Title of Course *(45 hours):* Cognition in the Classroom

Course Description:
This class explores the connection between critical thinking, reasoning, problem solving and academic success. Participants in this class will examine cognition and metacognition relative to the academic setting and how teachers may design or revise lessons and their strategies in order to promote higher levels of student cognition.

Overall Course Objective and Expectation(s) – SWBAT:

- Gain an understanding of various cognitive theorists
- Examine research grounded in the cognitive teaching and learning perspectives and synthesize findings
- Articulate a personal understanding of "Cognition in the Classroom"
- Explore how cognitive theory helps explain events such as why teachers' describing their thought processes as they demonstrate skills is effective, and why students who set goals, monitor progress toward the goals, and assess the results have higher student achievement
- Identify ways to incorporate critical thinking, reasoning and problem solving activities into daily lessons
- Apply design principles aligned with cognitive engagement in the analysis and design of planning, lessons, and assessments

Opportunities for Common Core Standards Alignment:
Course work will, when applicable, demonstrate the practice of common core standard shifts. This practice by instructors of LILIE courses may act as a model for implementation of learned information and skills into common core aligned classroom practice. Depending on the nature and thrust of the course objective, the course will make attempts to balance informational and literary texts, provide for deeper and more critical knowledge in the discipline(s), provide for a staircase of complexity, offer ways in which to demonstrate text-based answers, offer opportunities of writing from various sources applicable to course content and offer tiered academic vocabulary through resources, assignments and instructor-peer and peer-peer dialogue.

Course Instructional Materials:
All courses maintain a fully developed and dynamic webpage that houses all resources, reference material and various other required informational texts, videos and alike that is both active and relevant to course objectives and content. Course web pages are routinely updated to reflect most current research and available readings therefore instructional materials used to teach course objectives are subject to change.

Instructor Consultation and Interaction:
Real time consultation and instruction is provided through the LILIE, LLC discussion boards for each course/classroom on a daily basis.

Suggested Readings *(subject to change):*
- Why Don't Students Like School: A Cognitive Scientist Answers Questions About How the Mind Works and What It Means for the Classroom [Hardcover] *by Daniel T. Willingham*
- Research-Based Strategies to Ignite Student Learning: Insights from a Neurologist and Classroom Teacher [Unabridged] [Paperback] *by Judy Willis*
- Getting to "Got It!" *by Betty K. Garner*
- Critical Thinking and Formative Assessments *by Betsy Moore and Todd Stanley*

LILIE, LLC is committed to assuring that enrollees fully participate in and receive the educational benefits contemplated by the course. Enrollees must demonstrate participation by making detailed postings designed to foster dialogue among colleagues and instructors. These enrollee postings must be made four times each week in separate sessions. Enrollees will be required to submit a detailed log documenting at least 45 hours of course work, including discussion board posts, and will be required to apply information and strategies acquired from the course content to weekly classroom instruction. Attempts to falsify logs or discussion board entries will result in denial of credit and a report to the enrollee's employer.

Scope & Sequence/Weekly Topics and Objectives

Week I

Topic(s):
Introductions, Definitions, History, Theories

Objectives:
-Define a minimum of 3 professional goals and expectations for this course
-Define cognition and metacognition
-Research and summarize different cognitive learning theorists
-Analyze similarities and differences among the learning theories and how it impacts lesson planning
-Explain connection of critical thinking, reasoning and problem to cognitive engagement to student success

Impact on Classroom Instruction:
Participants will familiarize themselves with the history, theorists, similarities and differences behind cognitive teaching and learning and apply principles to the classroom. They will use the conversations and resources shared throughout the course to increase student engagement, student ownership of learning and student success.

Learner Outcomes:
Students will be able to:
- Summarize information from multiple resources regarding cognition and metacognition
- Identify informative, helpful resources to produce a cognitively engaged learning environment that includes multiple opportunities for critical thinking, reasoning and problem solving
- Respectfully engage in dialogue with others sharing pertinent information about weekly topics

Assessment of Understanding and Learning/ Weekly Assignments (including but not limited to posting requirements set forth by LILIE, LLC):
-Introduce self to classmates explaining position, experience and current teaching environment
-Summarize the background and history of cognitive teaching and learning and theorists
-Read resources and articles, reflect, reference and post about readings
-Check for understanding and clarify misconceptions via daily postings and discussions

Topic(s):
Engaging Classrooms

Objectives:
-Analyze the connection between cognition and brain based teaching (BBT)
-Explore and discuss the 3 skill areas Eric Jensen speaks about: attentional skills, memory skills, processing skills
-List suggestions and expand upon what an "engaging classroom" might look like
-Describe a minimum of 3 ways teachers can modify lesson activities to improve student achievement
-Create a lesson plan that promotes cognitive engagement

Impact on Classroom Instruction:
Participants will delve into the concept of brain based teaching. They will explore ways to incorporate and use various cognitive factors in the classroom to help children learn better while improving memory and processing skills resulting in higher student achievement. Students will learn to observe and imitate material, while also holding their attention and enforcing classroom expectations.

Learner Outcomes:
Students will be able to:
- Identify elements of effective cognitive lesson planning
- Demonstrate understanding of a classroom environment that incorporates cognitive factors
- Identify some cognitive skills learning skills that help the brain develop and process information
- Modify current practices to include more critical thinking, reasoning and problem solving activities
- Professionally respond to peer postings

Assessment of Understanding and Learning/ Weekly Assignments (including but not limited to posting requirements set forth by LILIE¸LLC):
-Share simple, easy-to-incorporate critical thinking, reasoning and problem solving lesson plan ideas
-Review in depth the elements of a classroom environment that incorporates cognitive factors
-Read and summarize multiple articles relating to memory and processing skills
-Explore online resources about brain based learning and write a brief synopsis of points that resonate
-Post follow up questions on forum to further professional sharing and learning
-Moderate professional conversations

Topic(s):
   Implementation, Applications, Strategies, Tools and Learning Styles

Objectives:
-Identify examples of social cognitive theory concepts, such as types of modeling and self-regulation in students learning
-Define and describe 5 active teaching strategies and learning activities
-Define and describe the 3 positive results of using active teaching strategies, learning activities and learning styles
-Choose 3-5 tools, educational games and strategies that can easily be incorporated into learning environment and will help to promote higher level thinking

Impact on Classroom Instruction:
Participants will identify active teaching strategies and learning activities. They will evaluate and critique different strategies that can lead to a successful learning experience for all students. They will plan to identify student learning styles to help understand how people perceive and process information in different ways.

Learner Outcomes:
Students will be able to:
- Assess and evaluate cognitive teaching strategies and formulate a way to adapt to current lesson planning
- Read, discuss and implement the importance of learning styles
- Explore ways to teach curriculum and improve student learning and thinking not just memorization skills
- Identify informative, helpful resources relating to cognitive classrooms, strategies, games and tools

Assessment of Understanding and Learning/ Weekly Assignments (including but not limited to posting requirements set forth by LILIE, LLC):
-Review a variety of cognitive teaching strategies and learning activities
-Constructively critique the cognitive engagement priority of the NYSUT rubric and current APPR process
-Examine unit lesson plans and incorporation of cognitive engagement elements
-Moderate conversations between participants and encourage dialogue

Week IV

Topic(s):
> Technology and Reflection

Objectives:
> -Compare and reflect on teaching practices before taking this course and after
> -Identify new instructional strategies, techniques and resources that relate to cognitive
> engagement and student success
> -Explore and identify new sources of information found using social media
> -Share cognitive based lessons (prepared earlier in course)
> -Analyze the learning experience in this course by reflecting on professional practices since the
> beginning of this course

Impact on Classroom Instruction:
Participants will apply new information gleaned throughout course to implement instructional strategies, ideas and concepts to help: create a learning environment that increases student engagement, improves students memory, improves students processing /thinking skills and attain a professional HIGHLY Effective rating.

Learner Outcomes:
Students will be able to:
- Design curricula and plan instruction based on knowledge of cognitive theories
- Explore the multitude of professional development organizations and resources available and the importance of constant reflection on professional practices
- Modify current lesson planning and teaching practices based on collegial discussions of cognitive engagement

Assessment of Understanding and Learning/ Weekly Assignments (including but not limited to posting requirements set forth by LILIE,LLC):
-Provide feedback and evaluation of implemented ideas via course postings
-Compare prior knowledge to acquired knowledge
-Share newly created cognitive engagement lessons and peer reflect
-Discuss proactive ways for teachers to continue to build upon course information, reflect on learning
 and improve instruction
-Post course reflection overview