

Grading and Course Design

UNIVERSAL DESIGN FOR LEARNING (UDL): PART 3

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Provide multiple means of **Engagement**



Affective Networks
The "WHY" of Learning

Provide multiple means of **Representation**



Recognition Networks
The "WHAT" of Learning

Provide multiple means of **Action & Expression**



Strategic Networks
The "HOW" of Learning

Access



Build



Internalize



Goal

Access	<p>Provide options for Recruiting Interest</p> <ul style="list-style-type: none"> Optimize individual choice and autonomy Optimize relevance, value, and authenticity Minimize threats and distractions 	<p>Provide options for Perception</p> <ul style="list-style-type: none"> Offer ways of customizing the display of information Offer alternatives for auditory information Offer alternatives for visual information 	<p>Provide options for Physical Action</p> <ul style="list-style-type: none"> Vary the methods for response and navigation Optimize access to tools and assistive technologies
Build	<p>Provide options for Sustaining Effort & Persistence</p> <ul style="list-style-type: none"> Heighten salience of goals and objectives Vary demands and resources to optimize challenge Foster collaboration and community Increase mastery-oriented feedback 	<p>Provide options for Language & Symbols</p> <ul style="list-style-type: none"> Clarify vocabulary and symbols Clarify syntax and structure Support decoding of text, mathematical notation, and symbols Promote understanding across languages Illustrate through multiple media 	<p>Provide options for Expression & Communication</p> <ul style="list-style-type: none"> Use multiple media for communication Use multiple tools for construction and composition Build fluencies with graduated levels of support for practice and performance *
Internalize	<p>Provide options for Self Regulation</p> <ul style="list-style-type: none"> Promote expectations and beliefs that optimize motivation Facilitate personal coping skills and strategies Develop self-assessment and reflection 	<p>Provide options for Comprehension</p> <ul style="list-style-type: none"> Activate or supply background knowledge Highlight patterns, critical features, big ideas, and relationships Guide information processing and visualization Maximize transfer and generalization 	<p>Provide options for Executive Functions</p> <ul style="list-style-type: none"> Guide appropriate goal-setting * Support planning and strategy development Facilitate managing information and resources Enhance capacity for monitoring progress
Goal	<p>Expert learners who are...</p> <div style="display: flex; justify-content: space-around;"> <div style="background-color: #008000; color: white; padding: 10px; border-radius: 5px;">Purposeful & Motivated</div> <div style="background-color: #4b0082; color: white; padding: 10px; border-radius: 5px;">Resourceful & Knowledgeable</div> <div style="background-color: #0070c0; color: white; padding: 10px; border-radius: 5px;">Strategic & Goal-Directed</div> </div>		

“Clearly communicated goals can support all three brain networks by helping students know **what they are supposed to do, how to do it** and **why it is important**. Students who understand the goals of their schoolwork are more likely to stay focused, monitor themselves successfully, and derive satisfaction from their progress.”

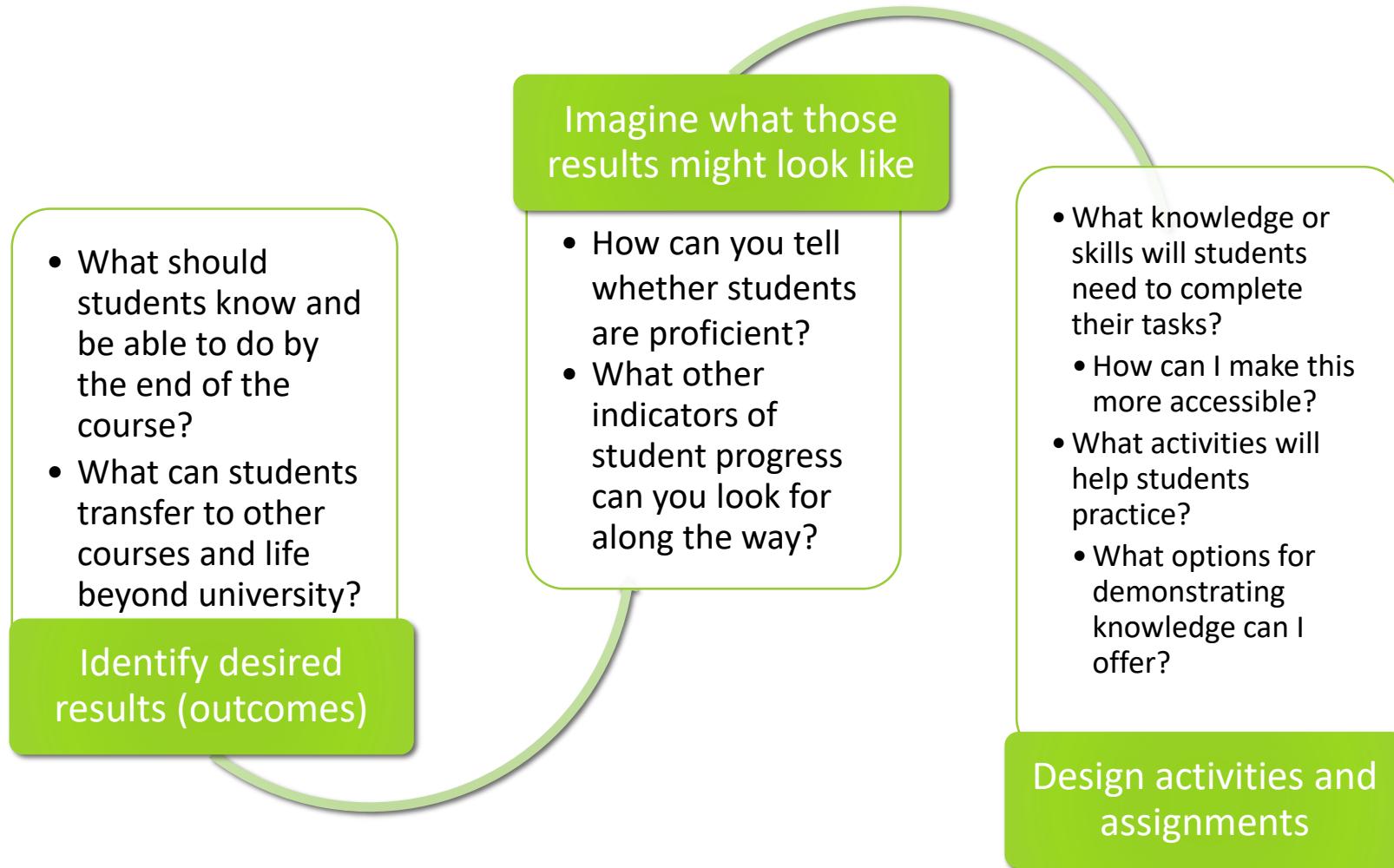
Rose, D. and Meyer, A. (2002) Teaching Every Student in the Digital Age: Universal Design for Learning (p.88)

UDL says:

- Design your course so that **students learn what you want them to learn**
- Design your course so that students **practice the skills** you want them to develop
- Design your assessments (assignments, exams) so that **student work tells you whether students have reached your goals**

How do you do this?

Design your course “backwards” from where you want students to finish the class, that is, from your course outcomes.



Writing Learning Outcomes

Learning Outcomes

Learning outcomes are specific and observable statements of what you expect students to have learned (to know or be able to do) at the end of a course

1. Specific and clear
2. Observable – students can demonstrate knowledge/skills
3. Most classes will have 3-5 major outcomes

Why have learning outcomes?

Engagement

- Clarify expectations for students, explain how those connect to course goals and larger goals
- Build and communicate sequenced activities and readings designed to promote achievement of outcomes – explain how a single assignment fits into the whole
- Helps offer feedback that is *formative* and promotes progress towards goals

Why have learning outcomes?

Representation

- Explicitly (e.g. visually or in assignment instructions) connect assessments (assignments, exams) to course outcomes
- Helps you give clear instructions that describe what an excellent assignment would look like
- A rubric that outlines the grading scheme and provides descriptions of what you are looking for can help link assignments to course goals

Why have learning outcomes?

Expression

- Provide loose means toward tight goals: choice of pathways for students to demonstrate that they have reached the outcomes
- Provide a deeper basis for goal-setting and self-assessment of progress towards key outcomes by clearly identifying how students can demonstrate their understanding

Goal-setting at different levels

For all levels:

- Establish clear goals and criteria for evaluation

Introductory level:

- Break assignments into steps with opportunities for feedback at each step

Intermediate level:

- Offer several check-in points that outline a structure for completing the assignment.
- Offer general feedback on areas of misunderstanding or review of important information/skills

Advanced level:

- Ask students to create a plan. Plans can be shared with fellow students or discussed individually
- Create one or two “check in points” where students can identify problems and strategize solutions using your feedback or peer feedback based on evaluation criteria

3 Steps:

1. Make a list of what you want students to **be able to do** and/or **demonstrate knowledge of** at the end of the course. Try to keep the items *specific and observable*.
2. Consider what **level of achievement** you expect for each item on the list (e.g. beginning; intermediate; proficient), and whether students will be expected to achieve it with or without aids (e.g. dictionary, reference guide, etc.)
3. For each item, **choose a verb** that describes the *observable* level of achievement you expect, for example “apply formulas,” “evaluate arguments” or “assess validity of experimental designs.”

Bloom's taxonomy

By understanding the level of cognition you are expecting, you can choose appropriate verbs to describe how students will **demonstrate** their knowledge

The VERB in learning outcome statements is connected to specific cognitive processes (Figure 3).

Levels of Cognitive Process	Action Verbs
<i>Remembering</i> Can the student recall or remember the information?	Define, duplicate, list, memorize, recall, repeat, reproduce, state
<i>Understanding</i> Can the student explain ideas or concepts?	Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase
<i>Applying</i> Can the student use the information in a new way?	Choose, dramatize, demonstrate, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write
<i>Analyzing</i> Can the student distinguish between the different parts?	Appraise, argue, compare, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test
<i>Evaluating</i> Can the student justify a position or decision?	Appraise, argue, judge, defend, select, support, value, evaluate
<i>Creating</i> Can the student create a new product or point of view?	Assemble, construct, create, design, develop, formulate, write

Figure 3. Action verbs associated with cognitive processes in Bloom's Revised Taxonomy. (Adapted from Anderson & Krathwohl, 2001, p. 31).

Draft an outcome! (In Ukrainian)

1. Choose one area of your course where you want students to **be able to do** and/or **demonstrate knowledge of** at the end of the course. Try to keep the items *specific and observable*.
2. Consider what **level of achievement** you expect for each item on the list (e.g. beginning; intermediate; proficient), and whether students will be expected to achieve it with or without aids (e.g. dictionary, reference guide, etc.)
3. **Choose a verb** that describes the *observable* level of achievement you expect, for example “apply formulas,” “evaluate arguments” or “assess validity of experimental designs.”
4. You have an outcome! Get feedback from someone near you.

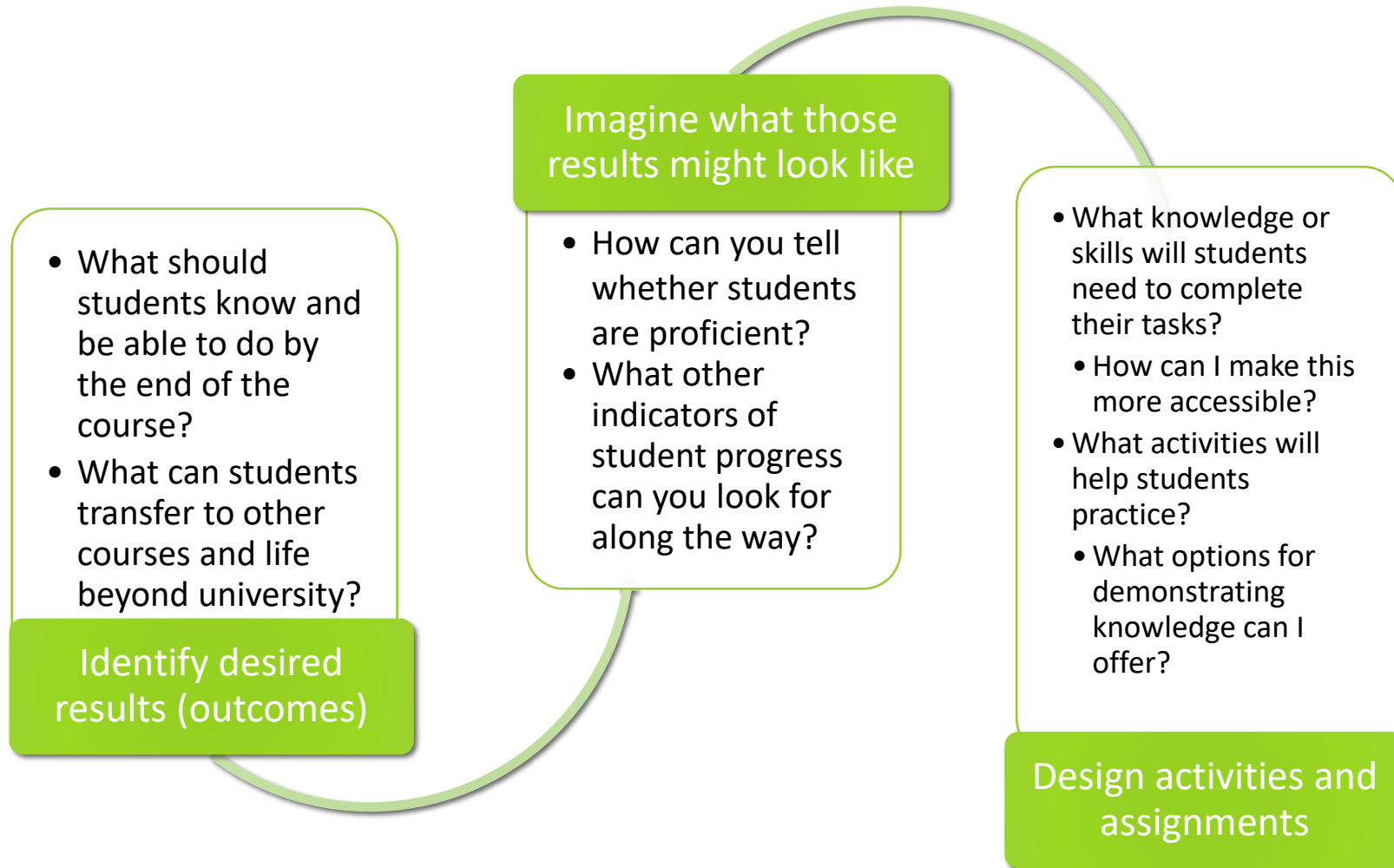
Backward Design

START FROM WHERE YOU WANT STUDENTS TO BE AT THE END OF YOUR COURSE

A solid green horizontal bar at the bottom of the slide.

Backward design in three steps:

1. Identify your learning outcomes for the course
2. Start with your learning outcomes and think about what students will need to learn and to do to reach them
3. Design your course and assessments/grading so that:
 - Course materials support achieving your outcomes
 - Assignments/exams allow students to demonstrate progress and get feedback on their progress towards your outcomes
 - Assignments/exams give YOU information on how well students are progressing towards your outcomes



Using Outcomes to Shape a Course

Keeping in mind the outcomes you have drafted,

- What content will help you address those outcomes?
- What does good student performance on those outcomes look like?
- What practice is necessary to promote proficiency?

Example:

Olena is teaching a class on government.

The textbook gives information on types of government organization and structures.

In her lectures, Olena gives examples of how these structures operate.

On the final exam, Olena is disappointed that students are not able to read a case study and propose a solution to a structural problem in government.

What can we tell Olena?

Answer:

We can tell Olena that her course materials are at the level of remembering and understanding, but she is asking students to apply and analyze without enough practice within the course.

Solutions?

Adjust the exam to that is corresponds to the course materials OR

Give in-class excercises or homeworks where students must apply terms and analyze case studies. Make sure students practice presenting their analysis of a case study as they would on an exam. Give feedback that helps them reach the level of analysis that she is expecting.

Example:

Taras is teaching an advanced American history class. Students *read and discuss* works by historians analyzing American involvement in international conflicts. In class, they read leading authors and *review theories* and *compare how the historians approach analyzing evidence*.

The only grade for the class is a *long research paper* due the last day of class, in which students must *find three authors* who analyze a conflict not covered in class and *argue* which author proposes the *best analysis*. Taras is disappointed with the students because their papers **do not choose leading authors in these areas, have poor writing organization and skills, and focus on the quality of the evidence presented, not on how the authors use theory and evidence to build an argument.**

What can we tell Taras?

Answer:

We can tell Taras that the course materials and activities led students to believe he was looking for a comparison of approaches to analyzing evidence and a discussion of theory among authors he chose. They may not have understood:

1. How to tell whether a study is the “top” study in a field, because students did not have to turn in a list of sources ahead of time, or discuss them with him or peers
2. What factors, besides quality of evidence, make an argument the ‘best,’ because he chose high quality examples but did not focus on why
3. His expectations for organization, argumentation and clarity of writing in their essays. They had no practice or feedback in this area in the course, and also did not analyze and critique author arguments in the class.

Planning chart

For the outcome you wrote before, fill out the boxes on the planning chart.

Outcome	How do students practice so they can achieve the outcome?	Where and how often is progress evaluated and how is feedback given?	How are students made aware of the relationship between coursework and their achievement of the outcome?	How is achievement of this outcome demonstrated and assessed?

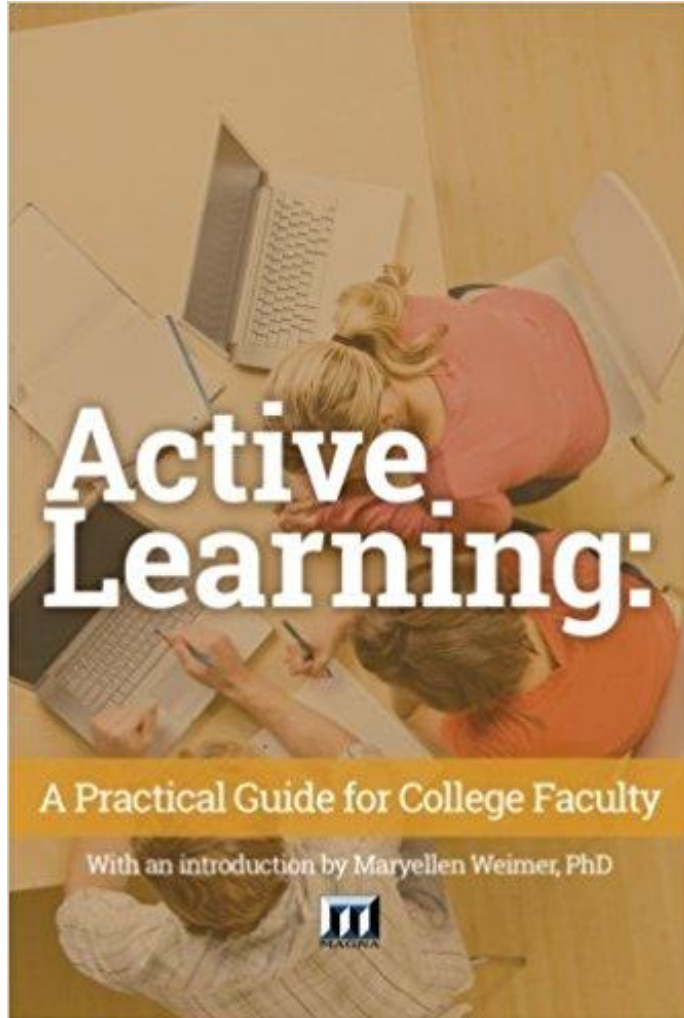
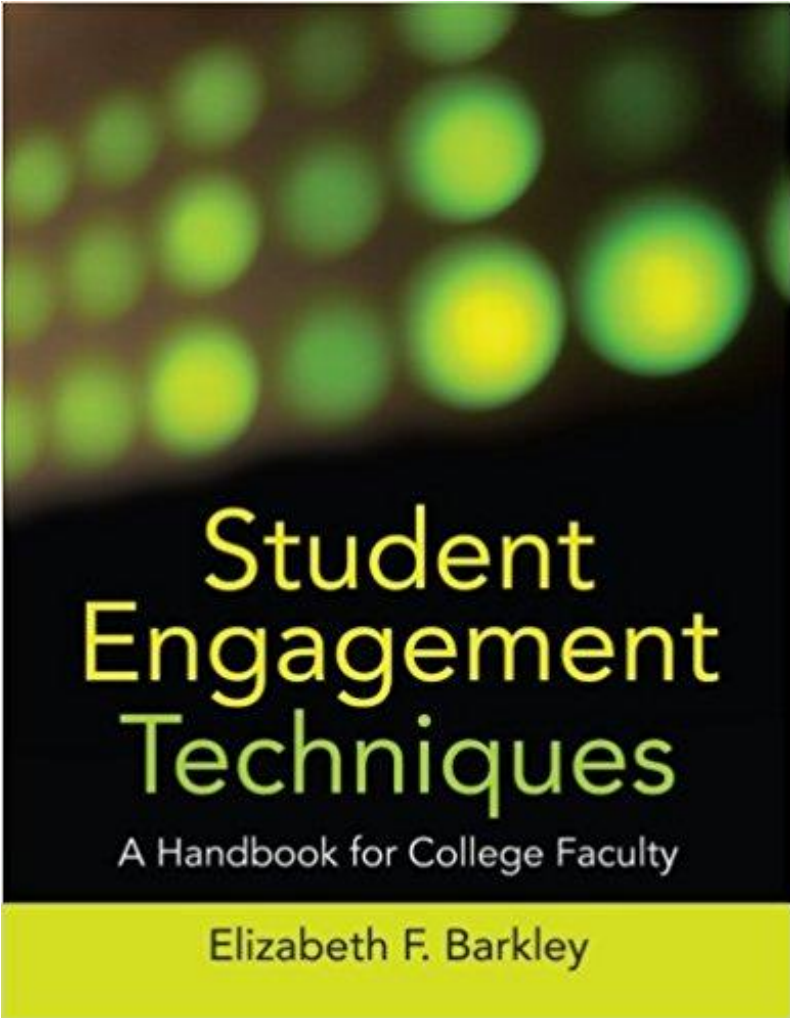
Questions about this process?

Outcome	How do students practice so they can achieve the outcome?	Where and how often is progress evaluated and how is feedback given?	How are students made aware of the relationship between coursework and their achievement of the outcome?	How is achievement of this outcome demonstrated and assessed?

Grading as part of course design

- Assignments should be opportunities for students to practice and/or demonstrate progress towards achieving course outcomes
- Check that your assignments “align” with course outcomes – do they give you (and students) information about progress towards course outcomes? Based on student assignments/exams, will you be able to say whether students have demonstrated the expected knowledge and skills?
- Grades should help students self-assess their progress towards course goals

Questions? Examples?



Upcoming short workshops

Each 1-hour workshop (17:00-18:00) will have practical advice/examples:

1. March 8 Promoting Learner Self-awareness
2. March 15 Helping Students Prepare for Class
3. March 21 Effective Class Discussion
4. March 26 Grading Schemes: Rubrics/specs grading/contract grading