Course Design

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DESIGNING COURSES THAT PROMOTE SIGNIFICANT LEARNING

Course design

- The process of conceptualizing, organizing, and arranging the elements of curriculum into a coherent pattern (Print, 1993).
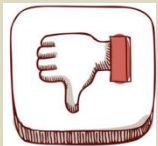
عملية تنظيم وترتيب عناصر المنهاج الدراسي في نمط متماسك.

Two general approaches to creating a course

- **A content-centered approach:**

  "List of topics approach", most common, textbook, time for each topic, and how many tests.
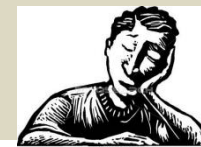
  Easy and simple.

 No attention to what students might learn beyond content, easily forgotten.

Two general approaches to creating a course

- ## A Learning-centered approach:

  Decide first what students can and should learn in relation to this subject and then figure out how such learning can be facilitated.

  The best chance of ensuring that students have a significant learning experience.
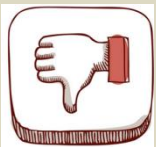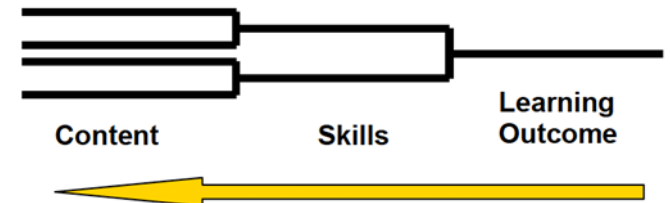
  Requires more time and effort.

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Learning-centered approach

- **Backward** Design

- **Integrated** Course Design

The Backward Design Process

Identify desired results

What I want the students to Understand and know and be able to do?

Determine assessment evidence

How do I check they have learned?

Plan learning experiences and instruction

Which learning activities will lead students to the desired results?

Content   **Skills**   **Learning Outcome**

Integrated Course Design:

Learning Outcomes

Teaching & Learning Activities

Feedback & Assessment

Situational Factors

Un-integrated/dis-connected course

Integration Problem:
Example 1

Learning Outcomes

التفكير الناقد للموضوع

Teaching/ Learning Activities

محاضرات عادية

Feedback & Assessment

سؤال لانتقاد مفهوم معين....

Un-integrated/dis-connected course

Integration Problem:
Example 2

Learning
Outcomes

التفكير الناقد للموضوع

محاضرات عادية

Teaching/
Learning
Activities

Feedback &
Assessment

لا يوجد سؤال لانتقاد مفهوم معين...

Example

- ILO (educational psychology): "solve a disciplinary problem in the classroom by applying expectancy-value theory."

- TLA: a case study of a particular classroom situation requiring the students to apply the theory and solve the problem.

- The assessment would be in terms of how well the problem was solved (using rubrics by which the quality of the solution).

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Integrated Course Design:

Step 1. **Situational factors**

Step 2. **Learning outcomes**

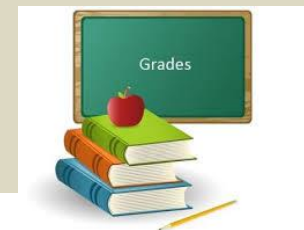Step 3. **Feedback & assessment procedures**

Step 4. **Teaching/learning activities**

Step 5. **Structure for the course**

Step 6. **Instructional strategies**

Step 7. **Grading system**

Step 8. Syllabus

Step 9. **Evaluate** course & teaching

1- Identifying the Situational Factors:

WHERE ARE YOU?

1. Specific Context of the Teaching/Learning Situation
2. General Context of the Learning Situation
3. Nature of the Subject
4. Characteristics of the Learners
5. Characteristics of the Teacher

Step 1 Worksheet

Integrated Course Design:

Step 1. **Situational factors**

Step 2. **Learning outcomes**

Step 3. **Feedback & assessment procedures**
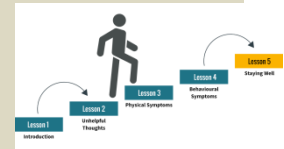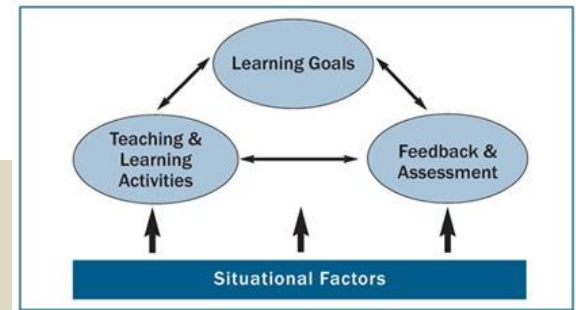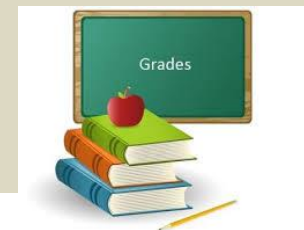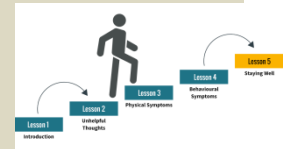
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2- Establishing Learning Outcomes

WHERE DO YOU WANT TO GO?

Traditionally, a content centered approach is taken: "I want students to learn about topics X, Y, and Z." Although such an approach is easy and natural, it generally results in an over-emphasis on "understanding and remembering"

2- Establishing Learning Outcomes

WHERE DO YOU WANT TO GO?

- ### Learning-centered approach

  - What do you want students to get out of the course.

  - What is important for them to learn and retain, 2-3 years after the course is over?

  - What kind of thinking or application abilities do you want them to develop?

  - How do you want them to keep on learning after the course is over?

Bloom's Taxonomy of Educational Objectives

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Integrated Course Design:

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Step 3. **Feedback & assessment procedures**
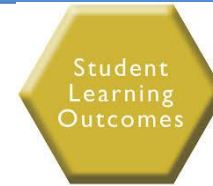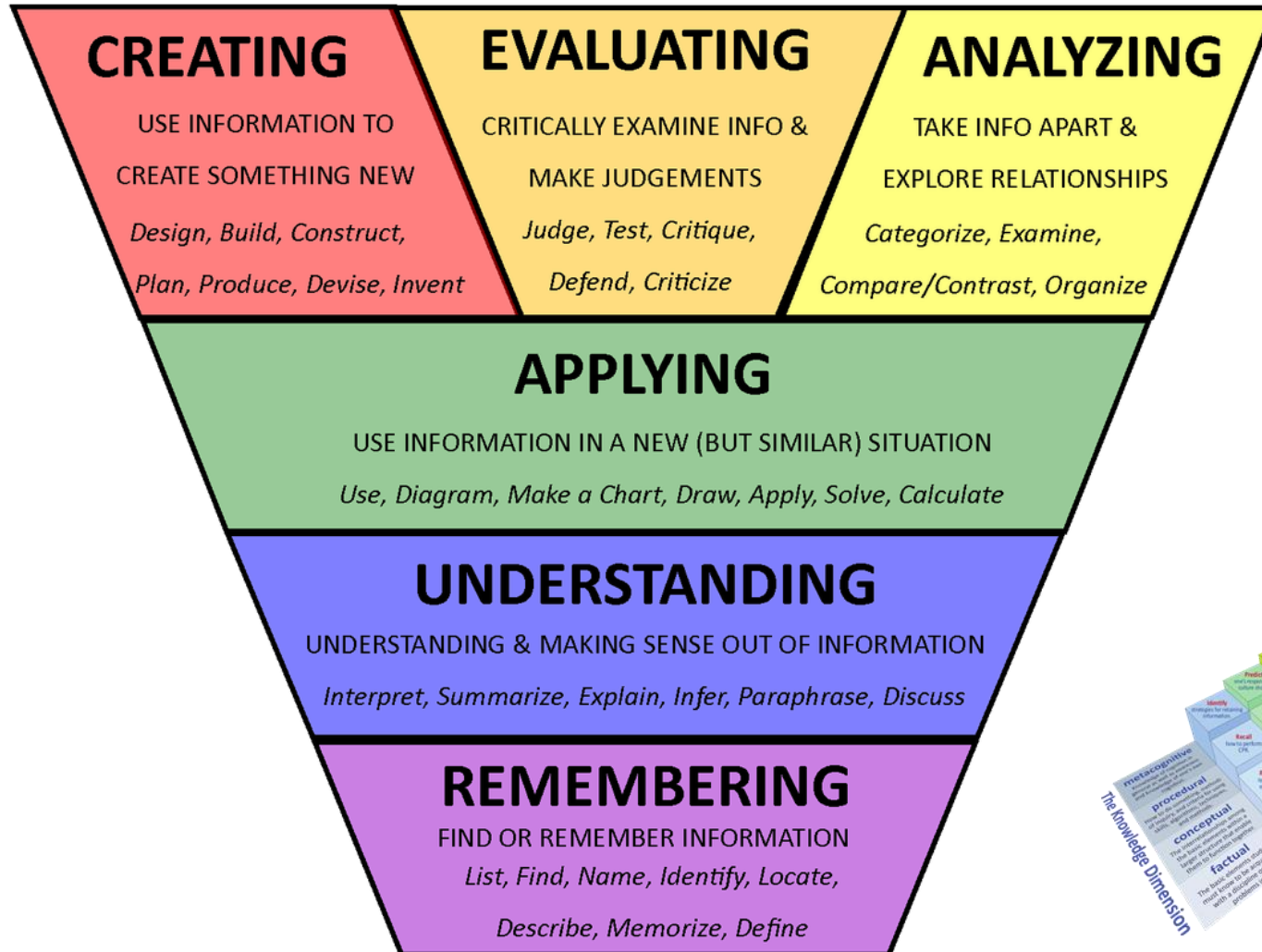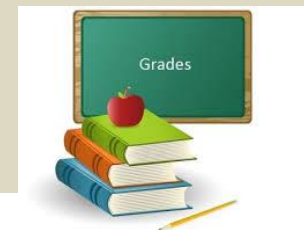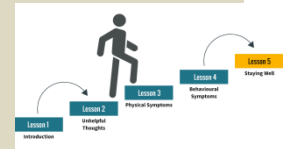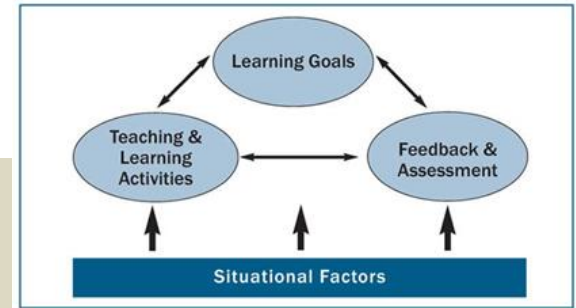
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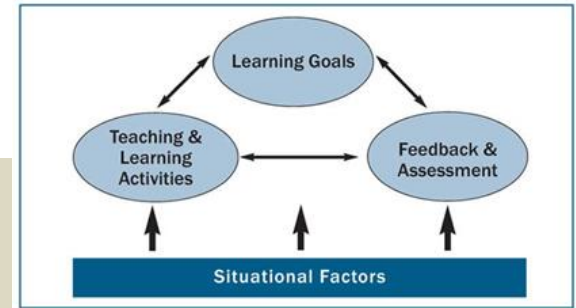
3- Feedback and Assessment Procedures
HOW WILL THE STUDENTS AND YOU KNOW IF THEY GET THERE?

Assessment of Learning

- What will students do to demonstrate they have achieved the ILOs we set for the course? Are they getting it?

- For which outcomes are paper-and-pencil evaluations sufficient? Which need reflective writing? Performance assessment?

In a content-centered course, two mid-terms and a final exam are usually considered sufficient feedback and assessment for determining if the student "got it" or not.

EVIDENCE

Feedback and Assessment Procedures

A learning-centered course

- Think about what you can do that will help students learn, as well as give you a basis for issuing a course grade.

- A set of feedback and assessment procedures collectively known as "**educative assessment**" is needed.
  - Forward-Looking Assessment
  - Self-assessment

■ Tips   "FIDeLity" Feedback:

- ■ **Frequent**: Give feedback daily, weekly, or as frequently as possible.

- ■ **Immediate**: Get the feedback to students as soon as possible.

- ■ **Discriminating**: Make clear what the difference is between poor, acceptable, and exceptional work.

- ■ **Loving**: Be empathetic in the way you deliver your feedback.

AUDIT-IVE AND EDUCATIVE ASSESSMENT
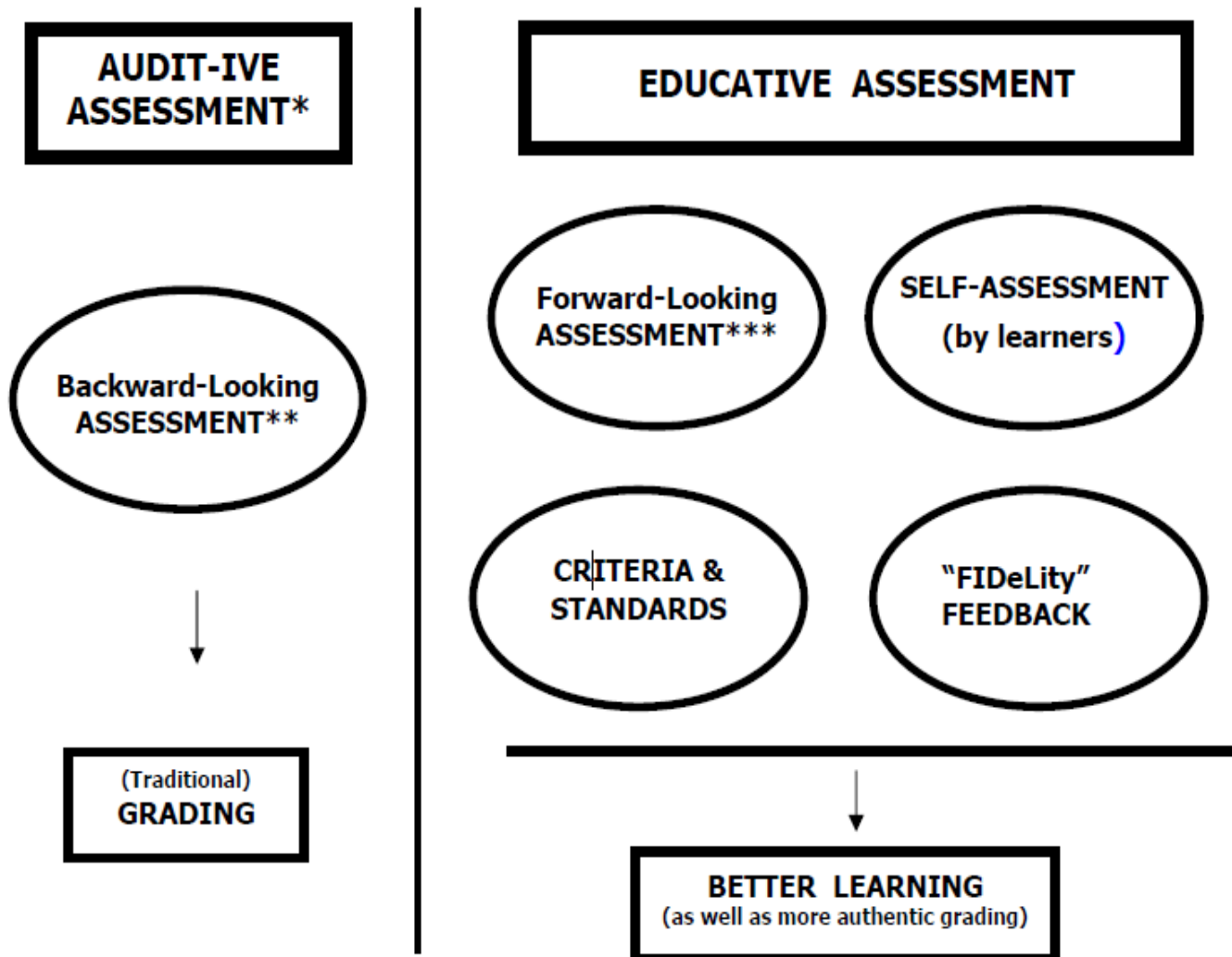
AUDIT-IVE ASSESSMENT*

EDUCATIVE ASSESSMENT

Backward-Looking ASSESSMENT**

Forward-Looking ASSESSMENT***

SELF-ASSESSMENT (by learners)

CRITERIA & STANDARDS

"FIDeLity" FEEDBACK

(Traditional) GRADING

BETTER LEARNING
(as well as more authentic grading)

Integrated Course Design:

Step 1. **Situational factors**

Step 2. **Learning outcomes**

Step 3. **Feedback & assessment procedures**

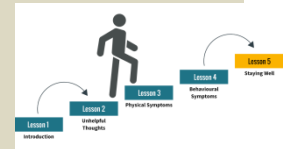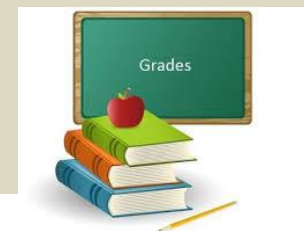Step 4. **Teaching/learning activities**

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4. Teaching/learning activities
HOW ARE YOU GOING TO GET THERE?

- What would have to happen during the course for students to do well on the Feedback & Assessment activities?

- **Active Learning.** students learn more and retain their learning longer if they acquire it in an active rather than a passive manner.

4. Teaching/learning activities
HOW ARE YOU GOING TO GET THERE?

- Think creatively for ways of involving students: in doing things and thinking about the things they are doing.

- "Doing" refers to activities such as debates, simulations, guided design, group problem solving, and case studies. Thinking refers to reflections about the meaning of what students learn or about the learning process itself.

The Cone of Learning

sparkinsight.com

After 2 weeks, we tend to remember ...

I see and I forget.
I hear and I remember.
I do and I understand.
— Confucius

Reading — • 10% of what we READ

Hearing Words — • 20% of what we HEAR

Seeing — • 30% of what we SEE

Watching a Movie / Looking at an Exhibit / Watching a Demonstration / Seeing It Done on Location — • 50% of what we SEE & HEAR

Passive

Participating in a Discussion / Giving a Talk — • 70% of what we SAY

Doing a Dramatic Presentation / Simulating the Real Experience / Doing the Real Thing — • 90% of what we SAY & DO
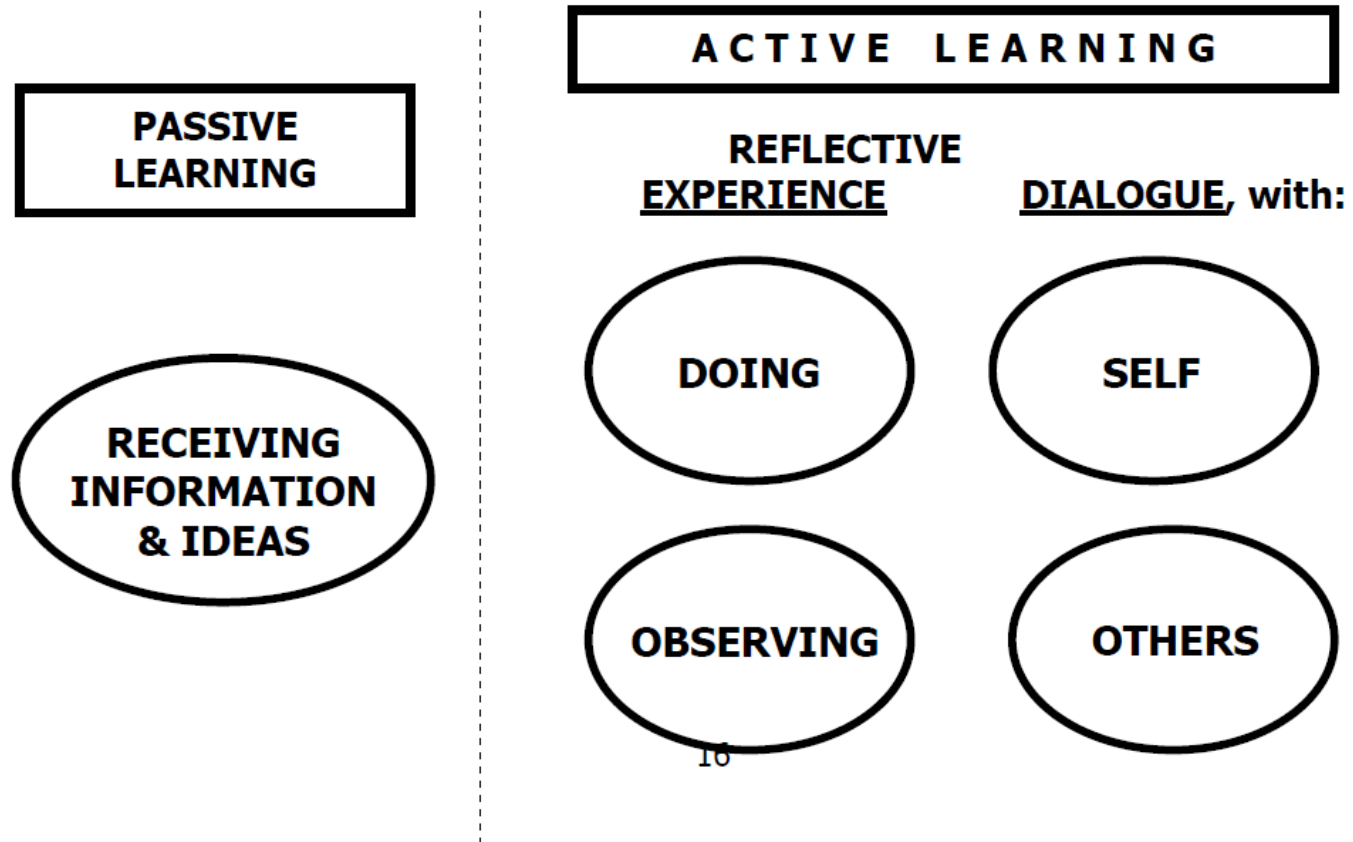
Active

Source: Edgar Dale (1969)

4. Teaching/learning activities
HOW ARE YOU GOING TO GET THERE?

INITIAL VIEW OF PASSIVE AND ACTIVE LEARNING

ACTIVE LEARNING

PASSIVE LEARNING

REFLECTIVE EXPERIENCE

DIALOGUE, with:

RECEIVING INFORMATION & IDEAS

DOING

SELF

OBSERVING

OTHERS

Active Learning

A HOLISTIC VIEW OF ACTIVE LEARNING
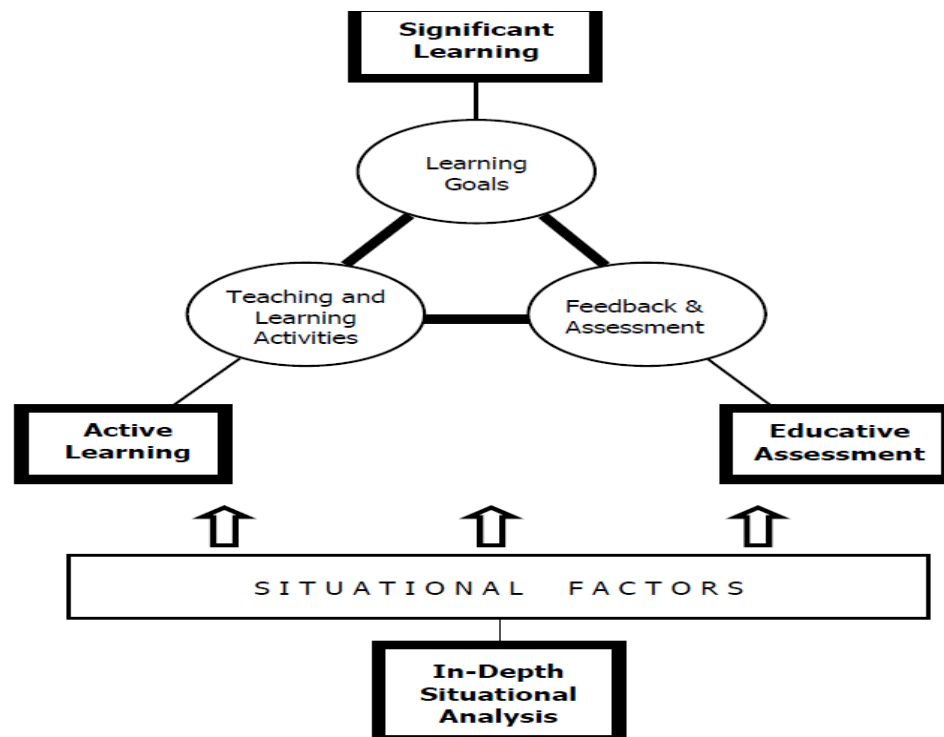
Experience
- Doing, Observing
- Actual, Simulated
- "Rich Learning Experiences"

Information & Ideas
- Primary & Secondary Sources
- Accessing them in class, out of class, online

Reflective Dialogue
- Minute Papers, Learning Portfolios, Journaling
- About the Subject and/or Learning Process

Integrating Steps 1-4

Step 4 Worksheet B

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Integrated Course Design:

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Step 2. **Learning outcomes**

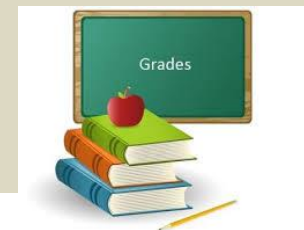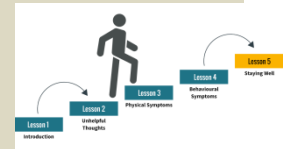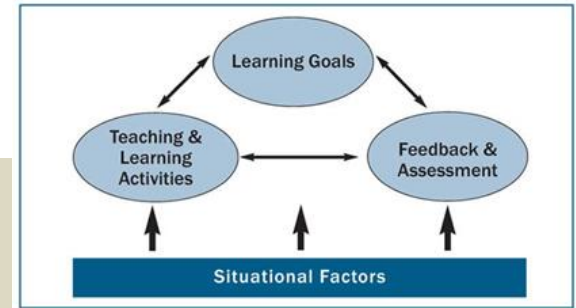Step 3. **Feedback & assessment procedures**

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Step 9. **Evaluate** course & teaching

Step 5. Course Structure

WHAT ARE THE MAJOR TOPICS IN THIS COURSE?

"What content topics could I use to achieve the outcomes of my course?"

- Identify the four to seven major ideas, topics, or themes in the course.

- Then place them in an appropriate sequence.

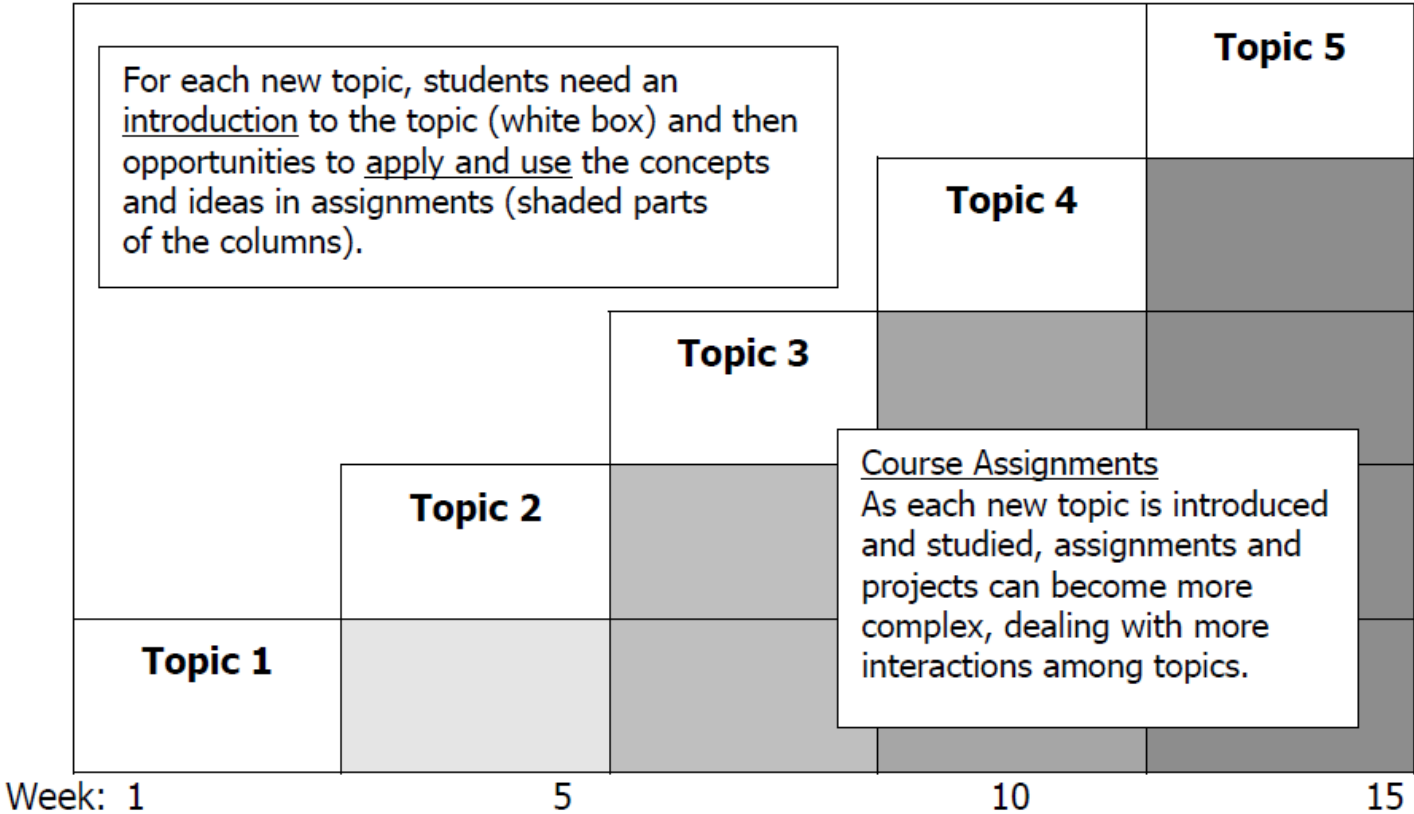- Decide how many weeks or class sessions to allocate to each one.

Tips

- Courses with depth rather than breadth are a viable alternative in course design.

- Topic coverage in a course does not have to be linear or follow the table of contents of a textbook.

  Non-linearity is OK, and, in fact, may be desirable. Revisiting a topic in different contexts and depth improves learning and provides an opportunity to build the complexity of ideas and applications over time.

A Structured Sequence for the Content of a Course

Topic 5

Topic 4

For each new topic, students need an introduction to the topic (white box) and then opportunities to apply and use the concepts and ideas in assignments (shaded parts of the columns).

Topic 3

Topic 2

Course Assignments
As each new topic is introduced and studied, assignments and projects can become more complex, dealing with more interactions among topics.

Topic 1

Week: 1   5   10   15

Integrated Course Design:

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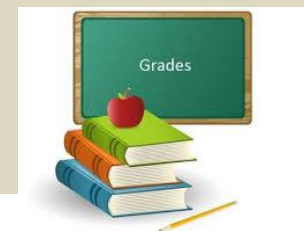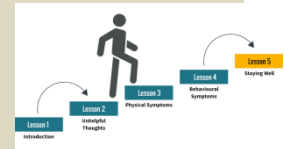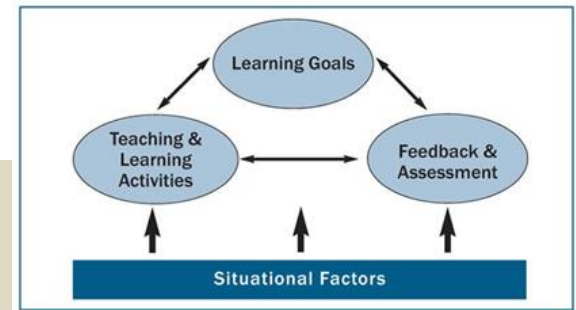
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Step 6. Instructional Strategy
WHAT WILL THE STUDENTS NEED TO DO?

Examples of instructional strategies:

- **Continuous series of lectures and reading assignments, interrupted once or twice by a midterm exam.**

Sequence of student activities: hear- read-test.

- **Series of reading, reflective writing, and whole-class discussion assignments (sequence repeated for each topic).**

Sequence of student activities: read-write-talk.

(A variation of this would be read-talk-write.)

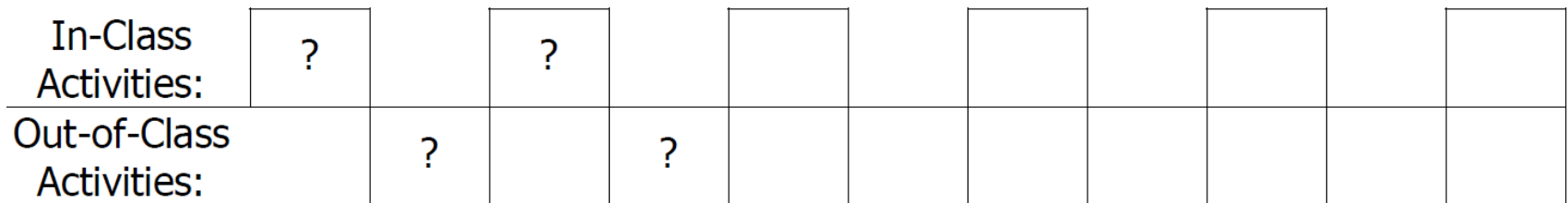- **Start with some field or lab work observations, followed by readings and whole-class discussions.**

Sequence of student activities: do (or look)-read-talk.

(Write-ups of lab or field work are sometimes included.)

- **Lectures followed by field work or lab observations.**

Sequence of student activities: hear-see or do

- Laying out the combination of in-class and out-of-class activities in a "**castle-top**" diagram allows the teacher to sense how dynamic the teaching strategy is.

In-Class Activities:	?		?						
Out-of-Class Activities:		?		?					

Examples:

Instructional Strategy

Major Topics in Course:

I_____

In-class
Out-of-class

II_____

In-class
Out-of-class

III_____

In-class
Out-of-class

IV_____

In-class
Out-of-class

Course Structure (for whole semester or term)

Step 6 Worksheet

Integrated Course Design:

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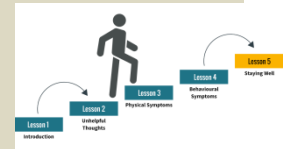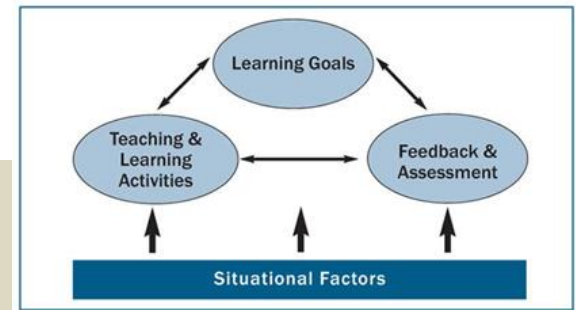
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Step 7. How Are You Going To Grade?

Develop your grading system. Tips

- Should reflect the full range of learning outcomes and activities.

- You do NOT have to grade everything.

- But make sure you do grade some instances of every kind of learning you want students to retain.

- Relative weight of each item as it affects the course grade should reflect the relative importance of that activity.

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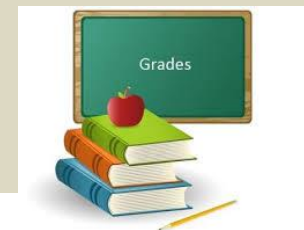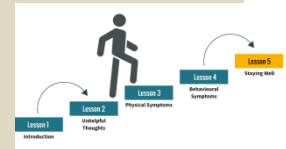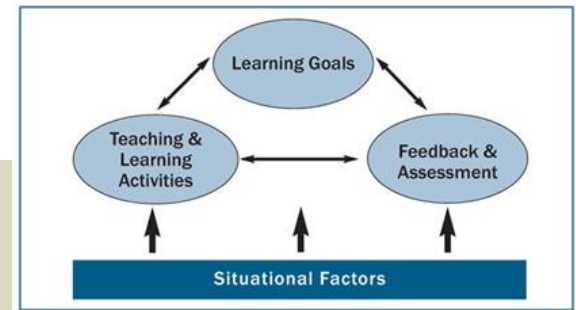
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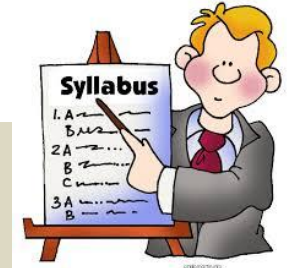
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Step 8. Let Students Know What You Are Planning

- [Syllabus](#)

- How do you want to communicate the syllabus to students — on paper, online?

  > In general, the syllabus serves a variety of functions, not the least of which is that it acts as a **"contract"** between the instructor and the student (Slattery and Carlson, 2005).

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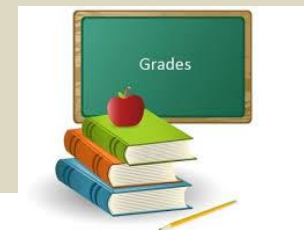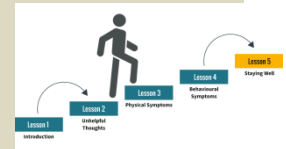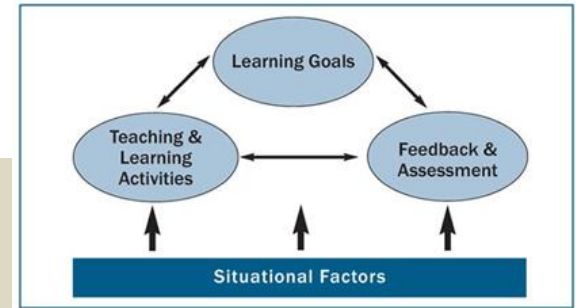
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Step 9. How Will You Know How The Course Is Going? How It Went?

- Plan an evaluation of the course itself and of your own teaching.

- To make the course better and to improve your own teaching over time.

- You can collect feedback throughout the semester as well as at the end.

What specific questions do you have about:

- The degree to which your goals for the course were achieved?

- The effectiveness of particular learning activities?

- Your ability to interact effectively with students?

You can use a variety of information sources:

- Video/audio tape of the class sessions

- Student ratings of instruction

- Student interviews and/or questionnaires

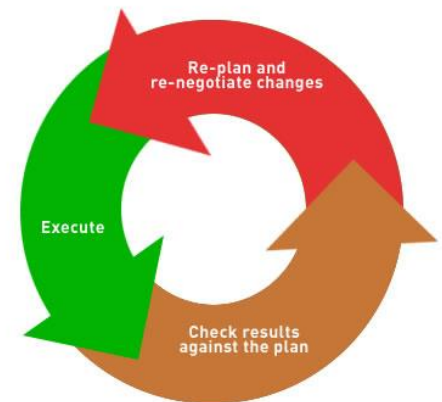- Outside observers (e.g., colleagues, instructional consultant)

- Test results

Course Report

Conclusions

- Stay Flexible

  It is only a plan

- Each time you teach, make an assessment of how well the design worked; then next time, make another, more ambitious set of changes.

Conclusions

An integrated course design requires a significant investment in time, energy, and thought. But has great potential for exerting a potent effect on student acquisition of "**significant**" **learning**.

"Most of us end up with no more than five or six people who remember us. Teachers have thousands of people who remember them for the rest of their lives."