**Coaching Content Enhancement Course (CEC) Design**

*A Two-part At-a-Glance Planning Guide for Instructional Design Principles*

Part 1: Overview of

*The SMARTER Instructional Cycle*

***The hardest and “toughest” thinking is done in the “S&M” steps.*** *It can leave our thinking black and blue as we struggle with the most critical parts of what we teach.*

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| ***S******Shape the critical questions.*** | Shape course, unit, and lesson questions that show how coherent learning leading to improved outcomes.  | *The questions require: (a) greater knowledge of the uses of language and mathematical competence across content domains, (b) instruction in increasingly complex higher-order thinking strategies in each discipline, and (c) evidence of an evolution in the use of collaborative co-constructed learning experiences.*  | How well do questions promote ongoing conversations that help students discuss and explore the “how” and “why” dimensions of critical content and relationships leading to observable and personal confidence in learning.  |
| ***M*** ***Map the critical content and relationships*** | Map the structure of the critical content in a way that shows relationships that are “sign posts” to signal or suggest the type thinking to establish a “playing field” for exploring probabilities.  | *Content maps graphically represent critical content and relationships that can be used by the teacher to guide and organize conversations with and between students to encourage collaborative co-constructed learning experiences. semantic prompts.*  | How is critical content and relationships in the content of the course/unit/lesson organized to allow understanding?How can the process of mapping the critical content with students be used to increase student engagement, collaboration, and higher-order thinking?How do visual depictions incorporate the use of connecting lines and symbols supported by steps, labels, connecting phrases, and semantic prompts. |

**The “ART” of teaching.**

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| ***A******Analyze how learning of critical might be difficult, made apparent, and measured.*** | Identify and plan to provide foundational background knowledge, skills, and strategies for learning.  | Tools, procedures, observations, and measures can be used generate data to confirm the readiness of students to learn and to determine at what point meaningful learning can be planned and implemented. To answer the critical questions. | What level of “readiness” is required to ensure adequate progress toward mastery?What types of formative and summative assessments will help determine readiness leading to instruction that learning aligns to standards. How will students participate in monitoring their learning progress towards mastery? |
| ***R*****Revisit learning outcomes and critical questions** | Critical content and the relationships within this content must be either retaught or the relevance of the original critical questions to the standards must be reconsidered if the outcomes are not aligned.   | Critical content and the relationships within this content must be either retaught or the relevance of the original critical questions to the standards must be reconsidered if the outcomes are not aligned. | Are my critical questions and content really critical?Have I sorted, taught, assessed, and graded content based on what all, most, and some students are expected to know and do?Do I need to re-teach or revise?How will I do this? |

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| ***T******Teach******Strategically*** | Teach students about the enhancements communication systems that must serve as the basis for an evolution in the design of practices leading to ongoing collaborative co-constructed learning experiences. | ***The Cue-D-Review process is the basis for a generative collaborative co-constructed pedagogy that should evolve beyond the use of enhancements to virtually all forms of instructional practices.*** ***Cue – Do- Review*** | The instructional sequence draws students’ attention to processes of learning and for checking for the effectiveness of those processes?Teaching is a partnership in learning with students, including co-construction, creating collaborative discourse, and participating in academic conversations?Opportunities to discuss and apply the processes of learning are discussed for use in this class, other classes, classes and in their lives.  |

**Going to the “ER” (emergency room).** Student learning may be in a criticalcondition.

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| ***E******Evaluate Learning*** | Evaluation is daily and occurs upon classroom entry, during class, and upon classroom exit. Course, unit, and lesson assignments should be viewed as formative assessments.  | *Skills and strategies are taught to ensure that evaluation tasks are reliable and valid and predictive of attainment of standards.* *Feedback is provided on the results of formative assessments to guide instructional decisions and greater progress toward success on summative assessments.* | How do formative assessments relate to the ability of students to answer course, unit, or lesson questions?How do I ensure that individual and collaborative assignments include appropriate assessments and feedback for content, higher-order thinking, collaboration, and emotional readiness to collaborate?  |
| ***R*****Revisit learning outcomes and critical questions** | Critical content and the relationships within this content must be either retaught or the relevance of the original critical questions to the standards must be reconsidered if the outcomes are not aligned.   | Critical content and the relationships within this content must be either retaught or the relevance of the original critical questions to the standards must be reconsidered if the outcomes are not aligned. | Are my critical questions and content really critical?Have I sorted, taught, assessed, and graded content based on what all, most, and some students are expected to know and do?Do I need to re-teach or revise?How will I do this? |

Part 2: An Elaborated Description of the

*The SMARTER Instructional Cycle*

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| ***S*** | ***Shape the critical questions.***The design of critical questions is a technique for personalizing the standards for classroom use for both the teacher and the student. They are crafted to align with new state standards that are often informed by the Common Core State Standards,the *Next Generation Science Standards*, and other discipline-specific standards)Course, unit, and lesson questions are shaped by design to show coherence between the standards, how the standards will be addressed in a course, where and how progress towards building fluency in knowledge and skills will be embedded in units, and how standards-informed instruction affects lessons.The presence of and attention to use of course, unit, and lesson questions should reflect manipulation of relationships that reflect conceptual rigor of the standards.Good scaffolding questions from lesson outcomes leading to unit outcomes should provide a road map for teacher to student, student to text, student-to -student, and student-to-social networking environments that promotes a more coherent mastery of critical content and relationships.A good sequence of questions ensures that the focus of student engagement hat is expected in academic conversations reflects student efforts to explore, understand, and demonstrate mastery of the critical concepts and represent the foundational learning *all* students should master. | *The critical questions are shaped by the standards in at least three important ways.**First, expectations for teachers to emphasize greater knowledge of the uses of language and mathematical competence to achieve a deeper ability to explore and think about critical content in ways that will lead to new understandings of our world and the problems we face.**Seconds, expectations for teachers to identify, teach, and ensure mastery of increasingly complex higher-order thinking strategies by repeatedly exposing, evaluating, and providing feedback to learners as part of the exploration of discipline specific critical content and relationships across and within grades and courses to achieve outcomes.**Third, Expectations for teachers to move away from only traditional teacher-centered practices to pedagogies that teach and require the skills and dispositions that create new continuums of collaborative co-constructed learning experiences resulting in confident and resilient and individual and collective learning that extends learning from the classroom to world social learning environments that build on a new world view and its emerging technologies.* | Do they serve as the basis for many conversations with students?Do they include expectations related to *how* to learn or demonstrate competence?Do they identify ways in which students should think about the information to be learned?Do they lead students to do well on outcome measures?Do they enable students to monitor progress in learning?Do they help students break down and identify the basic information supporting the critical concepts?Do they help students propose how the combination of critical concepts can support the realization of bigger or newer ideas?Do they help students understand the processes (skills) to be learned?Do they help students think about the content and how it fits into other contexts?Do they provide a framework for building assignments as well as formative and summative assessments? |
| ***M*** | ***Map the critical content and relationships***Mapping the structure of the critical content in a way that shows relationships and uses “sign posts” to signal or suggest the type of thinking, in terms of both breadth and depth, establishes a “playing field” for exploring possibilities and defines the “problem space” for learning. The map of critical content and relationships cues where students should seek the answers to the answers to critical course, unit, and lesson questions. Uniquely, the process of explicitly visually depicting the organization of the content and the specific relationships influences how well both teachers and students can learn to think about the information | *Content enhancement content maps graphically represent standards-informed critical content and relationships and are comprised of those visual elements that help the teacher and student organize collaborative co-constructed conversations. The conversations result in the creation of visual depictions of the shared understanding of the information and always incorporate the use of connecting lines, arrows, and symbols supported by steps, labels, connecting phrases, and semantic prompts that both cause and result in they type of thinking required by standards.**The* **omission** *of steps, labels, connecting phrases, and sematic prompts that signal the organization of critical content and relationships between and among content elements ignores the important role that language plays in promoting deeper understanding of knowledge.**Likewise, using only language to convey knowledge without the strategic use of visual cues and structures dismisses the important role that visuals can play in making learning explicit.* | How is the critical content and the relationships in the content of the course/unit/ lesson organized that allows then to develop a useful understanding that will lead to meeting standards?How will critical relationships be shown in the content map that cue the higher order thinking embedded in the content?How can you make the connections in the critical content of course/units/lesson explicit visually and verbally meaningful?How can the organization of the critical content be transformed into a map that can be constructed and used in collaborative co-construction as part of the students’ journey in exploring and learning the critical content? How do terms such as “ limiting, connected, linear, hierarchical, labeled, and simple” provide guidelines for creating a meaningful content map? Rather then a question, could these be guidelines for developing a map? The novice CE learner will be overwhelmed and not make sense of some critical questions, so they must rely on peers and the quality of semantic prompts and verbal sign posts to prompt their thinking. To help students, is the first page of the content map: \_\_\_limiting? \_\_\_\_Connected? \_\_\_Linear? \_\_\_Hierarchical? \_\_\_Labeled? \_\_\_Simple?How does the unit paraphrase guide the development of big ideas as the unit is launched, floated, and tied up? How do you avoid excessive language and rely on collaborative co-construction to allow the visual map or device to unfold? How is the structure used to visually depict the critical content and relationships linked to the critical questions, unit relationships, and unit schedule? How does the co-construction of an expanded unit map based on the initial construction of a basic unit map become an important ingredient in the learning processHow can the process of mapping the critical content with students be used to increase student engagement, collaboration, and the development of higher order thinking?*How*  |
| ***A*** | ***Analyze how learning of critical content and relationships might be difficult, made apparent, and measured.***The critical content critical content and the expressed relationships among and between the critical content can present significant difficulties in the ability of students who must master this content that present challenges because of the knowledge of students with sufficient knowledge and abilities as well as those with average, below average abilities, in addition to those with temporary or unique characteristics and circumstances of other students that must be addressed to make them ready to learn. Tools and measures are identified, developed, and implemented that can be used to teach and measure in a formative and summative manner the readiness of students to move forward in a continuous manner to master critical content and relationships.Students without the foundational background knowledge and skills to make them prepare them for higher-order learning are at a significant and permanent disadvantage to important master standards. | Tools, procedures, observations, and measures can be used generate data to confirm the readiness of students to learn and to determine at what point meaningful learning can be planned and implemented. To answer the critical questions. | What level of proficiency is required to demonstrate adequate progress toward mastery during the formative assessment process?Given the level of expectations established by new standards, what is the level of readiness of different students?What are the expected levels of: remembering?understanding for independent application?independence?progress from collaborative to independent work and fluency?basic skills? independent language and literacy fluency? fluent strategy integration and application ? vocabulary readiness and background knowledge? independent information analysis and application?navigating abstractness?identifying and using organization? perceiving and finding relevance? generating interest? navigating and handling unexpected complexity? developing ways to handle increasingly levels of quantity? exploring and conforming relationships? advocating for options for dealing with both expected and unexpected learning challenges?developing ways to handle personal levels of discomfort when learning?completing tasks that require resilience and perseverance in the face of failure?other?What types of summative assessments will be given to ensure that learning aligns with standards?How will formative assessments be used to pinpoint misunderstandings and guide revision of instruction?Have I developed an assessment for each type of skill, strategy or knowledge proficiency students must master?How will students participate in monitoring their learning progress towards mastery?How will I engage students in honest conversations about how to: (a) collect learning and improvement data, (b) identify what must be done to improve performance, (c) set goals for making reasonable progress, (d) identify ways o objectively measure progress, (e) design steps and plans to improve performance using identified measures,(f) identify ways to obtain helpful feedback from others when progress seems to become stagnant, (g) develop defensible and reliable ways to regularly collect and share data with others to prove progress?  |
| ***R*** | ***Reach instructional******Enhancement decisions***Instructional enhancement decisions are selected by teams of teachers and students and are based on the analysis and targeting of factors that might make learning difficult based on data that are collected.These instructional enhancement decisions are shared with the student as part of discussions and goal setting to address those factors that might make learning difficult.Using evidenced-based pedagogy and the colleagues of teachers, teams of teachers work together to plan *how* to move away from traditional less successful instructional practices and toward practices that enhance learning in ways that increase both what and how standards-informed critical content and relationships are learned and that targeted measurement strategies can be used to demonstrate that these enhancements have been effective. | ***Some Important Types of Evidenced Based Enhancement Decision Options******Teaching Routines***Course Level RoutinesUnit Level RoutinesLesson Level Routines***Learning Strategies***Course Level RoutinesUnit Level RoutinesLesson Level Routines***Social or Interaction Strategies***School Level SS or I StrategiesCourse Level SS or I StrategiesUnit Level SS or I StrategiesLesson Level SS or I Strategies***Individual and Group Accommodations***Course Level AccommodationsUnit Level AccommodationsLesson Level Accommodations***Communication Systems***Course Level Com SystemsUnit Level Com SystemsLesson Level Com Systems | Based on the characteristics of students when matched to the difficulty of the content, how will this content be enhanced for learning so that it is accessible to ALL students?­­­What teaching devices will I use to make content understandable and memorable?What teaching routines and related teaching devices will I need to introduce and maintain to make content understandable and memorable?What background knowledge and vocabulary development must become embedded in my the use of my teaching routinesWhat background knowledge and vocabulary development must become embedded in my strategy instruction?What literacy strategies, social skill, and interaction strategies will students need to know and use?What accommodations and options will be made for some or all students?What types of communication systems must be used as part of the instruction, assessment and feedback loop to implement a continuous cycle of learning?How can communication about status and progress in content learning, strategic performance, higher-order thinking, collaborative learning, personal advocacy, and other areas of learning be improved? |
| ***T*** | ***Teach******Strategically***Teach students about the enhancements (teaching routines, strategies, accommodations, and communication systems) that must serve as the basis for an evolution in the design of practices leading to ongoing collaborative co-constructed learning experiences. Strategic instruction must be centered around the use of informative, explicit, visible, semantically supported teaching that includes modeling, collaborative conversations among all classroom members, and purposefully practicing ways of goals, using assessments, feedback and enhancements in learning. ***The Cue-D-Review process is the basis for a generative collaborative co-constructed pedagogy that should evolve beyond the use of enhancements to virtually all forms of instructional practices.***  | ***Cue******Do******Review*** | Does my instructional sequence include drawing students’ attention to the use of a certain instructional processes, involving students’ in the process of checking for effectiveness of that process?Does the instructional sequence include organizers in advance, during and at the end of instructional segments so that students learn how to set expectations and are regularly given signals and cues related to how to think about and organize information?Does instruction include background knowledge and critical vocabulary about how o learn and use enhancements collaboratively and independently? Are multiple teachers and peers involved in helping all students learn how to learn and use enhancements? Teaching that can be characterized as a partnership in learning with students, including co-construction, creating collaborative discourse, and participating in academic conversations?Students are prompted to access information collaboratively and independently and proposed critical ideas and relationships that are discussed and collaboratively recorded based on a consensus of important outcomes informed by standards. As information is processed, thinking and organizational processes that are required to understand the critical content are identified, discussed, and noted for future use. Direct and explicit instruction and practice in the processes required for learning are provided both within and beyond the lesson. Opportunities to discuss and apply the processes of learning experienced in lessons during collaborative and independent learning tasks in this class are discussed for use in the classes and in their lives. to their lives?Direct instruction, modeling, and practice in how to the enhancements to prepare for assessments and promote further learning information and how to use them to study is provided. |
| ***E*** | ***Evaluate Learning***Evaluation of learningis accomplished through all the ways that both teachers and students collect data on the goals and enhancements established through the SMARTER planning process. Evaluation is daily and occurs upon classroom entry, during class, and upon classroom exit. Course, unit, and lesson assignments should be viewed as formative assessments leading to and supporting demonstration of content fluency on summative measures. The primary purpose is to determine whether the teacher has made accurate and sufficient enhancement decisions, whether those decisions have been implemented adequately, whether other teachers need to be enlisted for assistance, and whether learners have taken advantage and have been included as partners in the instructional process.  Evaluation consists of both formal and informal tools and procedures for monitoring progress, communicating progress and providing feedback to students and adapting the instructional process.  | *Skills and strategies must be taught to ensure that evaluation tasks are reliable and valid and predictive of attainment of standards.* *Instruction leads to student competence. Student competence is brought to collaborative work. Instruction in collaborative work around higher-0rder reasoning leads to collaborative competency in the completion of tasks.* *Collaborative competency Must be sufficiently practiced and supported for individuals to developed he independency skills required for independency higher-order reasoning.* *Collaborative fluency does not lead to individual fluency and likely needs the support of other teachers to ensure fluency for some students* | What formal and informal tools and procedures are needed to profile student learning. What daily formative measures are used to shape instruction?What assessment data should be used to alter how enhancements are implemented?What assessment data indicate that additional enhancements and teachers are needed?How do I know that the measures that I am using are reliable and valid? What additional instructional enhancements are needed? task?How do my formative and summative assessments relate to the ability of students to answer course, unit, or lesson questions?How do I ensue that individual assignments are formative or summative assessments?How do I ensure that collaborative assignments include appropriate assessments for content, higher-order thinking, collaboration, and emotional readiness to collaborate? How do I prof=vide feedback related to different measures of collaborative learning?How do I evaluate student readiness for independent mastery of standards informed outcomes? |
| ***R*** | **Revisit learning outcomes and critical questions**The evaluation of student learning and performance on summative assessments confirms that critical content and relationships required by standards has been achieved.If student learning and performance and learning of summative measures are not aligned with formative measures and the targeted critical questions, then teaching decisions and actions must be reevaluated.  | Critical content and the relationships within this content must be either retaught or the relevance of the original critical questions to the standards must be reconsidered if the outcomes are not aligned. | Are my critical questions and content really critical?Have I sorted, taught, assessed, and graded content based on what all, most, and some students are expected to know and do?Are my students able to explain, manipulate and apply the critical content?Am I assessing both the critical content and processes?Do I have data on the performance of all students? What does the data tell me?Do I need to re-teach or revise?How will I do this? |