Preparing Future-Ready Learners:

Online Course Design and Online Teaching Ideas Informed by Metacognition Research and the Growth Mindset Approach

Ye Liu, Lead Instructional Designer
Office of Distance Education
Metropolitan College
Boston University
Neuromyth or Not

- Brain development is complete by the time a person reaches secondary school.  
  ➢ Myth

- Intelligence is solely due to your genes.  
  ➢ Myth
Growth Mindset -- The Power of Yet

I can’t do this... yet.
This doesn’t work... yet.
I don’t know... yet.
It doesn’t make sense... yet.
I don’t get it... yet.
I’m not good at this... yet.
Metacognition

- Thinking of own thinking
- Awareness of own mental process
- Plan, monitor, analyze, and evaluate
- Need to be taught explicitly, even at the graduate level
At the end of the session, you will have opportunities to:

- Identify at least one course design or teaching strategy informed by metacognition research and the growth mindset approach.

- Identify one suggestion provided by session participants that you could implement to your own course design or teaching challenges.

- Share the ideas in your own institution.
Boston University Metropolitan College
Office of Distance Education

Challenges and Opportunities

- Academic rigor: designing challenging tasks and activities
- Filling students with a growth mindset and essential metacognitive skills to improve, not fear
- Caring of students’ learning = motivation
The class should be a learning community, where students support each other to increase everyone’s learning. You should not be competing with other students for grades.

Making mistakes and learning from them is expected and necessary. Feedback should help you improve your work.
Clearly communicate the reasons for what you plan to do in the course: reflective writing, interim-assessment, meta-assignment, etc.

**Interim Assessments**

These questions are typically part of your module’s assignment and are intended to help you with the associated subject matter. You may only submit your interim assessment once, so that you can get feedback before your assignment for that module is due. We encourage you to start the Interim Assessment early each module. You can leave the assessment open and work on it at any time prior to its deadline.
Course Design: Goal Setting

- Informal icebreaker: What are your goals in this course?
- Formal assignment: A paper titled “How I earned an A in this course”, dated the last day of the semester
- Informal discussion in live sessions: students in groups to brainstorm strategies for success in the course
Course Design: The Power of Teaching Bloom Taxonomy

Bloom’s Taxonomy Example Action Verbs for Each Dimension of Learning
from lower level to higher level

- **Remember**
  - Cite example of
  - Define
  - Duplicate
  - Identify
  - List
  - Label
  - Match
  - Name

- **Understand**
  - Calculate
  - Choose
  - Change
  - Determine
  - Differentiate
  - Discriminate
  - Discuss
  - Explain
  - Express

- **Apply**
  - Apply
  - Analyze
  - Choose
  - Compare

- **Analyze**
  - Appraise
  - Calculate
  - Categorize
  - Discriminate
  - Demonstrate
  - Discuss
  - Define
  - Duplicate
  - Identify
  - List
  - Label
  - Match
  - Name

- **Evaluate**
  - Arrive
  - Assemble
  - Appraise
  - Assess
  - Analyze
  - Choose
  - Compare

- **Create**
  - Arrange
  - Assemble
  - Collect
  - Compose
  - Construct
  - Create
  - Design
  - Develop
  - Manage
  - Modify
  - Organize
  - Plan
  - Prepare
  - Produce
Course Design: The Power of Teaching Bloom Taxonomy

1. Ask: What’s the difference between studying and learning?
2. Ask: Would you study harder to make an A on a test or teach the material to the class?
3. Present: Bloom’s Taxonomy
   Explain each level of the hierarchy and then apply Bloom’s to an example like Goldilocks and the Three Bears.

4. Ask: At what level of Bloom’s have you been operating? At what level do you need to be operating now?

Course Design: Opportunities to Practice

❑ **Test run**

This exercise is meant to give you an opportunity to practice public speaking skills. It will not be graded. If you do not get it right on the first try, do not give up; it means that you are in the process of learning.

❑ **Practice quiz**

❑ **Test yourself practices**
Review Question 2.4

**Question:** Identify stakeholders in a nonprofit’s case development cycle (Check all that are true.)

- [ ] Chief development officer
- [ ] Chief executive director
- [ ] Development committee
- [ ] The full board
- [ ] Donors

Show Hint

Review and relearn: **Demonstrate the Need for Funds.**
Course Design: Protection from Initial Failure

“Not yet... it’s okay” -- mistake tolerance

Why?
- One attempt only before due date
- One big term project at the end of semester

Why not?
- More attempts
- Breaking a high stake big task into phases
- Draft, feedback, and resubmission
Interim Assessments

These questions are typically part of your module’s assignment and are intended to help you with the associated subject matter. You may only submit your interim assessment once, so that you can get feedback before your assignment for that module is due. We encourage you to start the Interim Assessment early each module. You can leave the assessment open and work on it at any time prior to its deadline.
Module Reflection

1. Note something you learned this module that you did not know before.
2. Note an example you noticed of change over time.
3. Note something you are still curious about.
4. What learning strategies did you use during this module? What worked well and what didn't?
Course Design: Meta-Assignments (Paper of the Paper)

- Turn students’ errors into a learning opportunity

For the assignment, what were the steps you took to complete the assignment? What were the problems you encountered and how did you overcome these problems? What strategies worked well and didn’t?

What about your exam preparation worked well that you should remember to do next time?

What did not work so well that you should not do next time or that you should change?
# Course Design: Using Rubric for Self Assessment

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Unacceptable</th>
<th>Acceptable</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of the Case Resource File</td>
<td>Case Resource File elements are missing entirely. Without this information, it would be impossible to complete a competitive grant proposal.</td>
<td>The Case Resource File provides most of the necessary tools to write the narrative sections of your final grant proposal. Missing elements derive from the potential case for support.</td>
<td>The Case Resource File provides all the necessary tools to write the narrative sections of your final grant proposal including: mission, goals, objectives, programs, services, finances, governance, staffing, service delivery, planning, evaluation and history.</td>
<td>The Case Resource File provides all the necessary tools to write the narrative sections of your final grant proposal including: mission, goals, objectives, programs, services, finances, governance, staffing, service delivery, planning, evaluation and history.</td>
</tr>
</tbody>
</table>

**Weight:** 50%

| Organization of the Case File Materials | The Case Resource File has little to no organization; sections overlap, and it is very difficult to understand the organization based on how data is presented. | The Case Resource File is not organized well; with overlapping elements. To an outside reader, it is not clear where one section begins and one ends, creating a 'speedbump' when pulling data for the LOI and narrative. | The Case Resource File is adequately organized around main headings, providing a quick reference when completing the LOI and proposal. | The Case Resource File is well organized appropriately by organizational heading, creating a clean and clear blueprint for the LOI and proposal. |

**Weight:** 20%

| Writing Conventions and Design | The author fails to use the standard conventions and submits a Case Resource File that is poorly written from an editorial or grammatical perspective. These errors are so distracting that writing a LOI and narrative based on this File would be very difficult, if not impossible. | The author presents a Case Resource File with editorial and grammatical errors that distract the reader. Based on these errors, the File would be hard to use as a blueprint for the LOI and proposal. | The author presents a pristine Case Resource File with no grammar or spelling deficiencies. Information is concise and complete. | The author presents a pristine Case Resource File with no grammar or spelling deficiencies. Information is concise and complete. |

**Weight:** 20%
The module assignments in total are worth 60% of the course grade. The teaching team expects your understanding to improve throughout the course. Accordingly, the first sets of assignments weigh less than the rest, so that you have opportunities to catch up along the way. The weight of assignments ramps up as the following:

- Assignment 1: 7%
- Assignment 2: 9%
- Assignment 3: 10%
- Assignment 4: 11%
- Assignment 5: 11%
- Assignment 6: 12%
Assessments Design: Rethinking Grade Calculation

- The final exam will replace your lowest problem-set grade if doing so helps your final grade.

- The final exam will replace your lowest quiz grade if doing so helps your final grade.
Teaching: Rethinking of Feedback

- Timing of feedback: shorter feedback cycle

- What kind of feedback?
  - process
  - effort

Growth Mindset Feedback Tool from Mindset Works
Teaching: Rethinking of Feedback

You haven’t got it yet regarding X skill, but you will if you keep working and thinking about it. I have some suggestions for you. Please integrate my suggested revisions to your next version and submit again.
Mini Case Scenario for Discussion

Challenge: Sometimes students will not take our carefully drafted feedback seriously or pay little attention to it.

Discuss: What can we do to make sure students comprehend and integrate our feedback for the future?

Discuss in a breakout room for 3 minutes
Teaching: Rethinking of Feedback Follow Up

- Revise the work by incorporating feedback and resubmit.

- Please read my feedback carefully and write a paraphrase of as the way you understand it. Welcome to contact me to clarify if you don’t understand any part of my comments.

- Have one-on-one check ins to discuss the work.
What other strategies and practices have you tried?
Thank you! Questions?

Ye Liu
➢ Lead Instructional Designer
Office of Distance Education
Metropolitan College
Boston University
➢ liuye@bu.edu

Ideas and practices shared in the presentation are team efforts from Office of Distance Education, Boston University
Resources


- Mindset Works. [Growth Mindset Feedback Tool](#).