

Problem-Based Learning

2010 Hendrick Best Practices for Adult
Learners Conference

PBL Background

- McMaster University Medical School 1960s.
- Originated by Dr. James E. Anderson and Dr. Howard S. Barrows to teach medical students
- Today PBL has wide use in medicine, education, engineering, military, law enforcement, etc.

What is PBL?

III-Structured

Real Life Significance

Student-Led

Instructor-facilitated

Community focused



What is PBL?

- ◆ An instructional method which places students in an active role as problem-solvers confronted with ill-structured, real-life problems
- ◆ A problem solving process

Why PBL?....Transference of Learning

- ◆ People must achieve a threshold of initial learning before transference can occur
- ◆ Learning with understanding is more likely to promote transference of new skills than memorization

(National Research Council, 2000)

How can you help the knowledge transfer?

By using the following:

- 1: Adults must be partners in their own educational plans and evaluations
- 2: Adults learn experientially based on positive and negative experiences
- 3: The material must be relevant
- 4: Problem based learning is more effective than content based instruction

Adult Learning strategies supportive of PBL

Role playing

Co-operative learning

Individual/Partner Exercises



Socratic Lecturing

Scenario Based Learning

Group Assignments

Case Studies

PBL Structure

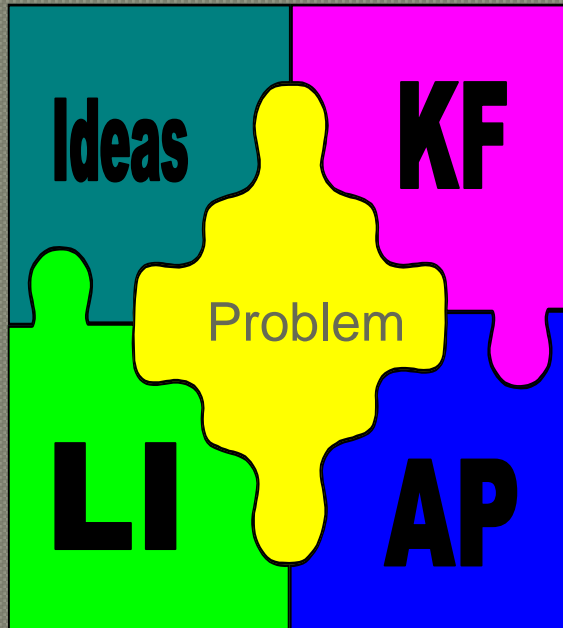
Ideas

Known Facts

Learning Issues

Action Plan

Evaluate Product & Process



PBL uses...

EMOTIONAL INTELLIGENCES*

- ◉ Being intelligent about your emotions
- ◉ Recognizing and understanding that how you think, feel, and act has consequences for learning
- ◉ E.I. Competencies

PBL uses...

EI COMPETENCIES

◉ What are E.I. Competencies?

Personal



1. Self Awareness
2. Self-Management

Social



1. Social Awareness
2. Relationship Management

PBL uses...

MULTIPLE INTELLIGENCES*

It's not how smart you are...

...but how you are smart!

- Verbal - linguistic learners
- Logical - mathematical learners
- Visual - spatial learners
- Body - kinesthetic learners
- Musical - rhythmic learners
- Interpersonal learners
- Intrapersonal learners

The “ill-structured” problem

- ◉ Make it “real-life” and describe it completely
- ◉ It should have numerous possible solutions
- ◉ Who “owns” the problem? (everyone)
- ◉ Who is affected by the problem? (when it comes to learning... the more, the better)

PBL Structure

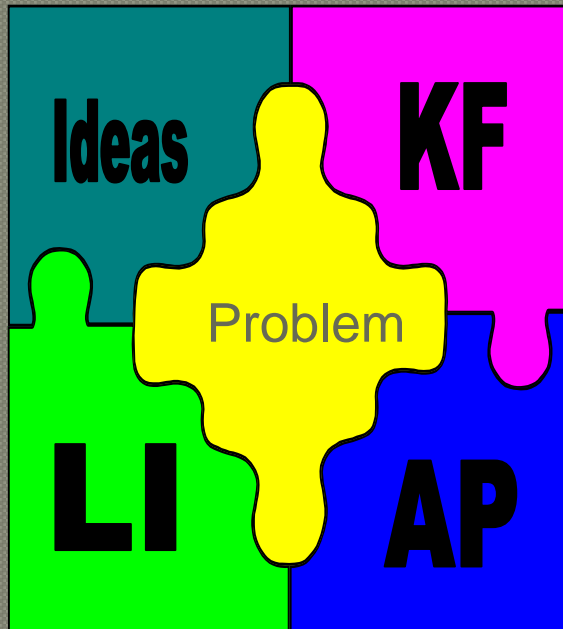
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Ideas: Consider the Problem

- ⦿ No such thing as “BAD” ideas about the problem
- ⦿ Consult a variety of opinions and use ample time
- ⦿ How?....brainstorm & brainstorm

Known Facts: Defining the Problem

- ◉ Explore all known facts
- ◉ Dissect the problem
- ◉ Suggest peripheral facts

Learning Issues: Learning about the problem

- ◎ What do they need to know to solve the problem?
- ◎ Use project management skills and use multiple resources.
- ◎ Collaborate on local resources needed to solve problem.

Action Plan: Solving the Problem

- ◉ What specifically will you do?
How will you operate the plan?
- ◉ Who will help?
Is there community buy-in?
- ◉ What are the possible consequences?

Evaluation: Is the problem solved?

- ◉ Did it work? How do you know?
- ◉ Evaluate both product and process
- ◉ Use evaluation ***rubrics***
(teacher/student generated)
- ◉ Self and Group evaluations

Journaling

- Is used to describe training, a situation or experience.
- It is used to explain what happened in training, during a situation or experience.
- It is used to analyze what learning issues one needs to overcome.
- It is used to evaluate how one did in regards to training, life situations, or experience.
- Self-improvement