Best Practices for Online Learning: Introducing the R2D2 and TEC-VARIETY Models

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Learning is Changing Continued...
New Technologies = New Delivery Methods...

I. Learning is More Online
Why I spent 10th grade online. Sophia Pink, Washington Post, August 23, 2013
http://www.washingtonpost.com/opinions/why-i-spent-10th-grade-online/2013/08/22/f2001640-ed8a-11e2-bed3-b99d6fe264871_story.html

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II. Learning also is More Collaborative
Collaboration and Discussion in Google Hangouts or with iPad, Jan. 28, 2013
(Carrie Gong from Beijing Normal University)
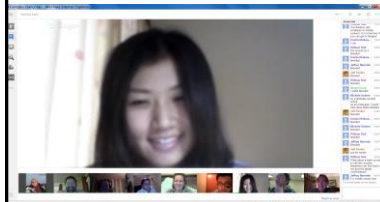
Google Hangouts
Class Sync Collaboration and Discussion
(Spring, 2013)
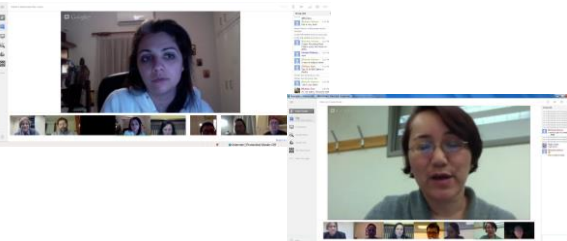
III. Learning is More Mobile
Brown, Keynote talk, "Learning in Hand With Mobile Technology," Wisconsin Distance Teaching and Learning Conference, August 10, 2012

	Beijing 2008	London 2012
Smartphones	139.3 million	657 million
Facebook	90 million	901 million
Twitter	<1 million	300 million
Tweets / day	1.1 million	140 million
Tablets	0	54.8 million
App store downloads	300+ million	25+ billion

Sources: Nielsen, eMarketer, Forrester, Apple

Digital Books

IV. Learning is More Video-Based

**Adora Svitak, WFP Youth Representative - 2013
ECOSOC Youth Forum, March 27, 2013**

"Shaping tomorrow's innovators: Leveraging science, technology, innovation and culture for today's youth", Statement by the World Food Programme Youth Representative, Ms. Adora Svitak at the 2013 ECOSOC Youth Forum.
http://webtv.un.org/meetings-events/economic-and-social-council/other-meetings/watch/adora-svitak-wfp-youth-representative-2013-ecosoc-youth-forum-shaping-tomorrows-innovators-leveraging-science-technology-innovation-and-culture-for-todays-youth/2257875055001

V. Learning is More Social

**Facebook reaches one billion users, CNN Money,
Aaron Smith, October 4, 2012**

VI. Learning is More Modifiable

Inside Look: Learning Spaces, Meeting classroom teaching and collaboration expectations, University Business, Feb. 22, 2013
http://www.universitybusiness.com/article/inside-look-learning-spaces

VII. Learning is More Comfortable

Design for Students, with Students, "Hub Central", the $42 million University of Adelaide learning hub opened in October 2011, May 8, 2012, Mike Roberts
http://designbuildsource.com.au/design-for-students-with-students

VIII. Learning is More Global
UC Irvine (2013 report)
Example 3: Fundamentals of Japanese
Dr. Hidemi Riggs, Fall 2012 & Winter 2013, Tech-enhanced: EEE AdvancedWebspace (Dreamweaver), Skype video conferencing tool, Active Learning. Format: 5 - 1A lectures (24 students maximum); 3 - 2A lectures (24 students maximum); 2- 3A lectures (24 students maximum)

Japanese end
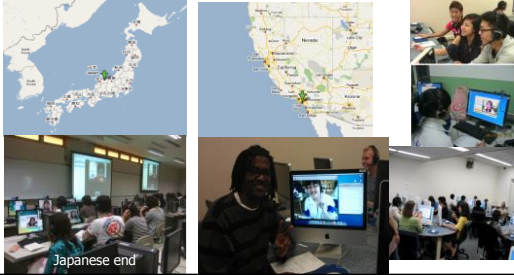
IX. Learning is More Instantaneous
April 9, 2013
HER Computer fashions face social test: Can wearable computers fit in? Scott Martin, USA Today
http://www.usatoday.com/story/tech/2013/04/06/google-apple-iwatch-glass-jawbone-iphone-nike-microsoft-samsung/1979419/
(i.e., magnify moles or injuries, see vital signs, live stream surgeries, access previous PT sessions, access research and drug info, etc.)
http://www.fiercemobilehealthcare.com/story/google-glasses-could-have-strong-potential-healthcare-use/2013-03-18

X. Learning is More Personal
iPotty Aims To Entertain Toddlers During Toilet Training, Mashable, Kate Freeman (January 10, 2013)
http://mashable.com/2013/01/10/ipotty/

Poll #1: Is this a revolution in education today?
A. Yes...
B. No...

Poll #2: Do students ever sleep through your clases?

What was it that he said?

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

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.

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.

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

1. **T**one/Climate: Psych Safety, Comfort, Belonging
2. **E**ncouragement, Feedback: Responsive, Supports
3. **C**uriosity: Fun, Fantasy, Control
   ...
4. **V**ariety: Novelty, Intrigue, Unknowns
5. **A**utonomy: Choice: Flexibility, Opportunities
6. **R**elevance: Meaningful, Authentic, Interesting
7. **I**nteractive: Collaborative, Team-Based, Community
8. **E**ngagement: Effort, Involvement, Excitement
9. **T**ension: Challenge, Dissonance, Controversy
10. **Y**ields Products: Goal Driven, Products, Success, Ownership
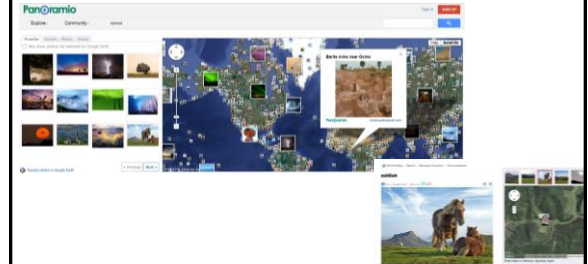
Examples of TEC-VARIETY

MAKE IT SO
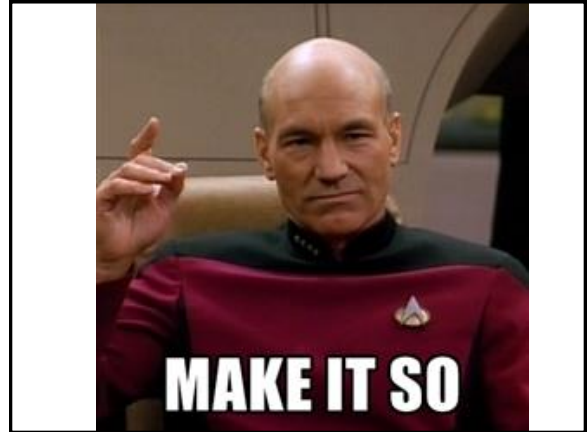
1. Tone/Climate: A. Video Introductions, e.g., Flipgrid
http://flipgrid.com/#429f88c5)
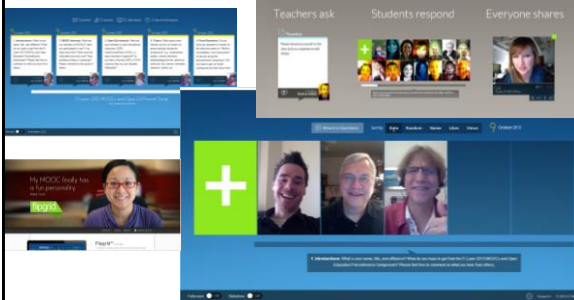
2. Tone/Climate: B. Share Visuals of Favorite Places
(e.g., Panoramio, http://www.panoramio.com/)

2. Encouragement, Feedback, etc.: A. Voice Feedback
Vocaroo; http://vocaroo.com/
http://vocaroo.com/i/s1COu5SkUdG2 (Tamkang U)

2. Encouragement, Feedback, etc.: B. Blog and Website Polling
(e.g., Poll Everywhere, BlogPolls, BlogPoll, MicroPoll)
http://www.polleverywhere.com/
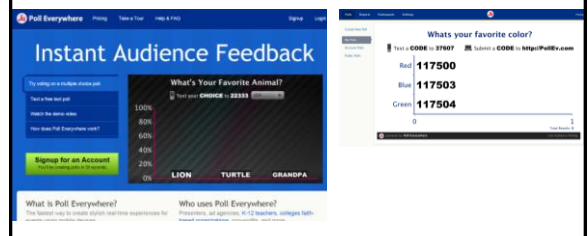
2. Encouragement, Feedback, etc.:
C. Quizlet (online quiz tools)
http://quizlet.com/
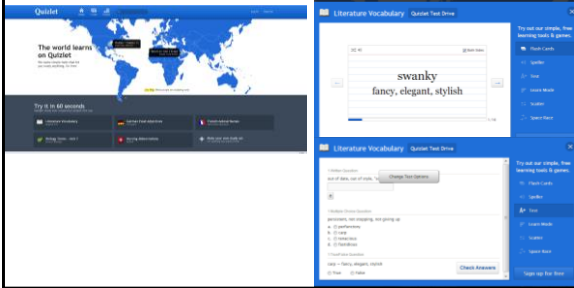
2. Encouragement, Feedback,
etc.: D. Create Screencasts
(Jing, GoView, Screenr, slide from Zaid Ali Alsagoff
[zaid.alsagoff@gmail.com])

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

Fauja Singh, 101, finishes last race

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. Online Database Activities
(e.g., WolframAlpha)
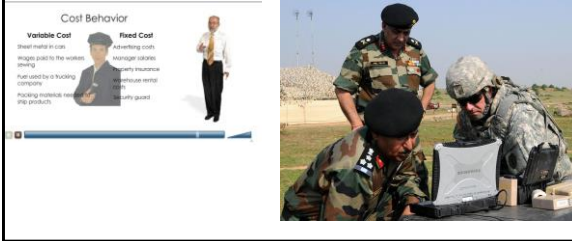http://www.wolframalpha.com/

5. Autonomy, Choice:
B. Demonstrate, Explore, and Share Websites
Commonwealth of Learning, March 2013
http://www.col.org/news/Connections/2013Mar/Documents/Connections_March2013.pdf

ONLINE COURSE DEVELOPMENT FOR TEACHER EDUCATION IN JAMAICA
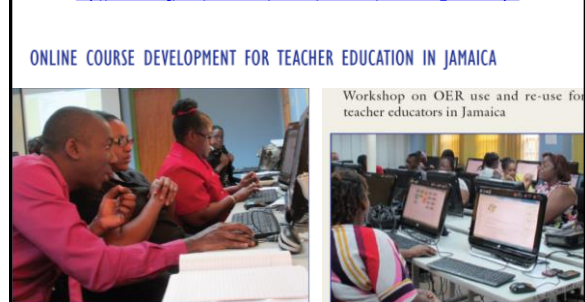
6. Relevance, Meaningfulness:
A. Video Scenario Learning
(Franklin University, cost and forensic accounting course)
http://video.franklin.edu/Franklin/acct/managerialAccounting/cost-behavior-player.html
http://video.franklin.edu/Franklin/acct/342/common/fraudScenario02.html
http://www.youtube.com/watch?v=cJmosLSUgQ8&list=TLzymmALKW1TI

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)
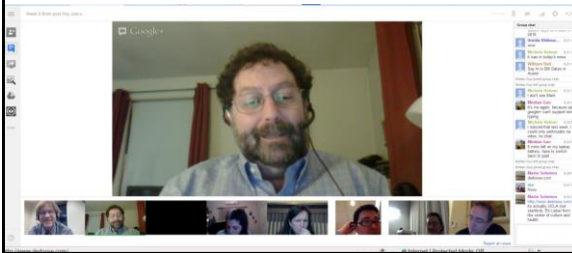
**7. Interactive, Collaborative:**
B. Negotiate Meanings Online
(e.g., PiratePad: http://meetingwords.com/)
MeetingWords is a simple text editor for the web.
Your text is saved on the web, and more than one person can edit the same document at the same time.
Everybody's changes are instantly reflected on all screens. Work together on meeting notes, brainstorming
sessions, homework, team programming and more!
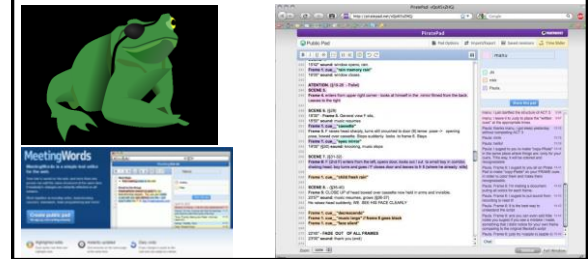
7. Interactive, Collaborative:
C. Combining Asynchronous and
Synchronous Events (flipping classes)
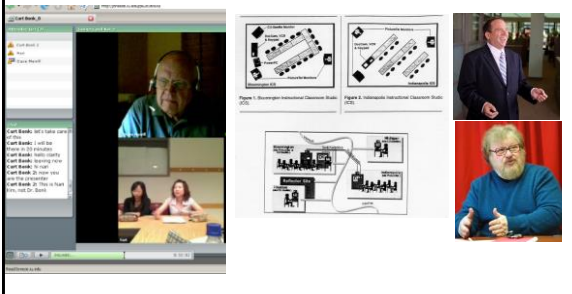
8. Engagement, Effort: A. Arab spring: an
interactive timeline of Middle East protests, The
Guardian, Garry Blight, and Sheila Pulham, July 12, 2011
http://www.guardian.co.uk/world/interactive/2011/mar/22/middle-east-protest-interactive-timeline

8. Engagement, Effort:
B. CNN (2011). Map: Impact of Japan tsunami and earthquake. *CNN*.
http://www.cnn.com/SPECIALS/2011/japan.quake/map/
also: Visualizing Emancipation
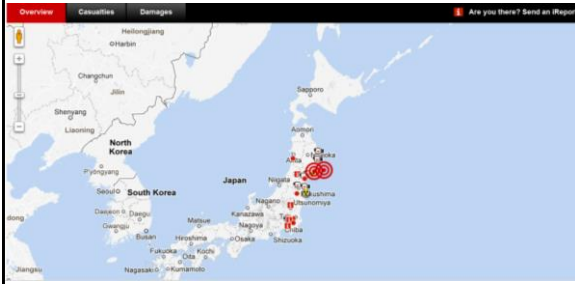
9. Tension, Challenge, etc.:
A. Game Show Final Project,
April 25, 2011, Kim Seeber
Website: http://mypage.iu.edu/~kseeber/web2.0technology.swf

9. Tension, Challenge, etc.:
B. Cage Match or Debate
MOOCs at SXSWedu (Curt Bonk & Chuck Severance)
http://chronicle.com/blogs/wiredcampus/at-south-by-southwest-education-event-tensions-divide-entrepreneurs-and-educators/42777
https://soundcloud.com/sxswedu/cage-match-the-massive-open

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=7Q429IqxZaU&feature=youtu.be
Miguel Lara (Web 2.0 FREEDOM): http://www.youtube.com/watch?v=8cmCFWi9IW8

Commitments:
Stop and Share:
Which principle(s) of TEC-VARIETY will you use?

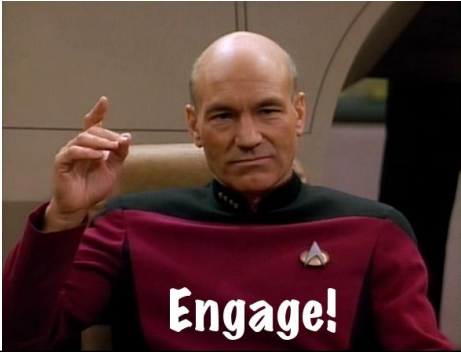**T**one/Climate
Encouragement, Feedback
Curiosity

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/)
Timelines with Oral Histories, Slavery and the Making of America
Time and Place, PBS
http://www.pbs.org/wnet/slavery/timeline/1857.html

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/

Read 1d. Twitter Fed Class Discussions

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)), January 8, 2013
(e.g., Do We Have Souls?)
https://www.bigquestionsonline.com/content/do-we-have-souls

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/destinations/story/2011-08-25/Martin-Luther-King-Jr-Memorial-in-Washington-A-closer-look/50136470/1?csp=34news
http://www.usatoday.com/story/life/movies/2013/04/10/harrison-ford-jackie-robinson/2001783/

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

3. Visual Learners

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

Display 3a. Virtualize Words Used (e.g., Wordle, Tagzedo, 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://todayscampus.com/article/Keith_Hampson_Interviews_Josh_Keller_on__Interactive_Graphics_for_Higher_Education

Display 3c. Videos for clinical education
(Sungkyunkwan University School of Medicine, www.mededu.or.kr)

Display 3d. Time Revealed Interactive Maps
Mapping the Dead: Gun Deaths Since Sandy Hook, Huffington Post, March 22, 2013
http://data.huffingtonpost.com/2013/03/gun-deaths

Display 3e. **Visual Library Search**
DPLA (Digital Public Library Of America)
**http://dp.la/**
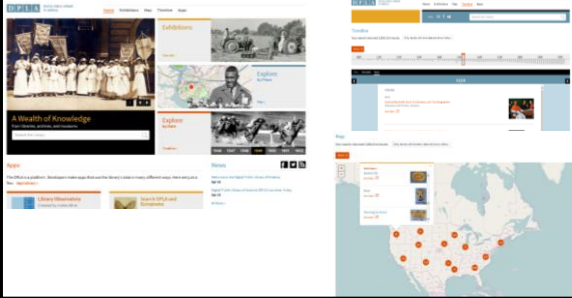
Display 3f. **Concept Mapping and Timeline Tools** (Popplet, Bubbl.us, Cmap, Freemind, Gliffy, Mindmeister, or Mindomo)

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.**
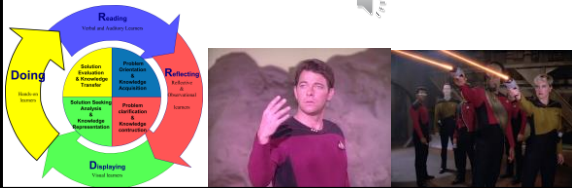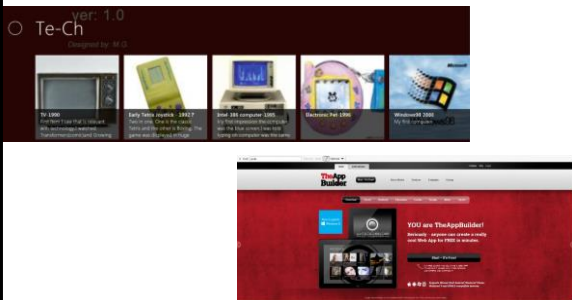

Do 4a. **Student Class Documentaries**
Umida's R546 Documentary Project
http://www.youtube.com/watch?v=EMLTzqCV_5A
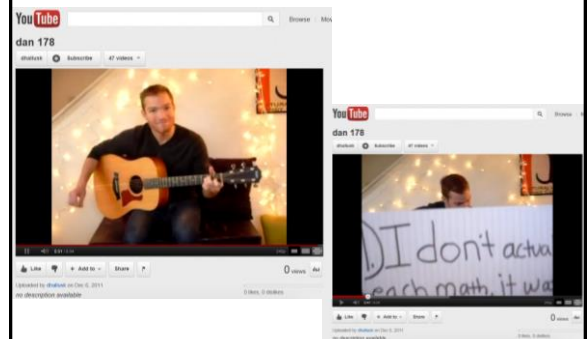

Do 4b. **Student Mobile App Creation**
The App Builder: http://www.theappbuilder.com/
Mintian Guo (April 2013): http://myapp.is/r685final

Do 4c. **Singing YouTube Summaries**
Daniel Halluska, P540, Fall 2011
http://www.youtube.com/watch?v=tOL7lrGsgnw

Poll #3: 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)**

DON'T JUST WISH FOR A GREAT 2013,
MAKE IT SO.
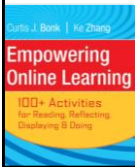
Poll #4:
Any light bulbs going off in your head now...?

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

Poll #4:
Do you feel "MOTIVATED" to try any of this out?
A. **Yes, R2D2**
B. **Yes, TEC-VARIETY**
C. **Yes, both**
D. **Neither**

Stop and Share:
Three Words from Today's Session!
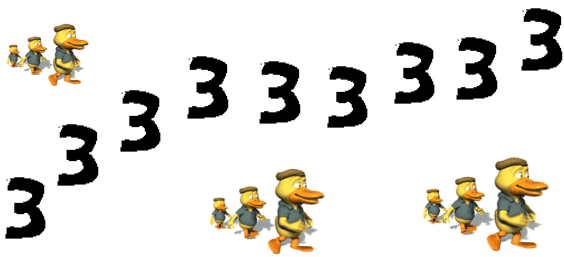
Any Questions?
Try the R2D2 Model!
Try TEC-VARIETY too...
Slides at: TrainingShare.com
Papers: PublicationShare.com
Book: http://worldisopen.com/
Dr. Curt Bonk – CJBonk@Indiana.edu