

**Addressing Diverse Online Learner Needs and Motivation with the Read, Reflect, Display, and Do (R2D2) and TEC-VARIETY Models**

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**What if our minds were on fire for learning?**

A Circle of Knowledge Building and Sharing

**MINDS ON FIRE**

Open Education, The Long Tail, and Learning 2.0

**MINDS ON FIRE: OPEN EDUCATION, THE LONG TAIL, AND LEARNING 2.0. JOHN SEELY BROWN AND RICHARD ADLER, EDUCAUSE REVIEW, JANUARY-FEBRUARY, 2008.**  
<http://connect.educause.edu/Library/EDUCAUSE+Review/MindsOnFireOpenEducation/45823>

**John Dewey (Author of "How We Think" and "Democracy and Education")**


**Ivan Illich (author of "Deschooling Society")**

**Stephen Heppell (co-developer of Notschool.net and the ULTRALAB)**

**John Seely Brown (author of "Minds on Fire" and The Social Life of Information)**


## Allan Paivio, Dual Coding Theory

Figure 1. A Model of Verbal, Dual-Coding and Interactive Processing.  
 Revised from "The Basic Model of Learning and Memory: Underlying Student Information Processing Theories," by R. M. Glaser and M. P. DeLoach, ERIC, *Journal of Learning for Instruction*, p. 13.




## Richard Mayer, The promise of multimedia learning: Using the same instructional design methods across different media.

Fig. 2. A framework for a cognitive theory of multimedia learning.




## Model of Teaching and Learning Through CMC (Gilly Salmon)



## What is the Interaction Rationale? (per Ellen Wagner)

- ✓ **Interaction is the most debated construct in the world of technology mediated learning design and development.**
- ✓ **In these settings, interaction is the defining attribute of the quality and value**
- ✓ **Interactivity (equated with interaction) is the most expensive component of a technology mediated learning design.**




## Michael G. Moore, Types of Interactions Possible

1. Learner-Instructor
2. Learner-Learner
3. Learner-Content

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- 4a. **Learner-Self:** highlighted the importance of 'self talking', or internal dialogue when engaging with learning materials (Soo & Bonk, 1998)
- 4b. **Learner-Interface:** The learner's ability to use the communication medium facilitating the online course (Hillman, Willis, & Gunawardena, 1994)





## Curt Bonk and Jack Cummings Matrix of Web Interactions

**Instructor to Student:** Syllabus, notes, feedback.  
**to Instructor:** Course resources, syllabi, notes.  
**to Practitioner:** Tutorials, articles, news.


**Student to Student:** Comments, sample work, links.  
**to Instructor:** Votes, tests, papers, evals.  
**to Practitioner:** Web links, resumes, reflections

**Practitioner to Student:** Internships, jobs, e-fieldtrips  
**to Instructor:** Opinion surveys, fdbk, listservs  
**to Practitioner:** Forums, listservs, prof devel.




## Part I. Some Online Motivational Ideas



THE UNIVERSITY OF MICHIGAN STATEWIDE • JANUARY 20, 2009

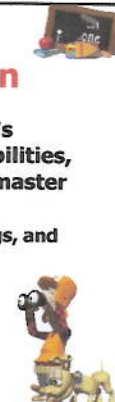
**Ok, Million Dollar Question: How do you motivate online learners? What Words come to mind?**




## 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.




**I even reflected on this for a moment...and then something magical happened...**



### Model #1: TEC-VARIETY Model 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



## Task

- Ideas definitely Can Use (**Circle** or write down)
- Ideas you might use (**check off** or write down in a separate column)
- Ideas you cannot use (**cross off** or put at the bottom)

## 1. Tone/Climate: Social Ice Breakers. A. Eight Nouns Activity

- Please describe yourself with 8 nouns and explain why those nouns apply to you. Also, reply to 2-3 peers in this class on what you have in common with them.



## 1. Tone/Climate: Social Ice Breakers. B. Accomplishment Hunt

- Post to a discussion forum 2-3 accomplishments (e.g., past summer, during college, during life);
- Students respond to each other as to what have in common or would like to have.



## 1. Tone/Climate: Social Ice Breakers. C. Goals and Expectations Charts

What do you expect from this class, lesson, workshop, etc., what are your goals, what could you contribute?

I have many goals for this course.

- I want to learn how to evaluate e-learning programs. I think this is critical to my career as a professor of educational technology back in China.
- I want to learn some techniques for blended learning for my own courses. I want to be an excellent teacher back home in Beijing at Beijing Normal University.
- I want to explore some articles in the area of reusable learning objects and open educational resources. I am interested in the OER movement. So maybe I can attend a conference in this area as well.
- I want to find a dissertation topic and explore it for my final project!



## 1. Tone/Climate: D. Create a Class Social Networking Group (MySpace, Facebook, LinkedIn)



## 2. Encouragement, Feedback, etc.: A. Wikibook Critique

- Ask students to critique a wikibook or page from Wikipedia



## 2. Encouragement, Feedback, etc.: B. Online Chemistry (e.g., virtual lab from Oxford)






**3. Curiosity, Fun: A. Online News**  
**Online News Coverage**  
 Ray of hope in Afghanistan; Greg Mortenson is educating the children of Afghanistan one school at a time. (CNN's Christiane Amanpour)



**3. Curiosity, Fun:**  
**B. Online Séance or Roundtable**

- Convene when dark (sync or asynchronous) and invite guest from other campuses).
- Present current day problem to solve
- Participate from within characters (e.g., read direct quotes from books or articles) and debrief.




**3. Curiosity, Fun:**  
**C. Google Sky from the Hubble**




**3. Curiosity, Fun: D. Tour a Museum**  
 (e.g., British Museum, Smithsonian, Louvre)



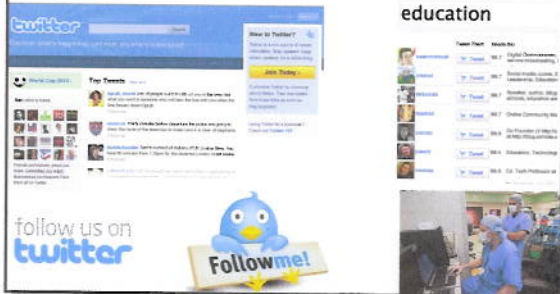
**3. Curiosity, Fun:**  
**E. Virtual Archaeology**  
 (e.g., ARCHAVE from Brown University)



**4. Variety, Novelty:**  
**A. Global Game Jams, Electronic Computer War Games, etc.**



**5. Autonomy, Choice: A. Follow People using Twitter (microblogging)**



**6. Relevance, Meaningfulness: A. Tour an Oil Drilling Site (i.e., BP)**



**6. Relevance, Meaningfulness: B. Design Mock Tour Packages**



**7. Interactive, Collaborative: A. Online Role Play Exercise for Renewable Energy (Tulane University, Freeman Sch. of Business, roles include power traders, electric utility analyst, independent power producers & utility dispatchers)**



**7. Interactive, Collaborative: B. Top Business School Online Competitions (teach energy trading, e.g., Tulane Freeman School of Business)**

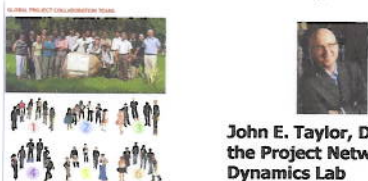


**7. Interactive, Collaborative: C. Google Groups (e.g., accounting clubs, computer programming, etc.)**






**7. Interactive, Collaborative:**  
**D. Global Project Collab Teams**  
 (Columbia University engineering and computer science student collaboration with the Indian Institute of Technology Madras, the Helsinki University of Technology (HUT), the University of Twente in the Netherlands)




John E. Taylor, Director of the Project Network Dynamics Lab

**7. Interactive, Collaborative:**  
**E. Cross-Cultural Rhetoric (CCR) Project** (writing, blogging, videoconferencing to build intercultural competence, Stanford U and universities in Sweden, Singapore, Russia, Egypt and Australia)




The Cross-Cultural Rhetoric Project

**8. Engagement, Effort:**  
**A. Global Videoconferencing**



**8. Engagement, Effort:**  
**B. Online Psychology Experiments**



PSYCHEXPERIMENTS  
 Psychology Experiments on the Web


perception lab

BLUE  
 press ENTER or click here to start

Top Ten Online Psychology Experiments

**9. Tension, Challenge, etc.:**  
**A. Online Role Play of Famous People, Mock Trial, Debates, etc.**

- Enroll famous people in your course
- Students assume voice of that person for one or more sessions




24.3. I am so wise, so listen. Aristotle 11/25/03 05:49 PM

74.5. He ain't heavy, he's my brother. Mother Theresa 04/22/04 11:4

74.6. HAPPY ABCDE DAY Jane Goodall 04/23/04 12:46 PM

I hope that everyone has been feeling wonderful today

**9. Tension, Challenge, etc.:**  
**A. Global Teams Solving Cases and Challenges**



OSUN UNIVERSITY  
 OSUN UNIVERSITY

**10. Yields Products, Goals:**  
**A. Movie Festivals, Concept Maps, Video Blogs, Virtual Timelines, Digital Movies**

Flip Mino  
MSRP \$179.99

Sleek and Fun

CAMPUS MOVIEFEST

**10. Yields Products, Goals:**  
**B. Scapblog (post video and photomedia work)**

scapblog

Create a World for your Pictures

**Now for the big questions...!!!**  
**99 Second Reflection!!! Jot down 3 things you learned.**

**II. Addressing Diverse Learners**

**Model #2: The R2D2 Model**


Reading, Reflecting, Displaying & Doing

100+ Activities for Reading, Reflecting, Displaying & Doing

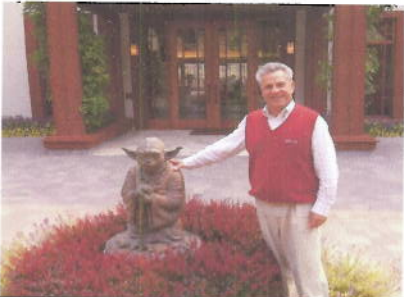


### The R2D2 Method

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)




### Dean of IU School of Education

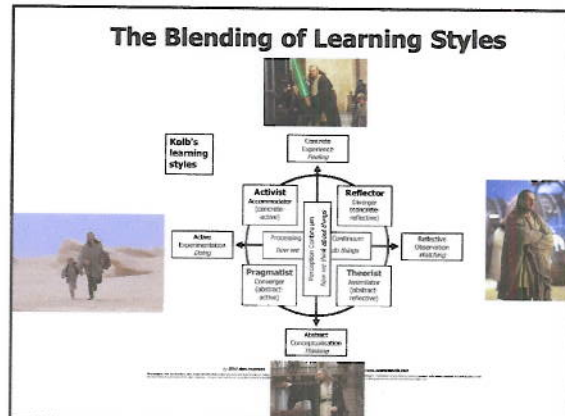


### Why Address Learning Styles?

- Promotes reflection on teaching
- Move from just one mode of delivery
- View from different viewpoints
- Offer variety in the class
- Might lower drop-out rates
- Fosters experimentation




### The Blending of Learning Styles



### 1. Auditory or Verbal Learners

- Auditory and verbal learners prefer words, spoken or written explanations.



### Podcast Questions

1. Who has listened to a podcast?
2. Who listens to a certain podcast on a regular basis?
3. Who has created a podcast?
4. Who has created a vodcast?
5. Who thinks podcasting is simply more talking heads?



**Read 1a. Ask students to relisten and reflect on particular NPR shows (e.g., iPad April 2010)**



**Read 1b. Listen and Reflect on Book Author Podcasts**



**Read 1c. Student and Instructor Cross-Cultural Blog Posts**



**Read 1d. Read Language Blogs (e.g., "The Spanish Blog")**



**Read 1e. Readings All Web Resources**

- Rely solely on Web resources.
- Let students select.
- Turn in final reflection papers.

2010: R&S Topical Seminar, ICR Section 30116, 3 Credits  
 "The World is Open with Web Technology"  
 Topical Seminar

Web 2.0 Seminar in order plan in classroom, Monday 7:00-7:30 pm. (to be held in Instructor Carl Stone, Professor, International System Technology)

See also related at [http://www.wisc.edu/~stone/teaching/2010\\_topical/](http://www.wisc.edu/~stone/teaching/2010_topical/)

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 Email: [CJReed@wisc.edu](mailto:CJReed@wisc.edu)  
 Office Hours: before and after class and as arranged  
 Jordan Emswiler  
[jems@wisc.edu](mailto:jems@wisc.edu)

**Course Description and Materials:**  
 This seminar is designed to explore and examine the Web 2.0 has changed everything! Don't believe it? Read & DeWolfe, "How MySpace saved 'me'" as the price of it...  
 materials will be rather than simply read in lecture room... to affect, based on previous conversations about learning, we are bring to participants...  
 the seminar... materials... such as video plans, albums, blogs, video podcasts, etc. This seminar...  
 materials... such as video plans, albums, blogs, video podcasts, etc. This seminar...

**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





## Blogging Questions

1. Who has a blog?
2. Who regularly reads other people's blogs?
3. Who assigns blogging tasks?
4. Who has created a video blog?
5. Who thinks it is an utter waste of time to blog?

## Reflect 2a. Read and Reflect on Blogs in Specific Disciplines

The image shows two blog pages. The top one is the 'Biomedical Sciences Blog' from the University of Pennsylvania, featuring a 'HEALTH BLOG' section with a video of a man speaking. The bottom one is the 'Public Financial Management Blog' from the University of Pennsylvania, featuring a video of a man speaking.

## Reflect 2b. Write Book Reviews in LibraryThing: The World's Largest Online Book Club (you can be a "thingamabrarian;" 1,000,000 users)

The image shows a screenshot of the LibraryThing website interface, which includes a search bar, a list of books, and a 'Library' section. Below the screenshot is a small video of a man speaking.

## Reflect 2c. Reflect on Podcast from Portals (e.g., Podcast Alley, Podcast.com, EPN Network, etc.)

The image shows a screenshot of the Podcast.com website, which features a grid of various podcasts, including 'Think' by LifeLock and 'Attention Podcast Publishers'.

## Reflect 2d. Reuse Blog Posts, Chat Transcripts, Interviews, Online Presentations

The image is a collage of various online content, including a video of a man speaking, a screenshot of a presentation slide titled 'Future Of Education: Is It Possible To De-School Society?' by George Siemens, and logos for 'growup digital' and 'WIKINOMICS'.

## Reflect 2e. Videos on Book Websites (e.g., Brain Rules, John Medina)

The image shows a screenshot of the 'brain rules' website by John Medina. It features a video player with a video of John Medina speaking, and a sidebar with navigation links like 'Home', 'About Brain Rules', and 'Purchase the Book'.

### Reflect 2f. Reflect on Shared Online Video (e.g., MIT World)

The screenshot shows the MIT World website interface. At the top, there's a navigation bar with 'Home', 'About Us', 'Contact Us', and 'Help'. Below that, a search bar and a 'Sign Up' button are visible. The main content area features a large video player with the title 'How to Make Teaching Come Alive' and a thumbnail of a man speaking. To the right of the video player, there are several smaller video thumbnails with titles like 'The Future of Learning' and 'The Future of Education'.

### Reflect 2g. Professional Development Videos (e.g., STARLINK from Dallas)

This block contains a collage of six video thumbnails. The top row features three thumbnails: a man in a red shirt, a man in a suit, and James E. Murrell, DVM, Director of Veterinary Learning at Texas A&M University. The bottom row features three smaller thumbnails: a woman speaking, a woman in a blue shirt, and a group of people.

### Reflect 2h. Webstreamed Lecture Reflections

- Students to watch weekly lectures.
- Reflect on key concepts.

The screenshot shows a webstreamed lecture interface. On the left, there's a video player showing two men. On the right, there's a table titled 'Webstreamed Class Sessions for 2010'. The table has columns for 'Session Number', 'Date', 'Time', 'Topic', and 'Instructor'. Below the table, there are several smaller video thumbnails showing different lecture segments.

### 3. Visual Learners

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

This block features a circular diagram with four quadrants: 'Doing' (top-left, blue), 'Thinking' (top-right, red), 'Displaying' (bottom, green), and 'Learning' (left, yellow). To the right of the diagram is a diagram of the Earth's atmosphere labeled 'Death Star II' and a photograph of an astronaut in a space helmet.

### Display 3a. Find Open Source Photography (e.g., Flickr)

The screenshot shows a Flickr group page for 'Open Source Photography (OSP)'. The page includes a search bar, a grid of photo thumbnails, and a large landscape photo of a mountain range under a blue sky with clouds.

### Display 3b. Visual Resources (e.g., Periodic Table of Visualization; Visual Thesaurus)

This block displays a 'PERIODIC TABLE OF VISUALIZATION METHODS'. The table is organized into columns and rows based on different visualization techniques. The columns are: 'Icon Visualization', 'Information Visualization', 'Concept Visualization', 'Diagram Visualization', 'Image Visualization', and 'Complex Visualization'. The rows represent different visualization methods, with elements labeled with letters and numbers. A legend at the bottom explains the color coding for each visualization type.



### Display 3c. Broadcast Surgeries

Image 4: Surgeon performing a high-precision surgery.

Image 5: A control room with multiple monitors displaying surgical video feeds.

### Display 3d. Timeline Tools (e.g., SMILILE from MIT, Learning Tools from UBC)

### Display 3e. Big Think (short topical videos from famous people)

### Display 3f. TED Conference Videos (Technology, Entertainment, and Design)

### Display 3g. University Shared Online Video and Podcast Portals

### Display 3h. University YouTube Channels

### 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.

### Wiki Questions

- Who regularly reads Wikipedia articles just for fun?
- Who regularly reads Wikibooks?
- Who seeks Wikipedia for content?
- Who has edited or written new articles on Wikipedia or Wikibooks?
- Who thinks it is ok for college students to cite from Wikipedia?

### Do 4a. Student Work in a Wiki

(e.g., Wet Paint, a free wiki tool for online collaboration; e.g., medical education)

### Do 4b. Anchor Creators

Students create their own YouTube videos to illustrate course concepts.

### Do 4c. Anchor Creator Interviews

Students find YouTube videos relevant to course concepts and email interview the creator about the purpose and potential uses of the video or perhaps request that the creator join the class in a synchronous chat.

### Do 4d. Online Poetry and Sonnets

Using Online Video (e.g., YouTube) to Memorize Sonnets and Poems



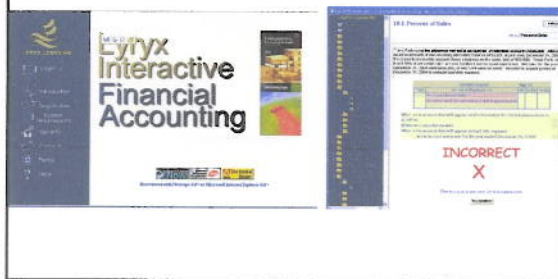
**Do 4e. Paired Article Critiques in a Blog (Students sign up to give feedback on each other's article reviews posted to their blogs.)**

Article	Student Critique	Student Peer Review
Arbaugh, J.B. (2007). Does the Community of Inquiry Framework Predict Outcomes in Online MBA Courses?	Stephen Moran	Laraine Ryan
	Candice Pascello	Kerra Leonard
	Lia Yu	Flora Liu
	Alex Hindeley	Lori Adkinson
Meyer, K.A. (2007). Face-to-Face versus Threaded Discussions: The Role of Time and Higher-Order Thinking	Laraine Ryan	Paul Anderson
	Haji Dhanjal	Yvonne Tracy
	Neena Arora	Candice Pascello
	Kerra Leonard	Lia Yu
Slate, P., Li, C.S. and Pickett, A. (2006). A study of teaching presence and student success	Francina Wikstrom	Alex Hindeley
	Hester Darnett	Stefan Raspopich
	Daryl Wilson	Neena Arora

**Do 4f. Create Cases and Video Scenario Learning**



**Do 4g. Interactive Online Accounting**



**Do 4h. Student Generated Podcasts and Reflections**

- Ask students to create a podcast show.
- Write reflection papers on how it went.



**Stand and Share Ideas**

Will Work: \_\_\_\_\_  
 Might Work: \_\_\_\_\_  
 No Way: \_\_\_\_\_

**Boring e-Learning**

Experience. The difference.

**Try the R2D2 Method!!!  
 Try TEC-VARIETY!!!**

Sample papers at: <http://www.publicationshare.com/>  
 Archived talks at: <http://www.trainingshare.com/>

