The New York Center for Teacher Development, Inc.

*In affiliation with the University of Massachusetts Global (Extended Education)*

# Course Syllabus

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| **Course:** | **EDZU 9989 - Beyond Engagement: Building Classrooms That Think** |
| **Credit Hours:** | 3.0 credits / 45 hours |
| **Instructor:** | **Dawn Nachtigall, PhD** |

## Course Description

This course is inspired by "Building Thinking Classrooms" by Peter Liljedahl and is designed to support K–12 educators in fostering deeper student thinking, engagement, and independence across subject areas. While rooted in mathematics research, the strategies in this course are adapted for use in any classroom setting, including ELA, science, social studies, and special areas.

Participants will examine core principles of thinking classrooms and learn how to shift from teacher-centered instruction to student-centered learning environments where students are actively engaged in meaningful thinking. The course will focus on practical, research-based strategies such as designing high-cognitive-demand tasks, promoting collaborative learning, using purposeful questioning, and creating classroom structures that support risk-taking and perseverance. Educators will reflect on their current practices and apply strategies to create equitable, engaging environments where students are empowered to think critically.

## Course Goals

**To Know…**

1. Key principles of thinking classrooms as outlined in *Building Thinking Classrooms*
2. What productive struggle is and the importance of that struggle when learning something new
3. Characteristics of high-cognitive-demand tasks and instructional strategies that promote student engagement
4. The role of the teacher in facilitating, rather than directing, student thinking

**To Understand…**

1. How classroom structures, questioning techniques, and task design influence student thinking and participation
2. The importance of productive struggle in developing deeper learning across content areas
3. That shifting to a thinking classroom requires intentional changes in both instruction and classroom culture

**and To Be Able To**

1. Design and adapt lessons that promote student thinking, collaboration, and engagement
2. Implement strategies such as purposeful questioning and task design to support deeper learning
3. Create classroom environments where students take ownership of their learning and demonstrate independent thinking

## Course Outline

I. Foundations of a Thinking Classroom
   a. What is a "thinking classroom"?
      i. Problems in traditional classrooms this concept seeks to address
      ii. Roles of students and teachers in a thinking classroom
      iii. Classroom practices and structures that support student thinking
         1. Thinking tasks
         2. Frequent Visible Random Groups
         3. Vertical Non-permanent Workspaces
      iv. Classroom practices that may unintentionally limit student thinking
      v. Indicators of student thinking vs. compliance (analyzing classroom scenarios and practices)
      vi. Considerations for supporting diverse learners (equity, access, and inclusion)
   b. Productive Struggle and Student Learning
      i. The neuroscience behind productive struggle and its impact on learning
      ii. The difference between productive struggle and frustration or confusion that does not support learning
      iii. The conditions or teacher practices that help ensure that student struggle remains productive rather than overwhelming
      iv. The role of the teacher during moments of struggle (when to intervene vs. step back)
      v. How productive struggle can look across content areas and grade levels
   c. Reflecting on Current Practice
      i. Identifying strengths in current instructional practices
      ii. Recognizing patterns that may limit student thinking
      iii. Using self-assessment to identify opportunities for instructional shifts
      iv. Considering access and entry points for all learners within thinking tasks

II. Thinking vs. Compliance
   a. Distinguishing Thinking from Procedural Completion
      i. Elements of lessons that promote student thinking
      ii. Elements that promote compliance or task completion without deep understanding
      iii. "Gray area" tasks that blend thinking and compliance
   b. Changes that shift lessons toward deeper thinking
      i. Instructional changes that increase cognitive demand
      ii. Revising tasks to promote reasoning, explanation, and multiple approaches

iii. Common misconceptions about student engagement and thinking

c. Analyzing Instruction Through a Thinking Lens
   i. Evaluating classroom scenarios and tasks for evidence of thinking
   ii. Identifying teacher moves that support or limit student thinking
   iii. Reflecting on how small shifts can significantly impact student engagement and independence

III. Designing for Thinking
   a. Classroom Practice: Defronting the classroom
      i. Designing a physical space that encourages collaboration
      ii. Supporting movement and interaction
      iii. Challenges and practical considerations when "defronting"
   b. Classroom Practice: Responding to Student Thinking
      i. Only answering "keep thinking" questions
      ii. Using purposeful questioning to promote thinking over compliance
      iii. Blending procedural completion with higher-order thinking
      iv. Shifting from answer-getting to thinking about thinking
      v. Teacher decision-making: when to prompt, probe, or step back
   c. Classroom Practice: Transforming How, When, and Where Tasks Are Given
      i. Structuring task delivery to promote immediate engagement
      ii. Standing and signaling active participation
      iii. Providing directions in stages to support entry into thinking
      iv. Encouraging independence and reducing reliance on the teacher
   d. Classroom Practice: Homework and Ongoing Assessment in a Thinking Classroom
      i. Limitations of traditional homework practices
      ii. Redefining homework as a tool for reflection and self-assessment
      iii. "Check-your-understanding" questions
      iv. Using student responses to inform instruction and support learning
      v. Addressing teacher concerns with shifting away from traditional homework

IV. Designing and Reflecting on a Thinking Classroom Lesson
   a. Lesson Design
      i. Designing lessons that incorporate key thinking classroom practices
      ii. Aligning task design, questioning, and classroom structures
      iii. Applying strategies across grade levels and content areas
   b. Anticipating Student Thinking
      i. Predicting likely student responses and approaches
      ii. Identifying possible misconceptions
      iii. Planning teacher moves that support thinking without taking over
   c. Pre-Implementation Reflection
      i. Identifying what excites and motivates instructional shifts
      ii. Anticipating challenges related to classroom management, pacing, and student response
      iii. Comparing thinking classroom approaches to current instructional practices

V. Graduate Extension Assignments

a. Reflective Analysis of Practice Paper
b. Instructional Artifact + Rationale
c. Classroom Inquiry / Action Reflection Study

## Methods of Instruction

Instruction will be delivered through a combination of readings, videos, podcasts, guided reflections, discussion forums, and application-based assignments. Participants will engage with research-based resources, including excerpts and related media from *Building Thinking Classrooms* by Peter Liljedahl, along with supporting articles and videos that extend key concepts. Participants will apply learning through structured reflection prompts, scenario analysis, task design activities, and lesson development.

*Students will connect with each other throughout the course within forums and various other types of online feedback options built into each class.*

## Methods of Assessment

There will be lengthy written assignments for students to complete individually. All assignments must be completed by all participants: inservice, CTLE, and graduate. Assignments should be completed in sequential order. In order to recreate the feel of discussions in a classroom, there will be forums posted for students to reply to. All participants must make at least one post to each forum. A few forums will require students to reply to at least one other participant's post. Graduate students will need to complete additional assignments to receive graduate credit. There are three choices for graduate assignments. Graduate students need to complete two of the assignments to receive an "A" for this course. They need to complete one of the assignments to receive a "B".

*Instructors are online each day of the course and correspond with students through the course itself, feedback on assignments, and e-mail.*

## Time Validation

Time estimates reflect participant engagement in reading, written reflection, peer interaction, lesson design, and synthesis of learning, with extended time allocated to higher-order tasks requiring analysis, application, and instructional planning.

| Assignment | Time (in hours) |
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| Forum Discussion: Introduction to course/ personal introduction. | 0.5 |
| Forum Discussion: Discuss currently used strategies to encourage student engagement- post, read and respond to other participants' comments. | 1.50 |

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| Introduction to Liljedahl's Building Thinking Classrooms: Watch videos and read articles summarizing principles of Liljedahl's book, answer questions. | 2.50 |
| Forum Discussion: Discuss how thinking classroom practices support diverse learners - post, read and respond to other participants' comments. | 1.50 |
| Productive Struggle: Read multiple articles on Productive Struggle and answer questions. | 2.50 |
| Classroom Snapshot Analysis: Analyze several case studies to determine elements that promote student thinking over compliance, consider how to deepen thinking, answer questions. | 2.50 |
| Personal Practice Audit: Answer several questions rating teachers' current practice when it comes to engagement, analyze and reflect on results. | 1.50 |
| Forum Discussion: Discuss challenges and barriers to building a thinking classroom- post, read and respond to other participants' comments. | 1.50 |
| Defronting the classroom: Watch a video about Liljedahl's notion of defronting the classroom, draw sketches of teachers' current and reimagined classrooms, answer reflection questions. | 2.50 |
| Forum Discussion: Discuss challenges to defronting the classroom- post, read and respond to other participants' comments. | 1.50 |
| How we answer questions in a thinking classroom: Watch a podcast on Liljedahl's practices from chapter 5, submit notes, answer reflection questions. | 1.50 |
| Tasks promoting thinking over compliance: Sort typical classroom tasks into those that support thinking or compliance, revise tasks to promote thinking, answer reflection questions. | 1.50 |
| Forum Discussion: Discuss “Gray area” tasks that blend thinking and compliance- post, read and respond to other participants' comments. | 1.50 |
| Promoting deeper thinking across content and grade levels: Identify the limitations in various types of questions used in the classroom, rewrite better promote deeper thinking, analyze how they are more effective in encouraging student thinking, answer reflection questions. | 1.50 |
| Setting up a thinking classroom: Watch multiple videos regarding setting up a student-centered classroom, answer questions. | 1.50 |
| Forum Discussion: Discuss the feasibility of Liljedahl's ideas on how to transform how, when, and where tasks are given - post, read and respond to other participants' comments. | 1.50 |
| Homework in a thinking classroom: Watch a video recapping Liljedahl’s concept about homework, consider several typical homework scenarios, and submit reflection questions. | 2.00 |
| Forum Discussion: Discuss anticipated challenges or concerns with shifting away from traditional homework - post, read and respond to other participants' comments. | 1.50 |
| Designing a thinking classroom lesson: Design and submit a lesson that includes at least three thinking classroom strategies learned in this course, identify the strategies, and describe how they support student thinking, engagement, or independence. | 4.00 |
| Anticipating challenges with the designed lesson: Answer several questions that promote reflection on the lesson that the teacher designed. | 1.50 |
| Summation Essay: Read articles summarizing additional classroom practices proposed by Liljedahl. Consider which practices discussed in the course and these articles are appropriate for the teacher's personal classroom setting and practice. Submit reflection. | 3.00 |

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| Final Forum Discussion: Discuss which thinking classroom practice teachers feel most ready to implement, and how they plan to use it in their classroom- post, read and respond to other participants' comments. | 1.00 |
| Final Course Assignment: Synthesize the material learned in this course by completing two of three activities:<br>- Participants will design and submit a complete instructional artifact that demonstrates application of thinking classroom principles, along with a written rationale explaining their design choices.<br>- Participants will conduct a small-scale classroom inquiry focused on implementing at least one thinking classroom strategy from the course.<br>- Participants will write a reflective analysis paper that synthesizes course learning and connects *Building Thinking Classrooms* by Peter Liljedahl to their own instructional practice. The paper should demonstrate thoughtful consideration of how thinking classroom strategies can be implemented, adapted, and sustained in the participant's specific teaching context. | 5.00 |
| **Total Time** | **45.00** |