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Increasing Engagement in the CTE Classroom

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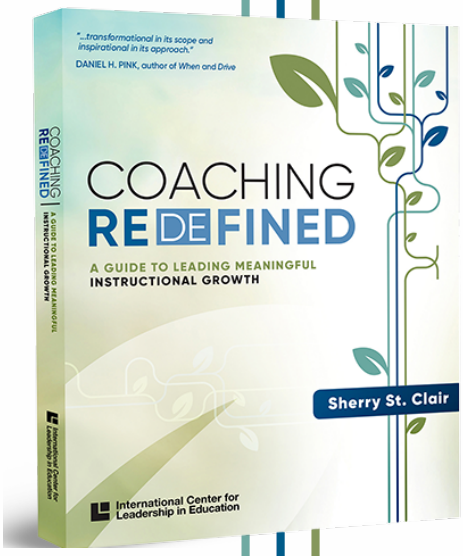
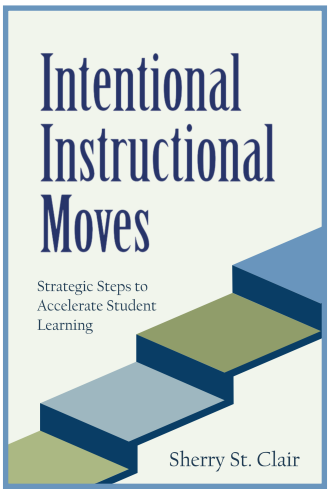
Sherry St. Clair is the visionary founder of Reflective Learning LLC, an esteemed educational consulting agency headquartered in Kentucky. Her organization partners with schools globally, delivering tailored training and coaching services designed specifically for school administrators, instructional coaches and educators. Sherry possesses a master's degree in Instructional Leadership and holds a Rank I certification in Instructional Supervision.

With a wealth of experience in public education, Sherry has excelled in various roles, including elementary school teacher, high school administrator overseeing 1,300 students, state consultant, and creator of virtual courses. As a Senior Consultant for the International Center for Leadership in Education and Houghton Mifflin Harcourt, she has earned recognition as a sought-after international speaker and consultant. Sherry specializes in instructional leadership, effective classroom practices, classroom walkthroughs, data utilization, and establishing frameworks for successful classroom coaching, all driven by her passion for coaching schools to meet the diverse needs of every student.

In her commitment to advancing education, Sherry developed virtual instructional workshops for the CTE Technical Assistance Center of New York. Collaborating with the Successful Practices Network, Houghton Mifflin Harcourt, and The School Superintendent Association (AASA), she has worked to scale innovative practices across educational settings. Additionally, through the Georgia Association of Educational Leaders, she has facilitated Literacy Leadership Institutes for the past five years, empowering district leaders, school administrators, and instructional coaches to focus on leading research-based literacy improvements within their schools and communities.

Sherry is also a contributing author to notable works such as Effective Instructional Strategies Volume 2, published by the International Center for Leadership in Education, and 100 No-Nonsense Things That All Teachers Should Stop Doing. She has authored numerous professional learning activity guides and led webinar series centered on leadership and effective instructional practices. Her influential publication, Coaching Redefined: A Guide to Leading Meaningful Instructional Growth, released in June 2019, has been embraced by instructional leaders worldwide. Her latest book, Intentional Instructional Moves, launched in October 2024, continues to extend her impact in the field.





Most Valuable Career Skills by 2025

Per the annual World Economic Forum report, the most valuable career skills by 2025 will be the following 10 skills:

1. **Analytical thinking and innovation:** In order to find creative solutions, you review new and possibly complicated information, examine that information to ensure it's factual, use reasoning skills to determine if the information follows a logical pattern and determine causes and effects.

2. **Active learning and learning strategies:** Utilizing strategies that work best for you, active learning requires you to evaluate what you know, understand what you need to know and have the initiative to learn that information through various means.

3. **Complex problem solving:** To solve complex problems requires being able to identify the problem, evaluate all pertinent information and factors, consider a range of possible solutions, think critically through different solution options and their potential outcomes, and then make a judgment as to which solution to select. A series of skills go into complex problem solving, including observation skills, analysis, creativity, innovative thinking, evaluation, perseverance, and resilience, to name some.

4. **Critical thinking and analysis:** To think critically is to think deeply. Critical thinking requires that you first suspend judgment to evaluate all related factors and perspectives as objectively as possible. It entails taking time to think through what you might not be considering or yet seeing. Reason, logic, and judgment are all used to analyze and evaluate information to, ultimately, probe far beyond the surface of the matter at hand.

5. **Resilience, stress tolerance and flexibility:** Through self-management, you are able to develop coping mechanisms to overcome and adapt to challenges in a healthy manner. By strengthening the five pillars of resistance- self-awareness, mindfulness, self-care, positive relationship and purpose -you can be more emotionally, mentally and behaviorally flexible and adjust to both the internal and external demands.

6. **Creativity, originality and initiative:** To be creative is to imagine something new from the information and data available. Creativity emerges from a capacity to view the world differently, connect seemingly disconnected dots, and unearth unseen patterns to conceive something new. To be creative is to apply critical thinking and empathy to imagine experiences, ideas, and things from other perspectives. With your creative skills, you take the initiative to make something original.

7. **Leadership and social influence:** Through the use of leadership skills-trustworthiness, reliability, organization skills, interpersonal and social skills- you are able to maximize the efforts of those around you towards the accomplishment of a common goal.

8. **Reasoning, problem-solving and ideation:** In a logical way, you are able to understand the problem and move from a hypothesis to a conclusion. You use information to solve complex problems and generate logical and potential solutions.

9. **Technology, design and programming:** Utilizing a combination of text, graphics and style elements, you are able to logically and purposefully create new technologies.

10. **Technology use, monitoring, and control:** technologies Remotely, you are able to monitor and manage technology to ensure it is working properly at all times. If it is not working properly, you are able to utilize problem-solving skills in order to fix it.

Visible Learning^{plus} 250+ Influences on Student Achievement

STUDENT		ES
Prior knowledge and background		
Field independence		0.68
Non-standard dialect use		-0.29
Piagetian programs		1.28
Prior ability		0.94
Prior achievement		0.55
Relating creativity to achievement		0.40
Relations of high school to university achievement		0.60
Relations of high school achievement to career performance		0.38
Self-reported grades		1.33
Working memory strength		0.57
Beliefs, attitudes and dispositions		
Attitude to content domains		0.35
Concentration/persistence/ engagement		0.56
Grit/incremental vs. entity thinking		0.25
Mindfulness		0.29
Morning vs. evening		0.12
Perceived task value		0.46
Positive ethnic self-identity		0.12
Positive self-concept		0.41
Self-efficacy		0.92
Stereotype threat		0.33
Student personality attributes		0.26
Motivational approach, orientation		
Achieving motivation and approach		0.44
Boredom		-0.49
Deep motivation and approach		0.69
Depression		-0.36
Lack of stress		0.17
Mastery goals		0.06
Motivation		0.42
Performance goals		-0.01
Reducing anxiety		0.42
Surface motivation and approach		-0.11
Physical influences		
ADHD		-0.90
ADHD – treatment with drugs		0.32
Breastfeeding		0.04
Deafness		-0.61
Exercise/relaxation		0.26
Gender on achievement		0.08
Lack of illness		0.26
Lack of sleep		-0.05
Full compared to pre-term/low birth weight		0.57
Relative age within a class		0.45

CURRICULA		ES
Reading, writing and the arts		
Comprehensive instructional programs for teachers		0.72
Comprehension programs		0.47
Drama/arts programs		0.38
Exposure to reading		0.43
Music programs		0.37
Phonics instruction		0.70
Repeated reading programs		0.75
Second/third chance programs		0.53
Sentence combining programs		0.15
Spelling programs		0.58
Visual-perception programs		0.55
Vocabulary programs		0.62
Whole language approach		0.06
Writing programs		0.45
Math and sciences		
Manipulative materials on math		0.30
Mathematics programs		0.59
Science programs		0.48
Use of calculators		0.27
Other curricula programs		
Bilingual programs		0.36
Career interventions		0.38
Chess instruction		0.34
Conceptual change programs		0.99
Creativity programs		0.62
Diversity courses		0.09
Extra-curricula programs		0.20
Integrated curricula programs		0.47
Juvenile delinquent programs		0.12
Motivation/character programs		0.34
Outdoor/adventure programs		0.43
Perceptual-motor programs		0.08
Play programs		0.50
Social skills programs		0.39
Tactile stimulation programs		0.58

HOME		ES
Family structure		
Adopted vs non-adopted care		0.25
Engaged vs disengaged fathers		0.20
Intact (two-parent) families		0.23
Other family structure		0.16
Home environment		
Corporal punishment in the home		-0.33
Early years' interventions		0.44
Home visiting		0.29
Moving between schools		-0.34
Parental autonomy support		0.15
Parental involvement		0.50
Parental military deployment		-0.16
Positive family/home dynamics		0.52
Television		-0.18
Family resources		
Family on welfare/state aid		-0.12
Non-immigrant background		0.01
Parental employment		0.03
Socio-economic status		0.52

SCHOOL		ES
Leadership		
Collective teacher efficacy		1.57
Principals/school leaders		0.32
School climate		0.32
School resourcing		
External accountability systems		0.31
Finances		0.21
Types of school		
Charter schools		0.09
Religious schools		0.24
Single-sex schools		0.08
Summer school		0.23
Summer vacation effect		-0.02
School compositional effects		
College halls of residence		0.05
Desegregation		0.28
Diverse student body		0.10
Middle schools' interventions		0.08
Out-of-school curricula experiences		0.26
School choice programs		0.12
School size (600-900 students at secondary)		0.43
Other school factors		
Counseling effects		0.35
Generalized school effects		0.48
Modifying school calendars/ timetables		0.09
Pre-school programs		0.28
Suspension/expelling students		-0.20

The Visible Learning research synthesises findings from **1,400** meta-analyses of **80,000** studies involving **300** million students, into what works best in education.

Key for rating

- Potential to considerably accelerate student achievement
- Potential to accelerate student achievement
- Likely to have positive impact on student achievement
- Likely to have small positive impact on student achievement
- Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*

visible learning^{plus} ™

Visible Learning^{plus} 250+ Influences on Student Achievement

CLASSROOM	ES
Classroom composition effects	
Detracking	0.09
Mainstreaming/inclusion	0.27
Multi-grade/age classes	0.04
Open vs. traditional classrooms	0.01
Reducing class size	0.21
Retention (holding students back)	-0.32
Small group learning	0.47
Tracking/streaming	0.12
Within class grouping	0.18
School curricula for gifted students	
Ability grouping for gifted students	0.30
Acceleration programs	0.68
Enrichment programs	0.53
Classroom influences	
Background music	0.10
Behavioral intervention programs	0.62
Classroom management	0.35
Cognitive behavioral programs	0.29
Decreasing disruptive behavior	0.34
Mentoring	0.12
Positive peer influences	0.53
Strong classroom cohesion	0.44
Students feeling disliked	-0.19

TEACHER	ES
Teacher attributes	
Average teacher effects	0.32
Teacher clarity	0.75
Teacher credibility	0.90
Teacher estimates of achievement	1.29
Teacher expectations	0.43
Teacher personality attributes	0.23
Teacher performance pay	0.05
Teacher verbal ability	0.22
Teacher-student interactions	
Student rating of quality of teaching	0.50
Teachers not labeling students	0.61
Teacher-student relationships	0.52
Teacher education	
Initial teacher training programs	0.12
Micro-teaching/video review of lessons	0.88
Professional development programs	0.41
Teacher subject matter knowledge	0.11

TEACHING: Focus on student learning strategies	ES
Strategies emphasizing student meta-cognitive/ self-regulated learning	
Elaboration and organization	0.75
Elaborative interrogation	0.42
Evaluation and reflection	0.75
Meta-cognitive strategies	0.60
Help seeking	0.72
Self-regulation strategies	0.52
Self-verbalization and self-questioning	0.55
Strategy monitoring	0.58
Transfer strategies	0.86
Student-focused interventions	
Aptitude/treatment interactions	0.19
Individualized instruction	0.23
Matching style of learning	0.31
Student-centered teaching	0.36
Student control over learning	0.02
Strategies emphasizing student perspectives in learning	
Peer tutoring	0.53
Volunteer tutors	0.26
Learning strategies	
Deliberate practice	0.79
Effort	0.77
Imagery	0.45
Interleaved practice	0.21
Mnemonics	0.76
Note taking	0.50
Outlining and transforming	0.66
Practice testing	0.54
Record keeping	0.52
Rehearsal and memorization	0.73
Spaced vs. mass practice	0.60
Strategy to integrate with prior knowledge	0.93
Study skills	0.46
Summarization	0.79
Teaching test taking and coaching	0.30
Time on task	0.49
Underlining and highlighting	0.50

TEACHING: Focus on teaching/instructional strategies	ES
Strategies emphasizing learning intentions	
Appropriately challenging goals	0.59
Behavioral organizers	0.42
Clear goal intentions	0.48
Cognitive task analysis	1.29
Concept mapping	0.64
Goal commitment	0.40
Learning goals vs. no goals	0.68
Learning hierarchies-based approach	0.19
Planning and prediction	0.76
Setting standards for self-judgement	0.62
Strategies emphasizing success criteria	
Mastery learning	0.57
Worked examples	0.37
Strategies emphasizing feedback	
Classroom discussion	0.82
Different types of testing	0.12
Feedback	0.70
Providing formative evaluation	0.48
Questioning	0.48
Response to intervention	1.29
Teaching/instructional strategies	
Adjunct aids	0.32
Collaborative learning	0.34
Competitive vs. individualistic learning	0.24
Cooperative learning	0.40
Cooperative vs. competitive learning	0.53
Cooperative vs. individualistic learning	0.55
Direct instruction	0.60
Discovery-based teaching	0.21
Explicit teaching strategies	0.57
Humor	0.04
Inductive teaching	0.44
Inquiry-based teaching	0.40
Jigsaw method	1.20
Philosophy in schools	0.43
Problem-based learning	0.26
Problem-solving teaching	0.68
Reciprocal teaching	0.74
Scaffolding	0.82
Teaching communication skills and strategies	0.43

TEACHING: Focus on implementation method	ES
Implementations using technologies	
Clickers	0.22
Gaming/simulations	0.35
Information communications technology (ICT)	0.47
Intelligent tutoring systems	0.48
Interactive video methods	0.54
Mobile phones	0.37
One-on-one laptops	0.16
Online and digital tools	0.29
Programmed instruction	0.23
Technology in distance education	0.01
Technology in mathematics	0.33
Technology in other subjects	0.55
Technology in reading/literacy	0.29
Technology in science	0.23
Technology in small groups	0.21
Technology in writing	0.42
Technology with college students	0.42
Technology with elementary students	0.44
Technology with high school students	0.30
Technology with learning needs students	0.57
Use of PowerPoint	0.26
Visual/audio-visual methods	0.22
Web-based learning	0.18
Implementations using out-of-school learning	
After-school programs	0.40
Distance education	0.13
Home-school programs	0.16
Homework	0.29
Service learning	0.58
Implementations that emphasize school-wide teaching strategies	
Co- or team teaching	0.19
Interventions for students with learning needs	0.77
Student support programs – college	0.21
Teaching creative thinking	0.34
Whole-school improvement programs	0.28

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Student Conversation Starters

Disagree	Summarize	
• I disagree with _____ because _____. • Respectfully, I disagree because _____. • I see it differently because _____. • Looking at it a different way, I think _____. • I see what you're saying, but I think _____.	• Overall, I think _____. • My whole point is that _____. • It all boils down to _____. • To summarize, I think _____. • To summarize, I learned that _____.	
Agree	**Clarify**	**Paraphrase**
• I agree with _____ because _____. • The evidence _____ shared is critical because _____. • I believe the same thing as _____ because _____. • As _____ pointed out, _____. • Like _____, I believe _____ because _____.	• Can you help me understand what you mean by _____? • Can you explain what you mean by _____? • I think I hear you saying _____. • Could you say that another way? • I'm confused about _____. Can you please explain it to me a different way?	• I believe that you are saying _____. • Is it fair to say you believe _____? • It sounds like you think _____. • I'm hearing that _____. • In other words, _____. • Let me see if I understand you correctly. I think you're saying _____.

Trade A Thought

Name: _____ Date: _____

My thought:

_____

_____

Classmate's thought:

_____

_____

Classmate's thought:

_____

_____

My Learning Log

Resource:	
Date:	
Thoughts	Questions

Resource:	
Date:	
Thoughts	Questions

Resource:	
Date:	
Thoughts	Questions