Learning to Learn®

- http://www.learningtolearn.com/
- Inquiry-based critical thinking skills
- Compared with other interventions - Learning to Learn achieves:
  - 50% improvement in retention through graduation at 2-year colleges and universities
  - 20% improvement in retention through graduation at 4 year colleges and universities
  - long-term improvement in GPA across the curriculum

Learning to Learn®

- The work samples below are questions generated by students taking an elective course in oceanography

Student A:
What is a mid ocean ridge? What is the speed of continental drift?

Student B:
What is a delta? What is turbidity current?

Student C:
Name and describe the four types of dams. What is isostatic balance?

Learning to Learn®

- Three weeks later, using LTL, the students generated the following questions from their work in this course:

Student A:
Contrast water hitting hard rock with waves rolling up on a beach of sand.

Student B:
How does the theory of "plates" relate to the age of the sea floor?

Student C:
How do we use knowledge of the earth's magnetic field reversal to explain sea floor drift?

Context

- **Responsibility / Leadership**
- **Curriculum / Instruction**
  - **Within a class**
  - **Within a program**
- **Student Services / Interrelationships**
- **Academic Support**

- **Curriculum is the "what"**
- **Instruction is the "how"**

Four Design Components

- **Presentation**
- **Demonstration or Appreciation**
- **Practice**
- **Performance**

Presentation

- What do you want the student to be able to do or know? (Student Learning Outcome or objective)
- Inquiry Based
- Task Analysis
- In how many different ways can the material be presented?

Demonstration / Appreciation

- Set the standard of response
- Show what excellence looks/ sounds/feels like
- Grab the students' attention

Ethics

Film Prompt

- Questions
- Value line

Ex: SLO: Ethical Behavior

The student formulates thoughtful decisions based on clear ethical standards

The student thinks critically about ethical issues

The student examines personal and professional situations for ethical issues and consequences

➡ **The student approaches an ethical question analytically**

Practice

- Engage the student in some ***activity***
  - Homework
  - Labs
  - Simulations
- Do you correct/review practice?
- Do you grade practice?
- Jigsaw

Performance

- In what ways might the student meet the SLO for your session/unit/course?
- Internal Levels of Knowledge
  - Matching
  - Recognition
  - Recall

Questions for You

- What structures need to be in place for the professors to be creative with the design of instruction?
- Who will be responsive and responsible to the faculty as they try to increase student success?
- How will all of these activities be coordinated so as to maximize resources and diminish duplication?

Questions for Me

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Task Analysis
Sample

Objective: The student will accurately multiply 9 times a whole number $\leq$ 10

Prerequisite skills and abilities:

- Ability to manipulate both hands and all fingers on both hands
- Ability to count to ten
- Ability to follow oral or written directions
- Ability to identify left/right and up/down
- Ability to identify first and second
- Write the numbers from one to ten
- Ability to read numbers from 0 - 100
- Vocabulary: palms, farthest, spread, turn under, number, desktop, assign, finger, thumb

Procedure: (to multiply 4 x 9)

1. Place both hands on the desktop . . . palms down . . . fingers spread
2. Assign a number (from one to ten, in order) to each finger and thumb starting from the left
3. Count over to finger number 4 [the number of the finger to by multiplied by 9] and turn that finger under your palm
4. Write down the number of fingers to the left of the finger that is turned down [this represents the 10's place]
5. Write down the number of fingers to the right of the finger that is turned down [this is the 1's place]
6. Read the answer
7. Repeat for other combinations

Evaluation: Give various combinations of "9 x __"

SUMMER INSTITUTE 2010

INSTRUCTIONAL DESIGN SESSION

WORKSHEET

1) **PRESENTATION:** List as many ways as you can think of to present the material in your class.

2) **DEMONSTRATION / APPRECIATION:** What questions could we ask after the prompt?

3) **PRACTICE:** List as many practice activities as you can that the students could accomplish:
   a. **In class**

   b. **Outside of class**

c. **In the academic assistance center**

d. **In the community / service learning setting**

4) **PERFORMANCE:**

a. List different ways in which a student in your class could demonstrate the SLO or objectives?

b. List as many questions as you can about the content of today's session.