

INTEGRATED COURSE DESIGN FOR SIGNIFICANT LEARNING

A Workshop Offered by:

DEE FINK & ASSOCIATES 
DESIGNING COURSES FOR SIGNIFICANT LEARNING

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University of North Carolina, Wilmington
ETEAL Applied Learning Summer Institute
July 28, 2014

Goals for this Workshop

Not only will you be **persuaded** that course design is the single most important component you can learn about college teaching. . .

but that you acquire the knowledge and tools to design your courses *more intentionally* to achieve a high level of **SIGNIFICANT LEARNING** among your students.

Workshop Outcomes

Domain for Significant Learning	Outcome: <i>By the end of this full day workshop, participants will:</i>
FOUNDATION KNOWLEDGE	Internalize the principles of Integrated Course Design and offer rationale for its use.
APPLICATION	Using the principles of Integrated Course Design, design (and begin development or revision of) a module or course with the goal of achieving a high level of significant learning among adult learners.
INTEGRATION	Identify & critically review suitable tools, appropriate procedures, and sections of current course content that can be adapted for use in learning.

Workshop Outcomes

Domain for Significant Learning	Outcome: <i>By the end of this full day workshop, participants will:</i>
HUMAN DIMENSION	Self: Be more confident that you can do this. Others: Foster relationships with colleagues to create more powerful designs.
CARING	Acknowledge the value of good course design in the teaching/learning process. In role of leader and advocate, explore feasibility of recommended changes (based in theory) for improved course design.
LEARNING HOW TO LEARN	Gain insight into the best practices for online course design. Witness how colleagues are exploring online course design through the literature. Synthesize adult learning theory in a way that promotes personal understanding. Articulate next steps (post workshop) for individual module/course design project.

Workshop Agenda

- ✓ Welcome, Workshop Goals, & Agenda
- ✓ Introduction to Integrated Course/Module Design
 - *Paradigm Shift: Teaching, Learning, and Course Design*
 - *Adult Learning Theory*
 - *IF-AT Quiz on Integrated Course Design*
- ✓ Taxonomy of Significant Learning
- ✓ Model of Integrated Course Design
 - *Developing Learning Goals/Student Learning Outcomes for Significant Learning*
 - *Alignment: Learning Goals/Student Outcomes, Assessment Strategies, and Activities*
 - *Situational Factors and Andragogical Challenges*
- ✓ Questions & Summary

Paradigm Shift in College Teaching

- ✓ WHAT students learn
- ✓ HOW students learn
- ✓ ***WHAT should faculty be doing?***

Paradigm Shift in College Teaching

Teaching  Learning

- ✓ What is the difference?
- ✓ Leads to new questions about our work as teachers and as designers of instruction.
- ✓ ***WHAT should we be doing?***

Good Learning Experiences

Think back to a time when you were involved in a really good learning experience

- ✓ Briefly describe the experience.
- ✓ What made it so successful?

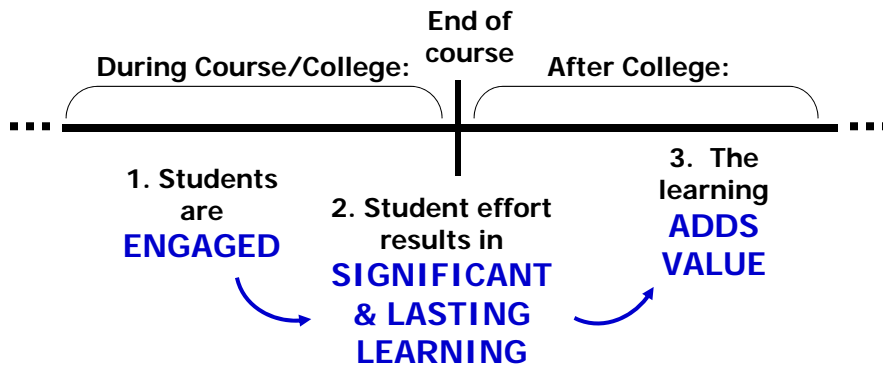
Jot notes. Then will share.

- ✓ Next, list the elements on the chart tablet and post.
- ✓ Verbally share the top 3 elements.

This is your benchmark.

In your design phase, these are the criteria against what you will measure your learning experience.

Three Features of a High Quality Learning Experience



“Algebra class will be important to you later in life because there’s going to be a test six weeks from now.”

Five Minute University



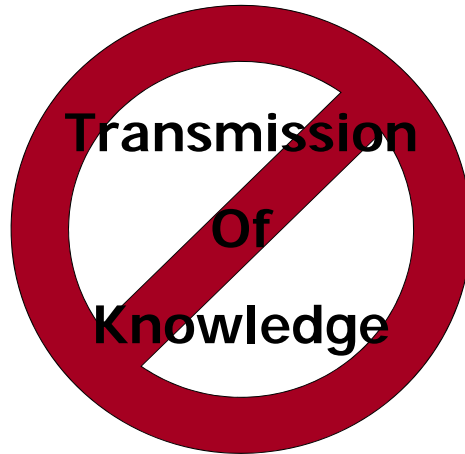
Paradigm Shift in College Teaching

Teaching  Learning

- ✓ What is the difference?
- ✓ Leads to new questions about our work as teachers.
- ✓ *WHAT should we be doing?*
- ✓ *HOW do students learn?*

How do People Learn?

- ✓ Content Focus has a “short half-life”



How do People Learn?

- ✓ Transmit knowledge?
- ✓ Constructivism

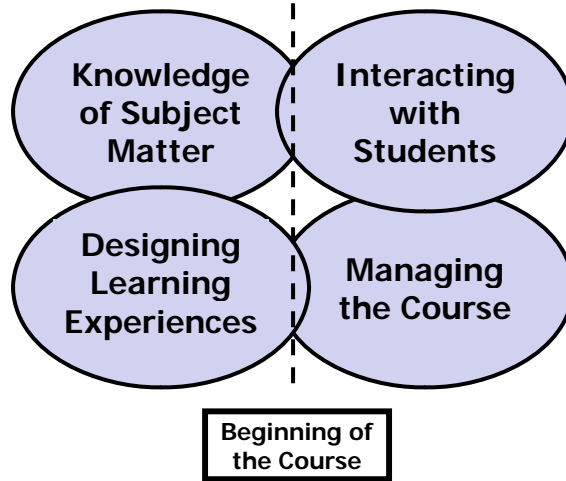
Constructivist View of Learning

- ✓ We can transmit “INFORMATION.”
- ✓ But people have to take that information and **CONSTRUCT** their own understanding of it, and figure out what they can do with it.

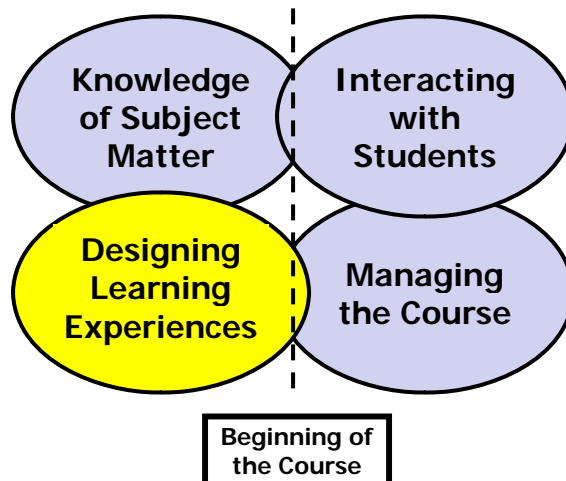
Social Constructivism

- ✓ We *can* construct our understanding of anything by ourselves, but...
- ✓ it usually works much better to **collaborate and dialogue with others**

Fundamental Tasks of Teaching



Fundamental Tasks of Teaching



Readiness Assurance Test (RAT)

www.epsteineducation.com

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)

Name _____ Test # _____

Subject _____ Total _____

SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.					_____
2.					_____
3.					_____
4.					_____
5.					_____
6.					_____
7.					_____
8.					_____

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SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.					5
2.					5
3.					3
4.					_____
5.					_____
6.					_____
7.					_____
8.					_____

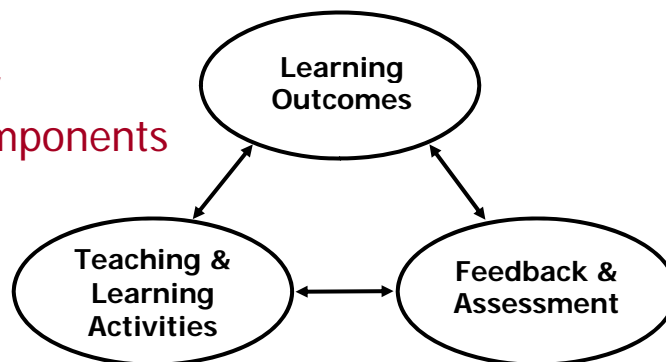
First try = 5 pts.
 Second = 3 pts.
 Third = 2 pts.
 Fourth = 1 pt.
 Fifth = 0

Three Ways of Instruction

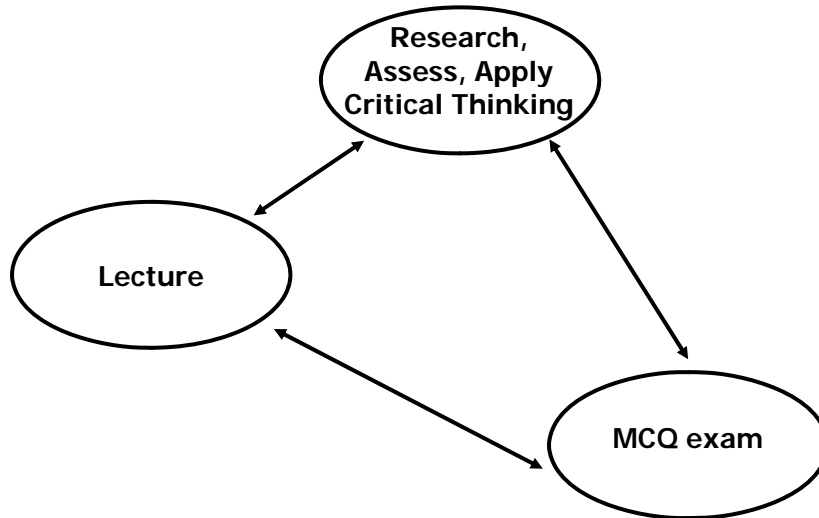
- ✓ “List of Topics”
- ✓ “List of Activities”
- ✓ Need a way of designing instruction that is:
 1. *Systematic*
 2. *Integrated*
 3. *Learning-Centered*

Integrated Course Design

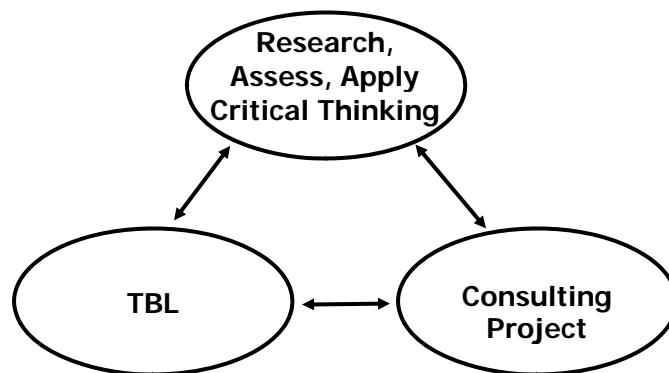
Key
Components



Integrated Course Design



Integrated Course Design

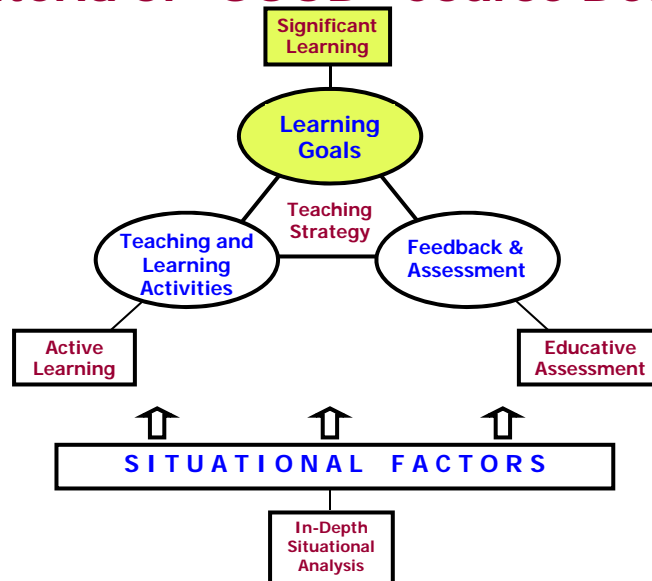


Faculty Dreams

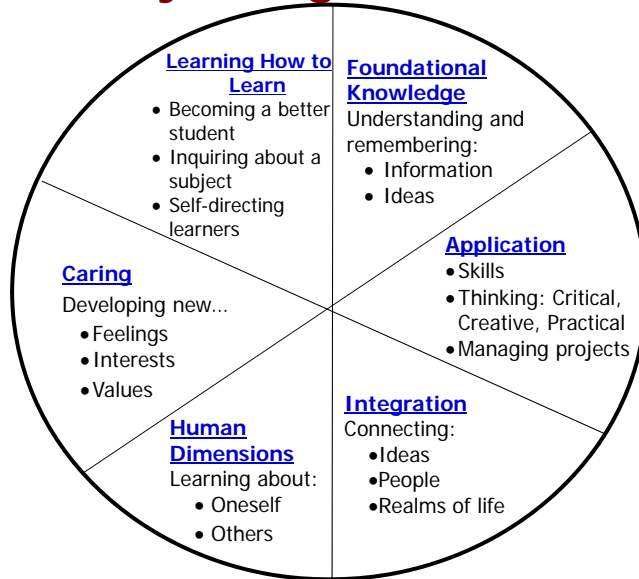
If you had a class that could and would learn anything and everything you wanted them to learn:

Q: What is it that you would really like them to learn? What would you want to know they could do long-term because they were in YOUR module?

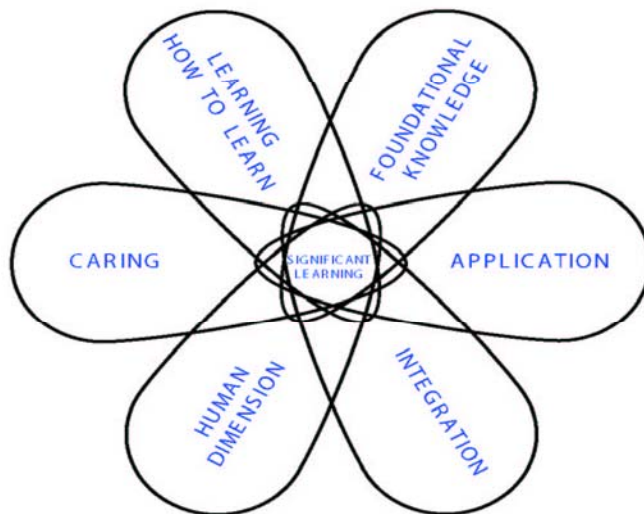
Criteria of "GOOD" Course Design



Taxonomy of Significant Learning



Taxonomy of Significant Learning



Foundational Knowledge

- ✓ What key **information** (e.g., facts, terms, formulae, concepts, principles, relationships, etc.) is/are important for students to **understand and remember** in the future?
- ✓ What key **ideas** (or perspectives) are important for students to understand in this course?

Application

- ✓ What kinds of **thinking** are important for students to learn?
- ✓ **Critical thinking**, in which students analyze and evaluate
- ✓ **Creative thinking**, in which students imagine and create
- ✓ **Practical thinking**, in which students solve problems and make decisions
- ✓ What important **skills** do students need to gain?
- ✓ Do students need to learn how to **manage complex projects**?

Integration

- ✓ What **connections** (similarities and interactions) should students recognize and make:
 1. Among ideas **within** this module/course?
 2. Among the information, ideas, and perspectives in this course and those **in other modules, courses or areas**?
 3. Among material in this course and the **learners' own personal, social, and/or work life**?

Human Dimension

- ✓ What could or should students learn about **themselves**?
- ✓ What could or should students learn about **understanding others** and/or **interacting with them**?

Caring

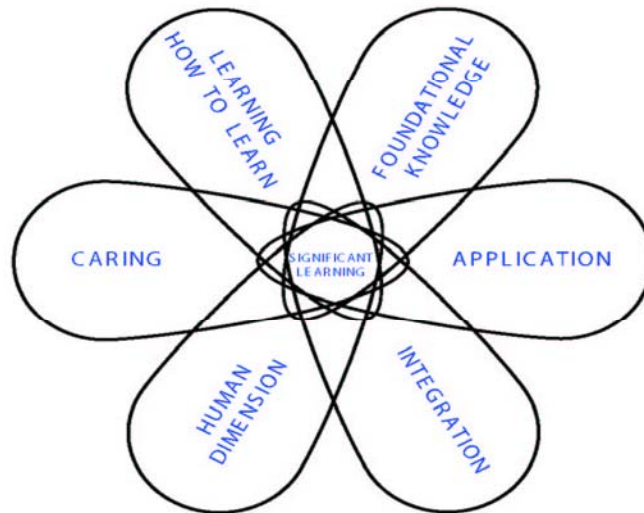
- ✓ What **changes/values** do you hope students will adopt?
- ✓ Feelings?
- ✓ Interests?
- ✓ Ideas?

Learning How to Learn

What would you like for students to learn about:

1. How to be good students in a course like this?
2. How to learn about this particular subject?
3. how to become a self-directed learner of this subject, i.e., having a learning agenda of what they need/want to learn, and a plan for learning it?

Taxonomy of Significant Learning



In a course with **significant learning**, students will:

1. **Understand and remember** the key concepts, terms, relationship, etc.
2. Know how to **use** the content.
3. Be able to **relate** this subject to other subjects.
4. Understand the **personal and social** implications of knowing about this subject.
5. **Value** this subject and further learning about it.
6. Know how to **keep on learning** about this subject, after the course is over.

Three Column Table Learning Goals - see handout



Three Column Table Learning Goals - see handout

Learning Goals	Assessment Activities	Learning Activities

Writing Learning Goals

- ✓ Select one module you are designing and write **2 learning goals** using Fink’s Taxonomy
 - Write one Foundation or Application
 - Write a second one from one of the other four domains
- ✓ Use the following preface:

“By the end of this module, the students will . . .”
- ✓ Pay attention to the verb!
- ✓ Make it concrete and specific.

Sample Verbs

Foundational Knowledge	Application	Integration	Human Dimension	Caring	Learning how to Learn
Remember Identify List	Use Critique Manage Solve Judge Imagine Analyze Calculate Create Coordinate	Connect Identify the interaction between. . . Identify the similarities between. . . Relate Compare Integrate	Come to see themselves as. . . Decide to become. . . Interact with others regarding. . . Work in teams on...	Get excited about. . . Be ready to . . . Be more interested in. Value. . .	Create a plan for future learning about. . . Identify important sources of info. . . Formulate useful questions about. . .
Reference: R. K. Noyd, <i>A Primer on Writing Effective Learning-Centered Course Goals</i>					

Destination!

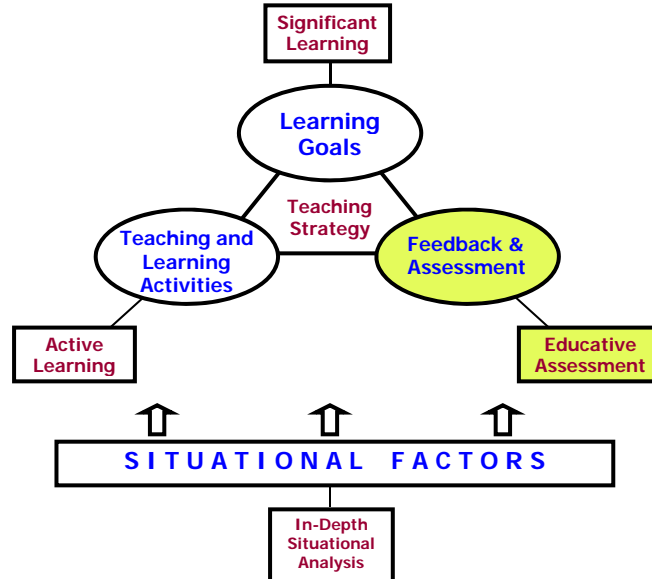


To Summarize: Why Objectives?

Added Benefits

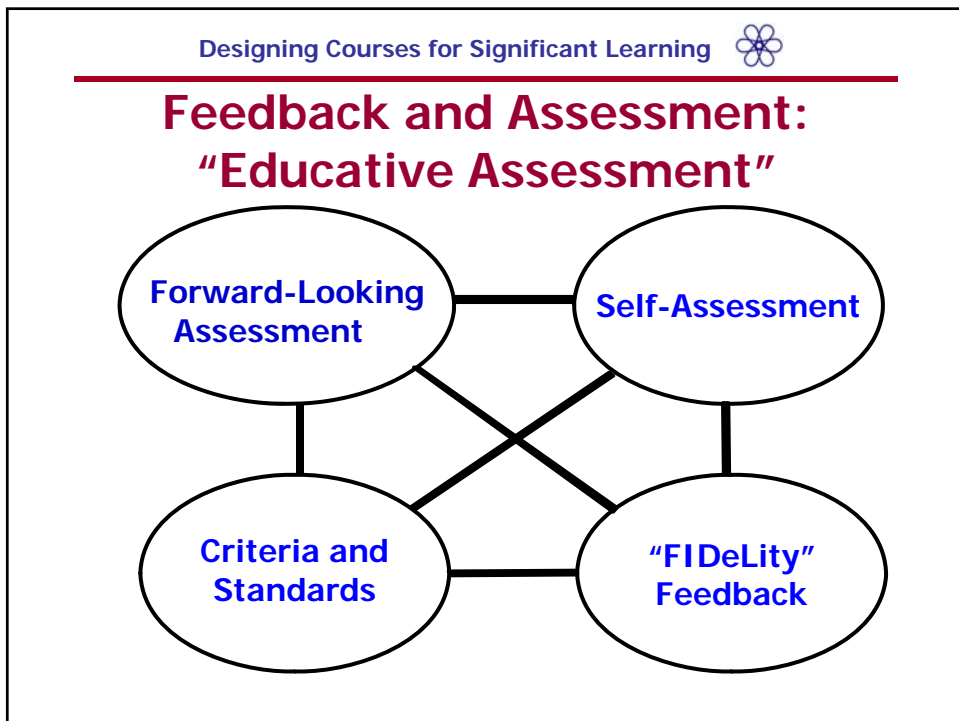
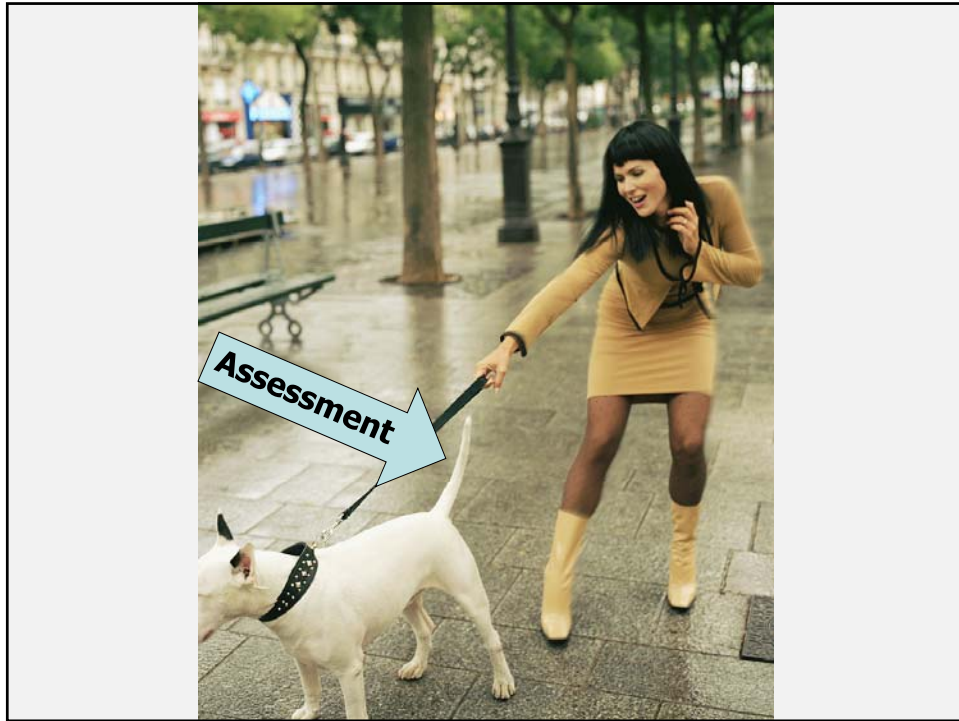
- ✓ Build a foundation for the course
- ✓ Organize central course concepts
- ✓ Eliminate unnecessary content
- ✓ Provide a map for faculty and for students
- ✓ Form the basis for assessment
- ✓ **Well-defined objectives with measurable components are easier to assess and easier to link to competencies.**

Criteria of "GOOD" Course Design



Assessment?

- ✓ What is assessment?
- ✓ Why do we assess?



Feedback and Assessment: “Educative Assessment”

Forward-Looking
Assessment Task



Criteria and
Standards



Self-Assessment



Feedback

Forward Looking Assessment

- ✓ APPLIED LEARNING!
- ✓ Focus on what learners should be able to **DO** in the future.
- ✓ Learners imagine themselves in a situation where people are actually using this knowledge.
- ✓ Create assignments and tests that require judgment/exploration rather than reciting or restating facts.
- ✓ Focus on real-life context
- ✓ Focus assessment on integrated use of skills

TASK: Develop Forward Looking Assessment

- ✓ Take a few minutes to analyze the type of assessments you do in your module.
- ✓ Write down a list of forward looking assessments you already use.
- ✓ Think of at least one forward looking assessment you could create for your course.
- ✓ Share with a partner

Self Assessment

- ✓ Create multiple opportunities for students to engage in self-assessment of their performance.
- ✓ Students need to identify relevant criteria for assessing their work and the work of others.
- ✓ Students need guidance & practice using the criteria for quality on their own work.



Am I on target?



Critical Incident Questionnaire Stephen Brookfield

During last 5 minutes of final class of the week students answer the following questions:

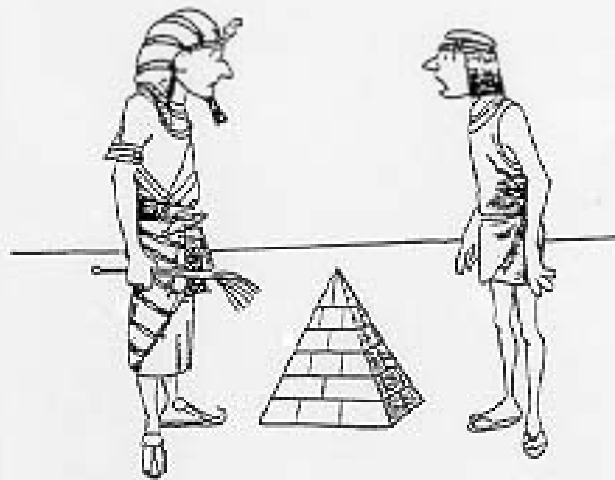
1. Most engaged moment as learner
2. Most distanced moment as learner
3. Most helpful action of professor and/or peer
4. Most puzzling action of professor and/or peer
5. What surprised you most

Teacher summarizes answers at the beginning of the first class of the next week.

FIDeLity Feedback

- ✓ Frequent
- ✓ Immediate
- ✓ Discriminating (based on criteria and standards)
- ✓ Lovingly or supportive approach used

The Point of Formative Feedback?



"We had a little problem with the decimal point."

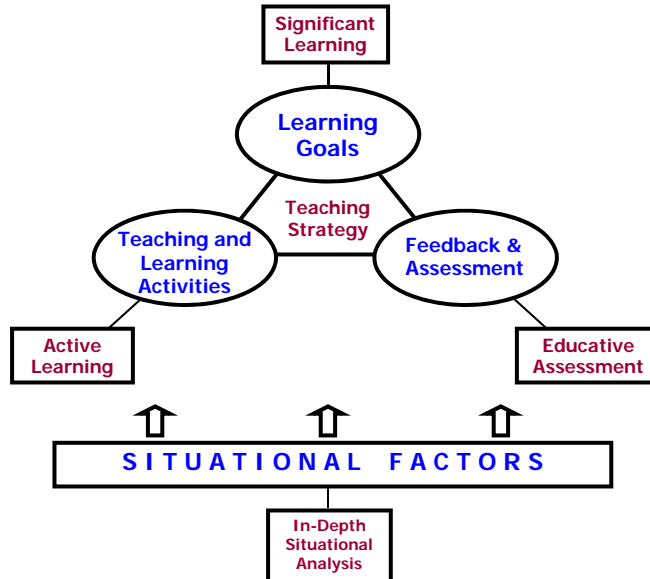
Three Column Table Assessment — see handout



Three Column Table Assessment — see handout

Learning Goals	Assessment Activities	Learning Activities

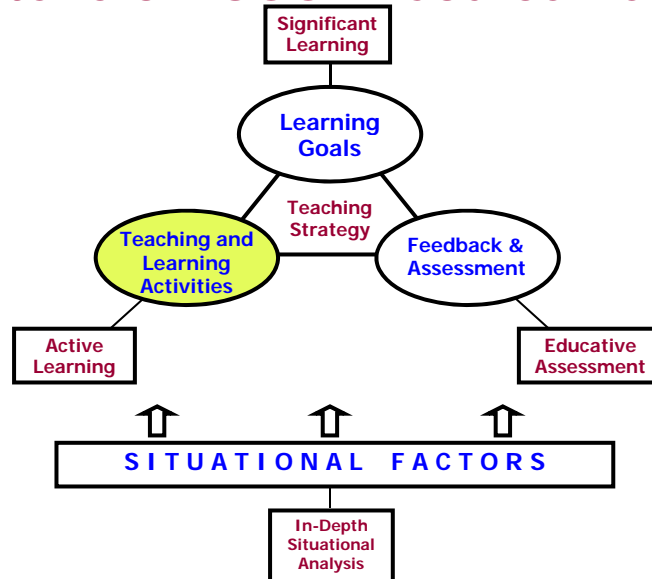
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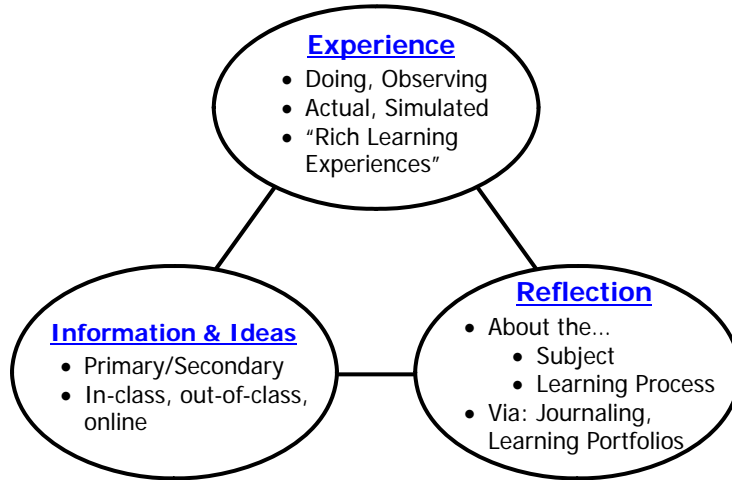
Why Use Active Learning Strategies in the Classroom?



Criteria of "GOOD" Course Design



Holistic Active Learning



Multiple Activities that Promote ACTIVE LEARNING

	GETTING INFORMATION & IDEAS	EXPERIENCE		REFLECTIVE DIALOGUE, with:	
		"Doing"	"Observing"	Self	Others
DIRECT	<ul style="list-style-type: none"> • Original data • Original sources 	<ul style="list-style-type: none"> • Real Doing, in authentic settings 	<ul style="list-style-type: none"> • Direct observation of phenomena 	<ul style="list-style-type: none"> • Reflective thinking • Journaling 	<ul style="list-style-type: none"> • Live dialogue (in or out of class)
INDIRECT, VICARIOUS	<ul style="list-style-type: none"> • Secondary data and sources • Lectures, textbooks 	<ul style="list-style-type: none"> • Case studies • Gaming, Simulations • Role play 	<ul style="list-style-type: none"> • Stories (can be accessed via: film, literature, oral history) 		
ONLINE	<ul style="list-style-type: none"> • Course website • Internet 	<ul style="list-style-type: none"> • Teacher can assign students to "directly experience" ... • Students can engage in "indirect" kinds of experience online 		<ul style="list-style-type: none"> • Students can reflect, and then engage in various kinds of dialogue online. 	

Rich Learning Experiences

- ✓ *What are they?*
- ✓ Learning experiences in which students are able to *simultaneously* acquire *multiple* kinds of higher level learning.

Some Examples

Whole Class	Outside of Class
<ul style="list-style-type: none">✓ Debates✓ Role playing✓ Simulations✓ Dramatizations	<ul style="list-style-type: none">✓ Service learning✓ Situational observations✓ Authentic projects

Let's Explore.
Suggested approach: Information & Ideas;
Experience; & Reflection

Legal Issues in Accounting Course

Learning How to Learn Goal

- ✓ Students will be able to do research to assess and apply court cases to legal issues.

Feedback & Assessment

- ✓ Student will draft a Team problem that requires research in legal databases

Activities

- ✓ Students interview someone who uses contracts on a daily basis – afterwards students do a double entry journal. Students must do research on legal cases and apply those results to new cases they must decide.

Marketing

Application

- ✓ Students will be able to assess a business situation and create a marketing plan for a non-profit.

Feedback & Assessment

- ✓ Student create a marketing plan for a local non-profit.

Activities

- ✓ Students learn foundational concepts and apply in case-based learning. Afterwards students explore the local economy and conduct research to gain a better sense regarding how marketing concepts are applied in a real-life context.

Curriculum in Higher Education

Integration

- ✓ **Identify** the impact of major social, political, cultural, and intellectual influences (both internal and external) on the development and maintenance of predominant curricular aims and structures.

Feedback & Assessment

- ✓ Matrix activity: cells represent how the influences intersect with aspects of curricular trends and structures.
- ✓ Reflection and incorporation into personal philosophy

Activities

- ✓ Gallery Walk

Leadership in Engineering

Human Dimension

- ✓ **Identify** the qualities of a leader.

Feedback & Assessment

- ✓ Define leadership.
- ✓ Following case study, reflect and incorporate new information and revise earlier definition.

Activities

- ✓ Read book or case student about people in leadership positions (e.g. Abraham Lincoln)

Introduction to Botany

Application

- ✓ **Design** a research project to test a hypothesis about factors affecting plant growth.

Human Dimension

- ✓ **Identify** three criteria and **use to assess** the appropriateness of a peer's study design.

Feedback & Assessment

- ✓ Articulate a hypothesis and design a study to test the hypothesis
- ✓ Peer review: Provide feedback to a peer on study design

Activities

- ✓ Conduct Journal Club with an article that highlights a study using basic scientific method. Evaluate studies using the FINER criteria.

Does It Make a Difference?

- ✓ Bill Weeks, University of Missouri at Rolla
- ✓ Course: Coding in Computer Science
- ✓ Small class (18 students), traditional time structure (M-W-F)
- ✓ Initially: Lecture + homework
- ✓ Results: Students overwhelmed by complexity – frustration – apathy – low course evaluations

Changes Made

1. Completely re-wrote his **learning goals**: (examples)
 - For a given communication channel, students will be able to compute the maximum rate of reliable transmission
 - Students will learn how to work effectively in a group setting.
 - Students will be able to direct their own learning in relation to understanding, designing, and evaluating new codes.
2. New **teaching strategy**: Used TBL
3. Used **reflective writing**: Learning portfolios
4. Oral presentations
5. Had students re-submit their homework

RESULTS

- ✓ Students did the readings, and did as well as before on exams of Foundational Knowledge.
- ✓ **TEACHER**:
 - "...drastic improvement in student morale...They worked harder – and reported enjoying it more."
- ✓ **STUDENTS**:
 - ...an interesting learning experience I will never forget...provided me with knowledge to carry out independent study.
 - I enjoyed this course to the fullest...course was entertaining and at the same time enlightening.

Three Column Table Rich Learning Experiences

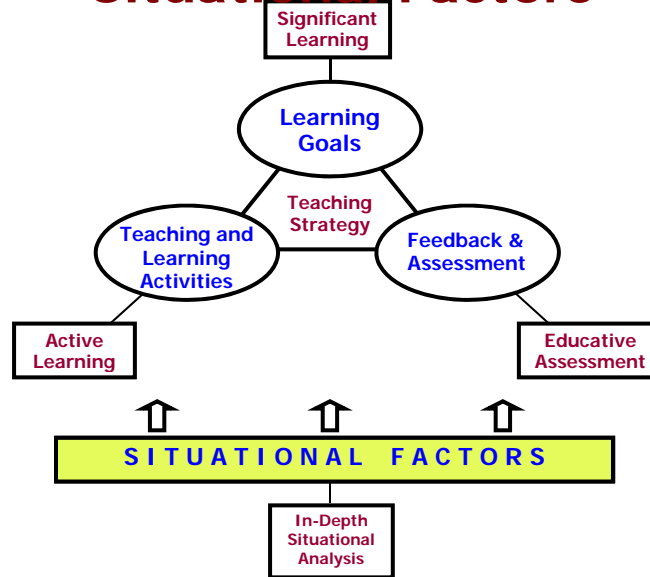


Three Column Table Rich Learning Experiences

Learning Goals	Assessment Activities	Learning Activities

TASK: 1-2 Rich Learning Experiences

Situational Factors



Situational Factors

Collecting information about...

- ✓ **Specific Context** of the Teaching/Learning Situation
 - Number of students
 - Level of course
 - Nature of the course (required or elective; for majors or non-majors)
 - Time structure
 - Placement within the program curriculum
 - Delivery (Online)

Situational Factors

Collecting information about...

✓ **Expectations** placed on this course or curriculum by:

Internal Influences - Institution

- Mission
- Governance
- Resource availability
- Technical infrastructure
- Opportunities for faculty development

Situational Factors

Collecting information about...

✓ **Expectations** placed on this course or curriculum by:

Internal Influences - Department

- Leadership
- Selection and sequencing of content
- Background of faculty (disciplinary training)
- Student characteristics
- Opportunity for release time to focus on course redesign

Situational Factors

Collecting information about...

- ✓ **Expectations** placed on this course or curriculum by:

External Influences

- Society
- Federal Oversight
- Institutional Accreditation
- State Review

Situational Factors

Collecting information about...

- ✓ **Nature of the Subject**
 - Theoretical, practical, or combination?
 - Convergent or divergent?
 - Important changes or controversies occurring?

Situational Factors

Collecting information about...

- ✓ Characteristics of the **Learners**
 - Life situation (e.g., working, family, professional goals)
 - Prior knowledge, experiences, and initial feelings
 - Personal learning goals, expectations, and learning preferences

Situational Factors

Collecting information about...

- ✓ Characteristics of the **Teacher (Me!)**
 - My attitude toward the subject and the students
 - My values/beliefs about teaching and how students learn
 - My teaching skills
 - My level of knowledge or familiarity with this subject

Situational Factors

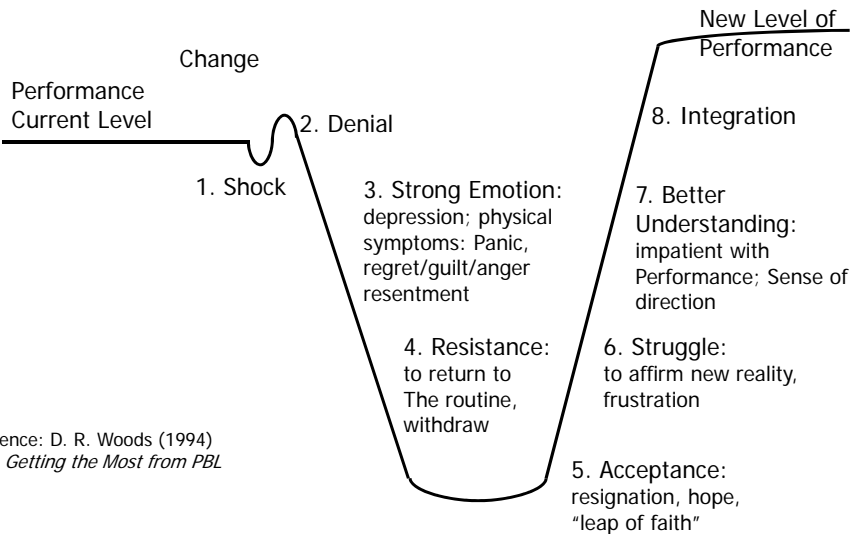
Collecting information about...

- ✓ Specific Context
- ✓ Expectations by people outside the course
- ✓ Nature of the Subject
- ✓ Characteristics of Learners
- ✓ Nature of Teacher

What is YOUR special pedagogical challenge in teaching YOUR course?



The Grieving Process for Coping with Change



Summary

- ✓ Integrated Course Design
 - Paradigm Shift: Issues in teaching and learning related to course design
 - Adult Learning Theory
- ✓ Taxonomy of Significant Learning
- ✓ Model of Integrated Course Design
 - Learning Goals/Outcomes for Significant Learning
 - Feedback and Assessment Strategies
 - Rich Learning Experiences
 - Situational Factors and Andragogical Challenges

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LEARNING HOW TO LEARN	Gain insight into the best practices for online course design. Witness how colleagues are exploring online course design through the literature. Synthesize adult learning theory in a way that promotes personal understanding. Identify what else you want to learn about (after the workshop).

Designing Courses for Significant Learning 

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Thank you!