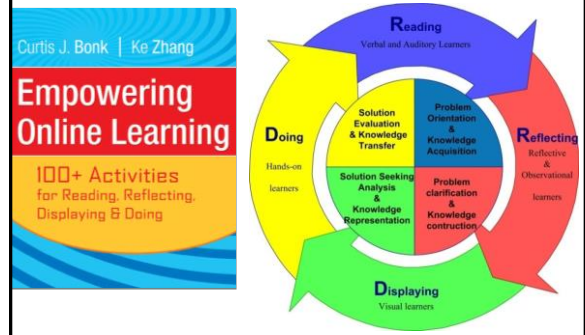
**That's right, Engage!**



## How can technology address diverse learner needs?



## Framework #2: The R2D2 Model



## 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.

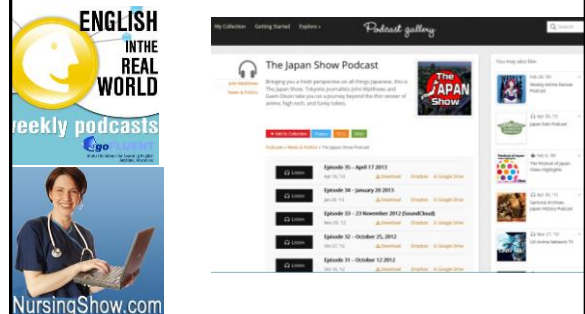


## Read 1a. Collect and Listen to Interactive Stories

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



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



### 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 'Reflecting' stage includes sub-points: 'Reflect on what you read', 'Reflect on what you observe', and 'Reflect on what you do'. A photograph of a person at a computer is shown to the right of the diagram.

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

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

The screenshot shows the 'Big Questions Online' website. The main article is titled 'Do We Have Souls?' by Tim O'Connor, dated January 9, 2013. The article discusses the relationship between the soul and the brain. Other articles visible include 'Can You Learn to Control Your Mind?' and 'Steve Jobs, Apple co-founder, dies'.

### 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/entertainment/story/2011-09-25/Martin-Luther-King-3rd-remorial-in-Washington-A-closer-look/20134870/1?user=344444>  
<http://www.usatoday.com/story/life/movies/2013/04/15/harrison-ford-jackie-robinson/2001753/>

The screenshot shows a virtual timeline interface. It features several event cards with images and text, including 'Steve Jobs, Apple co-founder, dies' and 'Martin Luther King Jr. Memorial in Washington, A closer look'. The timeline is presented in a scrollable, interactive format.

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

The screenshot shows a blog post from 'Come and See Africa (CASA)'. The post is titled 'A Day in Butera, Rwanda' and is dated Wednesday, July 28, 2010. It includes a photograph of a group of people sitting on the floor in a room, possibly a classroom or a community meeting. The text describes the author's experience in Rwanda.

### 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 'Reflecting' stage includes sub-points: 'Reflect on what you read', 'Reflect on what you observe', and 'Reflect on what you do'. A collage of images is shown to the right of the diagram, including a Star Trek movie poster, a person at a computer, and a person in a Star Trek uniform.



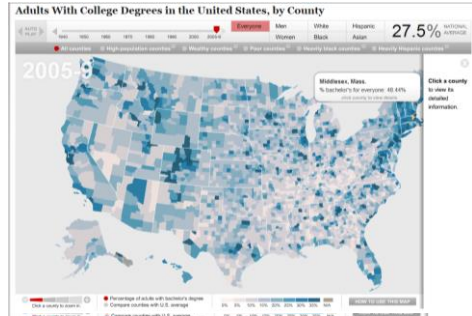
**Display 3a. Virtualize Words Used**  
 (e.g., Wordle, Taggedo, Tagul, WordSift, Word It Out)

<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\\_Keller\\_on\\_Interactive\\_Graphics\\_for\\_Higher\\_Education](http://todaycampus.com/article/Kath_Hanson_interviews_Josh_Keller_on_Interactive_Graphics_for_Higher_Education)

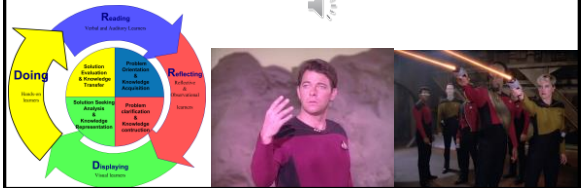


**Display 3c. Videos for clinical education**  
 (Sungkyunkwan University School of Medicine, [www.mededu.or.kr](http://www.mededu.or.kr))



**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.



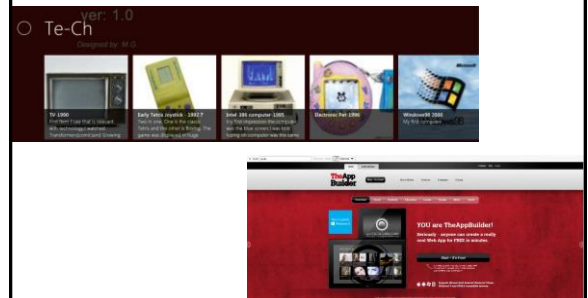
**Do 4a. Student Class Documentaries**  
 Umida's R546 Documentary Project

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



**Do 4b. Student Mobile App Creation**

The App Builder: <http://www.theappbuilder.com/>  
 Mintian Guo (April 2013): <http://myapp.is/r685final>



**Do 4c. Singing YouTube Summaries**  
 Daniel Halluska, P540, Fall 2011  
<http://www.youtube.com/watch?v=tOL7lrGsqnw>

**Poll #5: What phase of the R2D2 Method did you get the most ideas from ?**


- A. Read (Auditory and Verbal Learners)
- B. Reflect (Reflective Learners)
- C. Display (Visual Learners)
- D. Do (Tactile, Kinesthetic, Exploratory Learners)

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

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

**DON'T JUST WISH FOR A GREAT 2013,**  
**MAKE IT SO.**

**Stop and Share:**  
**Three Words from Today's Session!**

**Who is Content Now?**   
**And Who is Stretched Now?**  
 Website: [www.Extreme-Learning.com](http://www.Extreme-Learning.com)  
 Slides at: TrainingShare.com  
 Book: <http://worldisopen.com/>  
 Dr. Curt Bonk – [CJBonk@Indiana.edu](mailto:CJBonk@Indiana.edu)