

The R2D2 Model of Online Instruction: A Mapping Out of the Components



Ke Zhang, Assistant Professor
Wayne State University
prof.zhang@gmail.com

Curt Bonk, Professor, Indiana University
President, SurveyShare, Inc.
cjbok@indiana.edu
<http://mypage.iu.edu/~cjbok/>
<http://SurveyShare.com>

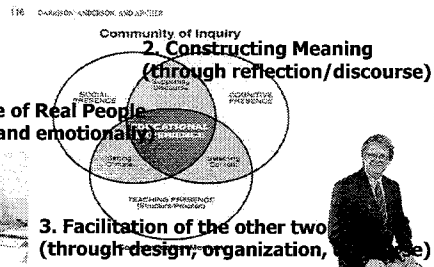
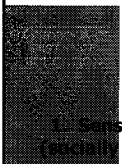


Task

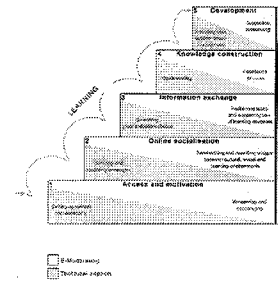
- Ideas definitely Can Use (Circle or write down)
- Ideas you might use (check off or write down in a separate column)
- Ideas you cannot use (cross off or put at the bottom)

Frameworks: A Theory of Critical Inquiry in Online Distance Educ

Randy Garrison, Terry Anderson, & Walter Archer
2003, Handbook of Distance Education, Moore & Anderson (Eds.)
garrison@ucalgary.ca; terrya@athabasca.ca



Model of Teaching and Learning Through CMC (Gilly Salmon, 2000)



Addressing Learning Styles



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



VARK learning styles (Fleming & Mills (1992a, 1992b): Four types of learners and learning styles:

- (1) visual;**
- (2) auditory;**
- (3) reading/writing;**
- (4) kinesthetic, tactile, or exploratory,**

Poll 1: Which learning style do you prefer?

- a. Read (Auditory and Verbal Learners)**
- b. Reflect (Reflective Learners)**
- c. Display (Visual Learners)**
- d. Do (Tactile, Kinesthetic, Exploratory Learners)**

VARK learning styles (Fleming & Mills (1992a, 1992b). Four types of learners and learning styles

- 1. Visual learners prefer diagrams, flowcharts, graphics (they do not mention video, film, Webcasts, or PowerPoint presentations).**
- 2. Auditory learners prefer to hearing directions, lectures, or verbal information.**
- 3. Reading and writing learners prefer text passages, words, and written explanations.**
- 4. Tactile or kinesthetic learners learn best by connecting to reality through examples, practices, or simulations.**

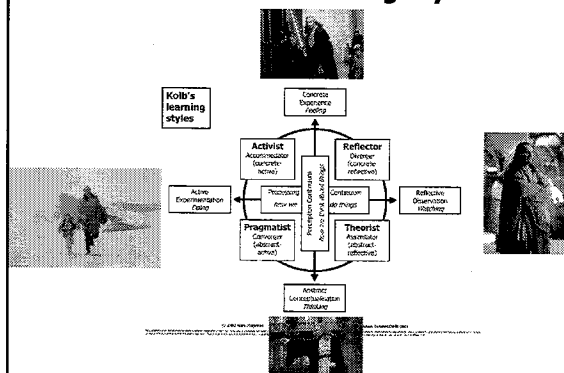
Kolb (1984)



- **According to Kolb, effective learning involves four phases:**
 - from getting involved (Concrete Experience) to
 - listening/observing (Reflective Observation) to
 - creating an idea (Abstract Conceptualization) to
 - making decisions (Active Experimentation).
- **A person may become better at some of these learning skills than others; as a result, a learning style develops.**



One View of Learning Styles



Abstract Conceptualization vs. Concrete Experiences

- **(AC)** - I am rational and logical.
- **(CE)** - I am practical and down to earth.
- **(AC)** - I plan events to the last detail.
- **(CE)** - I like realistic, but flexible plans.
- **(AC)** - I am difficult to get to know.
- **(CE)** - I am easy to get to know.



Active Experimentation vs. Reflective Observation

- (AE) - I often produce off-the-cuff ideas.
- (RO) - I am thorough and methodical.
- (AE) - I am flexible and open minded.
- (RO) - I am careful and cautious.
- (AE) - I am loud and outgoing.
- (RO) - I am quite and somewhat shy.

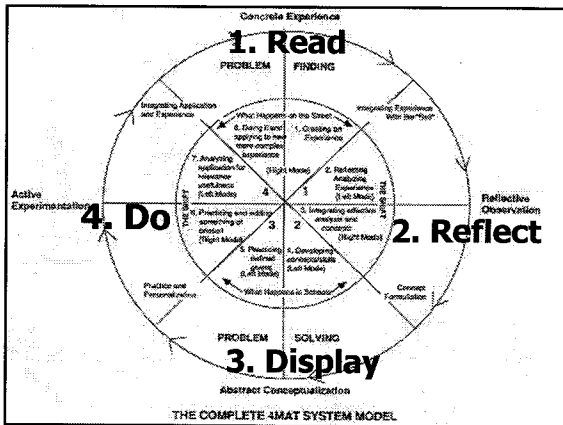


Index of Learning Styles Questionnaire

Barbara A. Soloman, North Carolina State Univ
<http://www.engr.ncsu.edu/learningstyles/ilsweb.html>

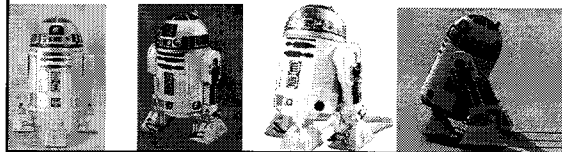


6. If I were a teacher, I would rather teach a course
- (a) that deals with facts and real life situations.
 - (b) that deals with ideas and theories.
7. I prefer to get new information in
- (a) pictures, diagrams, graphs, or maps
 - (b) written directions or verbal information.



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.



1a. Online Resource Libraries

SiteScape Forum

Tools Menu

Put links to additional articles you read here and discuss them. You critical friend will give you feedback.

Entries

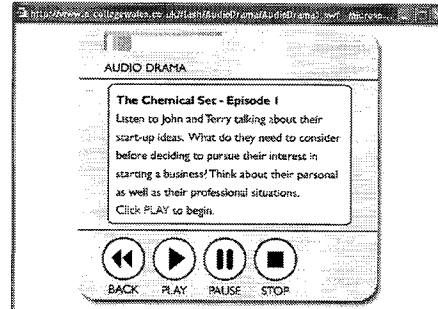
Number	Title
1 20	Leadership That Speaks: Lessons
1 19	The Seven Principles of Sustainable Leadership
1 15	Multicultural Education/Chunhui
1 17	Custom: Construction Ahead
1 16	Jim Soliman on Reading Research
1 15	Stochastic, This and Now
1 14	Don Zuber: Nobles about Teachers & Learning that Under the Effectiveness of Special Education
1 13	Reading Disability and the Brain
1 12	Overcoming Early School Failure: What Works
1 11	Can Education Reduce Social Inequality?

View entry

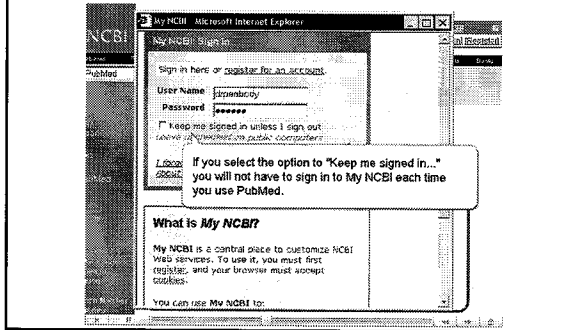
1b. Use of Weblogs (especially English writing class)

1. **Instructor or Tutor blog:** resources, information, space to chat
2. **Learner blog:** reflections, sharing links and pics, fosters ownership of learning
3. **Partner blog:** work on team projects or activities
4. **Class blog:** international exchanges, projects, PBL
5. **Revision:** review and explode sentences from previous posts, add details
6. **Nutshell:** summarize themes or comments across blogs
7. **Blog on blog:** reflections on feelings, confusions, and experiences with blogs

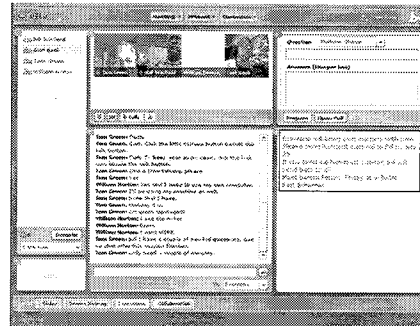
1c. Online Audio Cases Audio Dramas eCollege Wales, Univ. of Glamorgan



1d. Online Tutorials and Help



1e. Synchronous Conferencing



1f. Library Day (Bonk, 1999)

- Have students spend a day in the library or online finding and summarizing a set number of articles.
- Have them bring to class or post abstracts to an online forum.
- Share in small groups interested in similar topics.
- Perhaps give each student 1-2 minutes to describe what found in a chat.

1g. Cool Resource Provider (Bonk, 2004)

- Have students sign up to be a cool resource provider once during the semester.
- Have them find additional paper, people, electronic resources, etc.
- Share and explain what found with class via synchronous meeting or asynchronous discussion post.

1h. Practitioner Feedback: Asynchronous Threaded Discussion plus Sync Expert Chat (e.g., Starter- Wrapper + Sync Guest Chat)

4S. Real-time Chat is Enabled...And also More Async Questions for Bob, Erping, Julia, John, or Kira or anyone else.

Chat Book Posted on: 11/20/01 02:14 PM
Modified by: Dad Book on: 11/20/01 02:37 PM

OK, start your own Chapter 4, 5, or 10 questions here. Bob, Min, Erping, Tina, Julia, and others might reply. Thanks

- [Check the entry for on-line chat](#)
- [View the chat transcript as it will be here](#)
- [View the chat transcript as it will be here](#)

Attachments:

1i. Webquests (see the Webquests Page)

WebQuest Search Page

Free Text Search

Since 1995, San Diego State University has maintained a database of thousands of WebQuests. This database is open to all and is updated regularly. It has over 2500 WebQuests. You can search for any string of characters in the Title, Instruction, or the Author or Site.

Search the SDSU Database for: language webquests
with in the or

If you type two words in, they'll be listed as a subject to be general type to only use word as a search term unless it's a phrase like "art teacher"

Curriculum x Grade Level Matrix

WebQuests in the SDSU database for a specific grade level curriculum must use the proper fields below and run what you can. You can bookmark the search results page and return to it any time you wish.

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

2a. Post Model Answers

Employment Law and Ethics Project

Question 1

Would it be illegal for Lewis to recommend Billings instead of Lewis? Explain, being specific about the legal doctrines that would apply?

Answer 1

Under both Title VII of the 1964 Civil Rights Act and Section 1981 it is illegal to discriminate on the basis of race or color, and Lewis would likely be a lawsuit using the claim of disparate treatment if he were not recommended for the promotion. If Lewis does not recommend Lewis, she is guilty of violating the law. None of the three primary defenses—seniority, merit, or bona fide occupational qualification—apply to this situation since Lewis has higher seniority, equal skills, and more direct experience with power tools, then does the other candidate Frank Billings.

Title VII "prohibits discrimination based on race, color, religion, sex, and national origin in hiring, firing, job assignments, pay, access to training and apprenticeship programs, and most other employment decisions." ARECO is a covered entity under Title VII because they are "employing 15 or more employees and engaging in an industry affecting interstate commerce" and as the case footnotes point out "as of November 21, 1991, the Civil Rights Act of 1991 extended protection from discrimination in employment to U.S. citizens working in foreign countries while employed by U.S. firms."

In this case, Title VII's disparate impact is not applicable since ARECO's policy clearly states to "promote the most

2b. Reuse Chat Transcripts

47. Week 9: Chat 4MAT with Bernice McCarthy March 10th from 5-6 pm

Chat Book Posted on: 05/25/04 11:04 PM
Modified by: Dad Book on: 05/25/04 09:01 PM

Total Answers: 00 [View answers of sites who have accessed this page.](#)

OK, it is time to re-4MAT it. This is a chat with Bernice McCarthy:

- [Check the entry for on-line chat](#)
- [View the chat transcript as it will be here](#)
- [View the chat transcript as it will be here](#)

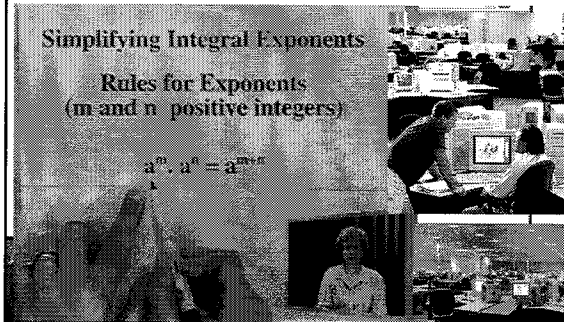
Attachments:

- [chat transcript.pdf](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)
- [http://www.abundant.com/boards/forums/4mat/4mat.html](#)

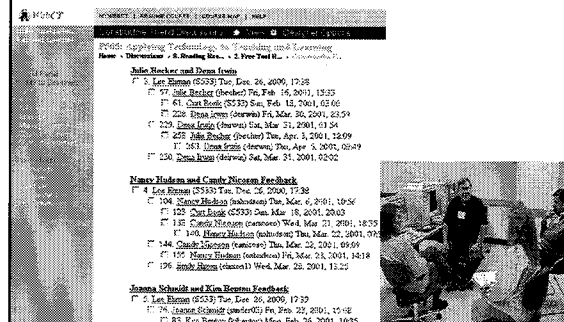
2c. Reflective Writing: e.g., One minute papers or muddiest point papers

- Have students write for 3-5 minutes what was the most difficult concept from a class, presentation, or chapter. What could the instructor clarify better.
- Send to the instructor via email or online forum.
- Optional: Share with a peer before sharing with instructor or a class.

2d. Video Streaming: Math Emporium of Online Tutorials and Testing (Virginia Tech, Robert Olin)



2e. Critical/Constructive Friends, Email Pals...



2f. Web-Supported Group Reading Reactions and Peer Feedback Required

1. Give a set of articles.
 2. Post reactions to 3-4 articles that intrigued them.
 3. What is most impt in readings?
 4. React to postings of 3-4 peers.
 5. Summarize posts made to their reaction.
- (Note: this could also be done in teams)

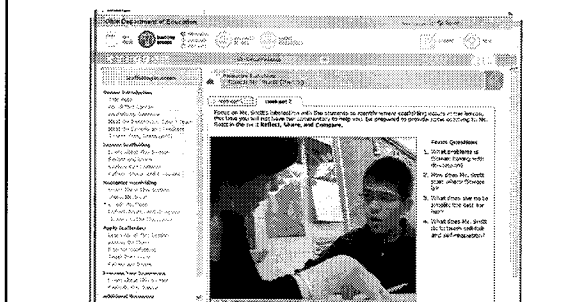


2g. Reflection and Observation: E-Portfolios

- Multimedia presentations (video, animation, voice-over testimonial)
- Examples of work
- Personal statement
- Self-reflections on that work
- Connections between experiences
- Standard biographical info
- i.e., progress, achievements, efforts...
- Large, complex, time to grade

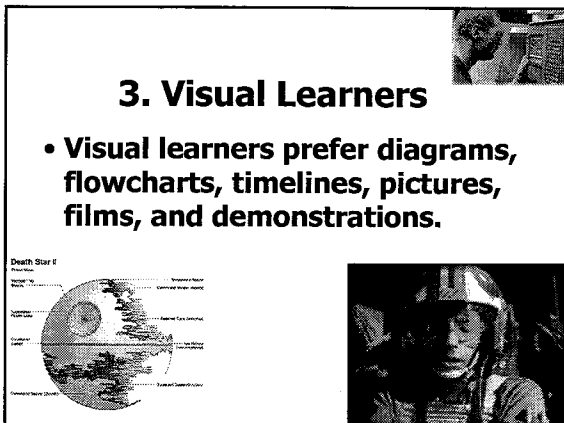


2h. E-Reading First Ohio (reflect, share, and compare)



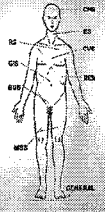
3. Visual Learners

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



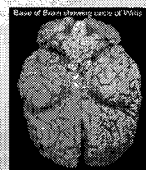
3a. Online Anatomy and Physiology

INTERACTIVE CADAVER



CENTRAL NERVOUS SYSTEM

- The skull, skull and meninges were formed, without evidence of any blood vessel or bleeding.
- The brain weighed 1400g.
- The cortex of Willis is normal with no aneurysms or arterioles.
- There showed scattered scattered petechial hemorrhages throughout the white matter.



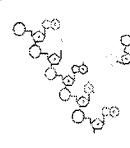
Base of Brain showing cerebellum of Willis


Return to history Back to m

3b. Animations, Video Clips, Audio, Pictures, Web Resources, etc.

RNA was the first genetic molecule.

RNA was only likely the first molecule to be able to replicate itself. In the primordial soup, a single-stranded RNA molecule could be a template.

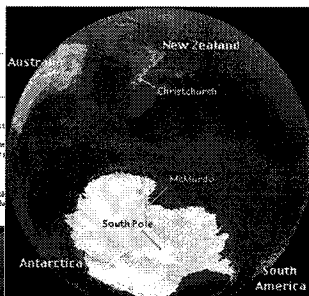




License this Interactive

3c. Virtual Tour (Center for Astrophysical Research in Antarctica)

Welcome to Antarctica!

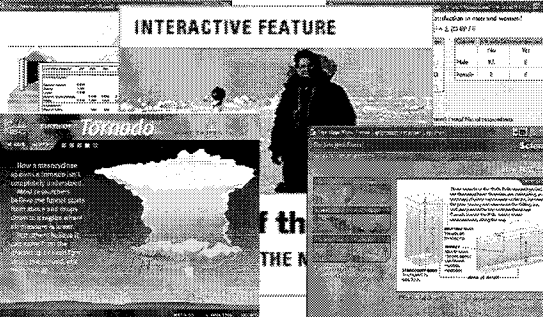


Now, let's go!

Begin here where you live or which country you would fly to get to the South Pole. Antarctica on your way to the center of the continent and the bottom of the Earth.

3d. Current Events: Interactive Online New Stories & Cases

INTERACTIVE FEATURE



License this Interactive

3e. Video Library of Concepts, Cases, or Experts

Discover ENGINEERING Online

DOWNLOAD


NOTE: Most of the downloadable items listed below are part of the www.enr.com/online site. This site provides links to these independent sites, as a service to our visitors. Please visit for complete information on the site, pricing, and the operation. Items are all offered by the creator's provider of each site.

Screen Savers

- Download Engineering Online
- Get Desktop Protection
- Desktop
- Clipboard

Video Clips

NOTE: Video clips are large files and can take



3f. Anchoring Event (CTGV, 1990?)

- In a synchronous lecture interrupt it with a summary video (could be a movie clip) explaining a key principle or concept.
- Refer back to that video during lecture.
- Debrief on effectiveness of it.

