



Research and Proven Practices of Dr. John Hattie

MISSOURI'S EDUCATOR EVALUATION SYSTEM

Introduction to the research of John Hattie

John Hattie is a Professor of Education and Director of the Visible Learning Labs, University of Auckland, New Zealand. He has piloted more than 30 million dollars in research grants, has published over 350 articles, 300 conference papers, twelve books and supervised close to 200 thesis students. As creator of asTTle (Assessment Tools for Teaching and Learning) and Director of the Visible Learning Laboratories, Dr. Hattie is recognized and highly regarded worldwide for his research in education, including the field of assessment and evaluation. His book, *Visible Learning: A Synthesis of Over 800 Meta-Analyses on Achievement* has attracted considerable attention across the professional educator world.

Visible Learning is the result of 15 years of research into the influences on achievement in school-aged students. Dr. Hattie's meta-analysis of more than 800 meta-analyses has been recognized as a singular landmark in educational research and the single largest assembly of research in the world, which lead to the development of the Visible Learning concept. Dr. Hattie's study aggregated, correlated and ranked those factors that most improved learning outcomes. Meta-analysis showed that feedback, followed by a student's prior cognitive ability and the trust built by teachers with their students, as the most important factors in effective learning.

A crosswalk is provided here linking Missouri's Teacher Standards and Quality Indicators to the influences articulated in the research of John Hattie. In addition, a quick reference document is provided which articulates rankings of aligned quality indicators. This might provide suggestion as to which of Missouri's Quality Indicators for the teacher could potentially provide greater impact on student achievement.

Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York: Routledge.

Hattie: Visible Learning		MO Standards/Indicators																																				
Rank/Effect Size	Impact	ST 1					ST 2						ST 3			ST 4			ST 5			ST 6				ST 7						ST 8			ST 9			
		1	2	3	4	5	1	2	3	4	5	6	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6	1	2	3	1	2	3	
# which rank 1 – 5	d = 0.88 – 1.44	Excellent	1	1		1		3	4	2	1	4		1	2	2	1			1	1		1		2		2	4	4	2	2	2	3	1		1		
# which rank 6 - 10	d = 0.73 – 0.80		4	2	1	3	1		1	4		3		2	1	3			1	1	2		1		1	1	2		1	1	1							
# which rank 11 - 14	d = 0.67 – 0.72			2				1	1	2	2	2	2		1	1			1	1	1	2		1														2
# which rank 15 - 25	d = 0.60 – 0.66			3		1		1	1	2		2													1	1		1	1	1								
		14/32 44%					34/61 56%						13/15 87%			3/9 33%			9/13 69%			9/19 47%				24/35 69%						4/6 67%			3/5 60%			
# which rank 26 - 33	d = 0.57 – 0.59	Above Average	1					1	1	1		2		1				1													1							
# which rank 34 - 45	d = 0.51 – 0.56			1		1					1	2	5			1	1		3	1		4		3	1				2			1	1	1		1	2	
# which rank 46 - 56	d = 0.44 – 0.50			1		1		1	1	1		2							1					1			1	1	1	1								
# which rank 57 - 61	d = 0.41 – 0.43			1		1										1								1														
		7/32 22%					18/61 30%						2/15 13%			6/9 67%			6/13 46%			6/19 32%				8/35 23%						2/6 33%			3/5 60%			
# which rank 62 - 88	d = 0.20 – 0.40	Average	1	3	1		1	2	1	4		1	1		1			3			3		1	1	1	3	1	1		1								
		6/32 19%					9/61 15%						1/15 7%			3/9 23%			3/13 23%			6/19 32%				3/35 9%						0/6 0%			0/5 0%			
Total Hattie Influences per Indicator		7	14	2	8	2	9	10	16	4	18	8	4	5	7	3	3	6	5	7	6	4	6	6	4	4	7	7	9	6	3	3	4	2	0	2	0	4
Total Hattie Influences per Standard/%		27/201 13%					61/201 30%						16/201 8%			12/201 4%			18/201 6%			21/201 10%				35/201 17%						6/201 3%			6/201 3%			

Title	Description	ST 1					ST 2						ST 3			ST 4			ST 5			ST 6				ST 7						ST 8			ST 9		
		1	2	3	4	5	1	2	3	4	5	6	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6	1	2	3	1	2	3
Direct Instruction (d=0.82)	Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice	x	x		x				x		x				x				x	x						x											
Comprehensive Interventions for LDS (d=0.77)	Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition	x	x	x	x	x		x	x		x		x		x																						
Teacher Clarity (d=0.75)	Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions	x							x		x		x									x				x				x							
Reciprocal Teaching (d=0.74)	Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.	x			x													x						x	x				x								
Acceleration (d=0.72)	Very bright students (gifted) being accelerated through curricula																																				

Title	Description	ST 1					ST 2						ST 3			ST 4			ST 5			ST 6				ST 7						ST 8			ST 9			
		1	2	3	4	5	1	2	3	4	5	6	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6	1	2	3	1	2	3	
Mastery Learning (d=0.50)	Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes		x		x				x		x																x											
Student disposition to learn (d=0.48)	Student motivation; students feeling in control of their learning experience; removing de-motivators						x	x			x								x									x	x									
Questioning (d=0.41)	Most effective questions are high order “why, how and which is best” questions that cause students to really think; they need to be given time and do better in pairs than alone; important to analyze the questions students ask, too		x		x											x									x													
Advance organizers (d=0.37)	Bridging from previous knowledge to whatever is to be learned; linking old and new information; summary of material in advance and is referred back to often		x								x																											
Bilingual programs (d=0.37)	Two languages are used as a medium of instruction rather than immersion programs where students are instructed in one											x																										

Title	Description	ST 1					ST 2						ST 3			ST 4			ST 5			ST 6				ST 7						ST 8			ST 9		
		1	2	3	4	5	1	2	3	4	5	6	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6	1	2	3	1	2	3
Computer-assisted instruction (d=0.37)	Effects for this are gradually rising as instruction becomes more interactive, engaging and better designed; use of computers are more effective when there is a diversity of teaching strategies; teacher is pre-trained; multiple opportunities for learning; student is in control of learning; peer learning is optimized								x									x																			
Simulations and games (d=0.33)	Using a model or game to engage students in learning								x									x																			
Instructional media (d=0.30)	Using state of the art visuals; media								x									x																			
Testing (d=0.30)	Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective		x						x	x								x																			

Teacher Growth Guide 1.1 – Hattie Research

Standard 1: Content knowledge aligned with appropriate instruction.

The teacher understands the central concepts, structures, and tools of inquiry of the discipline(s) and creates learning experiences that make these aspects of subject matter meaningful and engaging for students.

Quality Indicator 1: Content knowledge and academic language

Emerging		Developing		Proficient		Distinguished	
1E1) The emerging teacher... Knows and can demonstrate breadth and depth of content knowledge and communicates the meaning of academic language.		1D1) The developing teacher also... Delivers accurate content learning experiences using supplemental resources and incorporates academic language into learning activities.		1P1) The proficient teacher also... Infuses new information into instructional units and lessons displaying solid knowledge of the important concepts of the discipline.		1S1) The distinguished teacher also... Has mastery of taught subjects and continually infuses new research-based content knowledge into instruction.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice. Students' work is marked in class and they may do corrective work.							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Reciprocal Teaching (.74 effective size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Providing Worked Examples (.57 effect size)							
A form of demonstrating to students what success looks like; typically consist of a problem statement and the appropriate steps to a solution. Three steps: introductory phase, acquisition/training phase, test phase (assess learning). Reduces cognitive load for students such that they concentrate on the processes that lead to the correct answer and not just providing an answer.							

Homework (.29 effect size)

Involves “tasks assigned to students by teachers that are meant to be carried out during non-school hours.” Effects twice as large for high as for junior high, and twice as large again for junior high as for elementary. Smallest effects in math. Largest in science and social studies with English in the middle. Effects greater for higher than lower ability students. Homework for some reinforces that they cannot learn by themselves. Can undermine motivation and internalize incorrect routines and strategies.

Growth Guide 1.2 – Hattie Research

Standard 1: Content knowledge, including varied perspectives, aligned with appropriate instruction.

Quality Indicator 2: Student engagement in subject matter

Emerging			Developing			Proficient			Distinguished
1E2) The emerging teacher... Chooses from multiple sources to engage student interest and activity in the content.			1D2) The developing teacher also... Uses a variety of differentiated instructional strategies which purposefully engage students in content.			1P2) The proficient teacher also... Uses specific instructional strategies to engage students and advance each individual student's learning as evidenced by student data.			1S2) The distinguished teacher also... Moves fluidly between differentiated instructional strategies based on the unique learning needs and situations of the students resulting in deeper student knowledge and understanding in the content area.
Score = 0	1	2	3	4	5	6			7
Instructional Quality (1.00 effect size)									
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.									
Direct Instruction (.82 effect size)									
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice									
Comprehensive Interventions for LDS (.77 effect size)									
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition									
Spaced vs. Mass practice (.71 effect size)									
Frequency of different learning opportunities; three to four exposures to learning over several days before learning occurs. Spacing the practice of skills over a long period of time.									
Meta-cognitive strategies (.69 effect size)									
Thinking about thinking; plan how to approach a given learning task; evaluate progress; monitor comprehension. Includes knowledge about when and how to use particular strategies for learning or for problem-solving. Self-questioning is another meta-cognitive strategy.									
Remediation Feedback (.65 effect size)									
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)									
Self-verbalization / self-questioning (.64 effect size)									
Provides assistance in searching for needed information and increased understanding of the messages of the material to be learned. The internal dialogue of the learner is made verbal.									
Concept Mapping (.60 effect size)									
Involves development of graphical representations of the conceptual structure of content to be learned. Importance of concept mapping is in its emphasis on summarizing main ideas in what is to be learned. Assists in synthesizing and identifying major ideas, themes, and interrelationships.									
Challenge of Goals (.52 effect size)									
Students being given challenging yet achievable learning goals; teachers set challenging rather than "do your best:"									

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Mastery Learning (.50 effect size)

Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes

Questioning (.41 effect size)

Most effective questions are high order “why, how and which is best” questions that cause students to really think; they need to be given time and do better in pairs than alone; important to analyze the questions students ask, too

Advance Organizers (.37 effect size)

Bridging from previous knowledge to whatever is to be learned; linking old and new information; summary of material in advance that puts some sort of structure to it and is referred back to often

Testing (.30 effect size)

Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective

Homework (.29 effect size: Elementary .15 effect size; High School .64 effect size)

Positive effect is negatively related to duration; does not help with time management; problem-solving type is less effective due to the need for feedback; Involves “tasks assigned to students by teachers that are meant to be carried out during non-school hours.” Effects twice as large for high as for junior high, and twice as large again for junior high as for elementary. Smallest effects in math. Largest in science and social studies with English in the middle. Effects greater for higher than lower ability students. Homework for some reinforces that they cannot learn by themselves. Can undermine motivation and internalize incorrect routines and strategies.

Growth Guide 1.3 – Hattie Research

Standard 1: Content knowledge aligned with appropriate instruction.

Quality Indicator 3: Disciplinary research and inquiry methodologies

Emerging			Developing		Proficient		Distinguished
1E3) The emerging teacher... Introduces students to various methods of inquiry and research methodologies.			1D3) The developing teacher also... Employs student- inquiry instructional approaches to build capacity for all students on research methodologies.		1P3) The proficient teacher also... Develops strategies to engage students in the processes of inquiry and research pertinent to the discipline being taught.		1S3) The distinguished teacher also... Acquires and shares new knowledge on inquiry and research methodologies that improve student learning.
Score = 0	1	2	3	4	5	6	7
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Homework (.29 effect size: Elementary .15 effect size; High School .64 effect size)							
Positive effect is negatively related to duration; does not help with time management; problem-solving type is less effective due to the need for feedback; Involves “tasks assigned to students by teachers that are meant to be carried out during non-school hours.” Effects twice as large for high as for junior high, and twice as large again for junior high as for elementary. Smallest effects in math. Largest in science and social studies with English in the middle. Effects greater for higher than lower ability students. Homework for some reinforces that they cannot learn by themselves. Can undermine motivation and internalize incorrect routines and strategies.							

Growth Guide 1.4 – Hattie Research

Standard 1: Content knowledge aligned with appropriate instruction.

Quality Indicator 4: Interdisciplinary instruction

Emerging		Developing		Proficient		Distinguished	
1E4) The emerging teacher... Demonstrates the ability to make interdisciplinary content connections during instruction.		1D4) The developing teacher also... Implements meaningful interdisciplinary learning experiences that require students to apply disciplinary knowledge.		1P4) The proficient teacher also... Develops and implements interdisciplinary projects that guide students in analyzing the complexities of an issue or question using perspectives from varied disciplines.		1S4) The distinguished teacher also... Connects current interdisciplinary themes to their discipline(s) and weaves those themes into meaningful learning experiences through collaboration with students, colleagues, and/or real-world partners.	
Score = 0	1	2	3	4	5	6	7
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Reciprocal Teaching (.74 effect size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Self-verbalization / self-questioning (.64 effect size)							
Provides assistance in searching for needed information and increased understanding of the messages of the material to be learned. The internal dialogue of the learner is made verbal.							
Challenge of Goals (.52 effect size)							
Students being given challenging yet achievable learning goals; teachers set challenging rather than “do your best:							
Mastery Learning (.50 effect size)							
tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes							
Questioning (.41 effect size)							
Most effective questions are high order “why, how and which is best” questions that cause students to really think; they need to be given time and do better in pairs than alone; important to analyze the questions students ask, too							

Growth Guide 1.5 – Hattie Research

Standard 1: Content knowledge aligned with appropriate instruction.

Quality Indicator 5: Diverse social and cultural perspectives

Emerging			Developing		Proficient		Distinguished
1E5) The emerging teacher... Facilitates students’ ability to develop balanced, diverse social and cultural perspectives by recognizing personal bias in lesson design			1D5) The developing teacher also... Designs instruction that incorporates global perspectives about national/regional/ethnic contributions to, and cultural differences/interpretations of the discipline.		1P5) The proficient teacher also Builds background knowledge from a variety of perspectives critical to fostering innovation, solving global challenges, and assuring a healthy democracy.		1S5) The distinguished teacher also... Facilitates student action to address real-world problems from a variety of perspectives related to the discipline that improves their community and/or world.
Score = 0	1	2	3	4	5	6	7
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Homework (.29 effect size)							
Involves “tasks assigned to students by teachers that are meant to be carried out during non-school hours.” Effects twice as large for high as for junior high, and twice as large again for junior high as for elementary. Smallest effects in math. Largest in science and social studies with English in the middle. Effects greater for higher than lower ability students. Homework for some reinforces that they cannot learn by themselves. Can undermine motivation and internalize incorrect routines and strategies.							

Growth Guide 2.1 – Hattie Research

Standard 2: Student Learning, Growth and Development

The teacher understands how students learn, develop and differ in their approaches to learning. The teacher provides learning opportunities that are adapted to diverse learners and support the intellectual, social, and personal development of all students.

Quality Indicator 1: Cognitive, social, emotional and physical development

Emerging		Developing		Proficient		Distinguished	
2E1) The emerging teacher... Knows how to address developmental factors when making instructional decisions.		2D1) The developing teacher also... Applies understanding of child/adolescent growth and development markers to implement instruction that fosters development in students.		2P1) The proficient teacher also... Uses knowledge of individual growth and development to monitor and chart learner’s progress toward goals in each domain to meet current needs and lead to the next level of development.		2S1) The distinguished teacher also... Models and shares with colleagues an effective, continuous instructional cycle that assesses individual performance, identifies needs and provides instruction promoting individual advancement in each domain.	
Score = 0	1	2	3	4	5	6	7
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Teacher-Student relationships (.72 effect size)							
Interestingly, “when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students.” “Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student.”Facilitate student development by demonstrating that they care for the learning of each as a person							
Concept Mapping (.60 effect size)							
Involves development of graphical representations of the conceptual structure of content to be learned. Importance of concept mapping is in its emphasis on summarizing main ideas in what is to be learned. Assists in synthesizing and identifying major ideas, themes, and interrelationships.							

Study Skills (.59 effect size)

Develop task-related skills (note taking, summarizing); self-management learning skills (planning, monitoring, tactics, strategies); and non-cognitive features of learning like motivation/self-concept

Student disposition to learn (.48 effect size)

Student motivation; students feeling in control of their learning experience; removing de-motivators

Advance organizers (.37 effect size)

Bridging from previous knowledge to whatever is to be learned; linking old and new information; summary of material in advance and is referred back to often

Testing (.30 effect size)

Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective

Growth Guide 2.2 – Hattie Research

Standard 2: Student Learning, Growth and Development

Quality Indicator 2: Student goals

Emerging		Developing		Proficient		Distinguished	
2E2) The emerging teacher... Facilitates students' understanding of taking personal responsibility for their own learning.		2D2) The developing teacher also Uses strategies to enable students to set short- and long-term goals helping them to organize and reflect on their own learning.		2P2) The proficient teacher also... Use strategies to assist students in evaluating and modifying personal learning goals based on personal performance data.		2S2) The distinguished teacher also... Acquires and shares new knowledge on strategies for enabling students to expand and assume control of their own learning.	
Score = 0	1	2	3	4	5	6	7
Self-reported grades (1.44 effect size)							
Students knowledgeable about their chance of success; awareness of what they know about a subject and how they will likely perform							
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Teacher-Student relationships (.72 effect size)							
Interestingly, "when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students." "Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student." Facilitate student development by demonstrating that they care for the learning of each as a person							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Study Skills (.59 effect size)							
Develop task-related skills (note taking, summarizing); self-management learning skills (planning, monitoring, tactics, strategies); and non-cognitive features of learning like motivation/self-concept							
Student disposition to learn (.48 effect size)							
Student motivation; students feeling in control of their learning experience; removing de-motivators							
Testing (.30 effect size)							
Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective							

Growth Guide 2.3 – Hattie Research

Standard 2: Student Learning, Growth and Development

Quality Indicator 3: Theory of learning

Emerging		Developing		Proficient		Distinguished	
2E3) The emerging teacher...		2D3) The developing teacher also...		2P3) The proficient teacher also...		2S3) The distinguished teacher also...	
Applies theories of learning to create well-planned and delivered instruction.		Implements research-based instruction focused on production of learning for individual students.		Delivers instruction that effectively produces learning gains for every student based on effective plans, grounded in theory/research, and designed to meet individual needs.		Continuously modifies instruction based on his/her own and emerging research and shares effective practices and modifications with colleagues.	
Score = 0	1	2	3	4	5	6	7
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Instructional Quantity (.84 effect size)							
The time (hours) in which the student is actively taught							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Spaced vs. Mass practice (.71 effect size)							
Frequency of different learning opportunities; three to four exposures to learning over several days before learning occurs. Spacing the practice of skills over a long period of time.							
Meta-cognitive strategies (.69 effect size)							
Thinking about thinking; plan how to approach a given learning task; evaluate progress; monitor comprehension. Self-questioning is an example.							
Self-verbalization / self-questioning (.64 effect size)							
Provides assistance in searching for needed information and increased understanding of the messages of the material to be learned. The internal dialogue of the learner is made verbal.							

Concept Mapping (.60 effect size)
Involves development of graphical representations of the conceptual structure of content to be learned. Importance of concept mapping is in its emphasis on summarizing main ideas in what is to be learned. Assists in synthesizing and identifying major ideas, themes, and interrelationships.
Providing Worked Examples (.57 effect size)
A form of demonstrating to students what success looks like; typically consist of a problem statement and the appropriate steps to a solution. Three steps: introductory phase, acquisition/training phase, test phase (assess learning). Reduces cognitive load for students such that they concentrate on the processes that lead to the correct answer and not just providing an answer.
Mastery Learning (.50 effect size)
Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes
Advance Organizers (.37 effect size)
Bridging from previous knowledge to whatever is to be learned; linking old and new information; summary of material in advance that puts some sort of structure to it and is referred back to often
Computer-assisted instruction (.37 effect size)
Effects for this are gradually rising as instruction becomes more interactive, engaging and better designed; use of computers are more effective when there is a diversity of teaching strategies; teacher is pre-trained; multiple opportunities for learning; student is in control of learning; peer learning is optimized
Simulations and games (.33 effect size)
Using a model or game to engage students in learning
Instructional media (.30 effect size)
Using state of the art visuals; media

Growth Guide 2.4 – Hattie Research

Standard 2: Student Learning, Growth and Development

Quality Indicator 4: Differentiated lesson design

Emerging		Developing		Proficient		Distinguished	
2E4) The emerging teacher... Designs and implements instruction that considers the needs of students.		2D4) The developing teacher also... Designs and implements instruction that enables students to learn, grow, and develop because their needs are met in a positive learning environment.		2P4) The proficient teacher also... Through design and instruction, establishes an inviting and nurturing educational environment by creating a trusting relationship with students that engages them in learning.		2S4) The distinguished teacher also... Plans and cultivates the unique skills and talents of every child and encourages them to ask questions, take risks and enjoy learning.	
Score = 0	1	2	3	4	5	6	7
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Teacher-Student relationships (.72 effect size)							
Interestingly, “when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students.” “Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student.” Facilitate student development by demonstrating that they care for the learning of each as a person							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							

Growth Guide 2.5 – Hattie Research

Standard 2: Student Learning, Growth and Development

Quality Indicator 5: Prior experiences, multiple intelligences, strengths and needs

Emerging		Developing		Proficient		Distinguished	
2E5) The emerging teacher... Delivers a variety of lesson activities that address students' prior experiences, multiple intelligences, strengths and needs.		2D5) The developing teacher also... Creates and delivers lessons and instructional activities that address the individual needs of all learners and variation in prior knowledge and experiences, multiple intelligences, strengths, and needs.		2P5) The proficient teacher also... Adapts strategies to meet individual student needs based on student performance data and where the child is developmentally, cognitively, physically, and affectively to advance knowledge and skill development.		2S5) The distinguished teacher also... Acquires and shares authentic strategies for actively involving every student in advancing their own learning, building on their unique experience, intelligence, strengths and needs.	
Score = 0	1	2	3	4	5	6	7
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Teacher-Student relationships (.72 effect size)							
Interestingly, "when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students." "Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student." Facilitate student development by demonstrating that they care for the learning of each as a person							

Meta-cognitive strategies (.69 effect size)
Thinking about thinking; plan how to approach a given learning task; evaluate progress; monitor comprehension. Includes knowledge about when and how to use particular strategies for learning or for problem-solving. Self-questioning is another meta-cognitive strategy.
Remediation Feedback (.65 effect size)
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)
Self-verbalization / self-questioning (.64 effect size)
Provides assistance in searching for needed information and increased understanding of the messages of the material to be learned. The internal dialogue of the learner is made verbal.
Study Skills (.59 effect size)
Develop task-related skills (note taking, summarizing); self-management learning skills (planning, monitoring, tactics, strategies); and non-cognitive features of learning like motivation/self-concept
Providing Worked Examples (.57 effect size)
A form of demonstrating to students what success looks like; typically consist of a problem statement and the appropriate steps to a solution. Three steps: introductory phase, acquisition/training phase, test phase (assess learning). Reduces cognitive load for students such that they concentrate on the processes that lead to the correct answer and not just providing an answer.
Class environment (cohesion) (.53 effect size)
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains
Challenge of Goals (.52 effect size)
Students being given challenging yet achievable learning goals; teachers set challenging rather than "do your best:
Mastery Learning (.50 effect size)
Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes
Student disposition to learn (.48 effect size)
Student motivation; students feeling in control of their learning experience; removing de-motivators
Testing (.30 effect size)
Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective

Growth Guide 2.6 – Hattie Research

Standard 2: Student Learning, Growth and Development

Quality Indicator 6: Language, culture, family and knowledge of community values

Emerging		Developing		Proficient		Distinguished	
2E6) The emerging teacher... Reviews demographic and biographical data of students to determine the variety of learning needs.		2D6) The developing teacher also... Modifies instruction in response to how students' learning is influenced by individual experience, talents, and prior learning, as well as language, culture, family and community values.		2P6) The proficient teacher also... Creates a learning climate which respects individual differences by using teaching approaches that incorporate and are sensitive to the multiple experiences of learners, their family, culture, and community.		2S6) The distinguished teacher also... Connects instruction to students' experiences creating a trusting environment by employing strategies that respect differing cultures and draws explicit connections during instruction / assignments that are related to students' experiences and culture.	
Score = 0	1	2	3	4	5	6	7
Teacher-Student relationships (.72 effect size)							
Interestingly, "when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students." "Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student." Facilitate student development by demonstrating that they care for the learning of each as a person							
Home Factors (.57 effect size)							
Includes issues such as social class, help with homework, extent to which the learner's education is thought to be important; includes measures of the socio-psychological environment and intellectual stimulation in the home. Most highly correlated factors with achievement were maternal involvement, variety and play materials.							
Peer tutoring (.55 effect size)							
Students teaching each other (peer-explaining, peer-checking, peer-assessing); students move to being teachers of themselves							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Peer effects (.53 effect size)							
Helping, tutoring, providing friendship, giving feedback, increasing the feeling as school is a place they want to come							
Parent Involvement (.51 effect size)							
Parent aspirations were the most important influence on student achievement whereas external rewards, homework surveillance, negative control and restrictions for unsatisfactory grades. Overall the higher hopes/expectations of parents the greater the students' academic achievement							
Bilingual programs (.37 effect size)							
Two languages are used as a medium of instruction rather than immersion programs where students are instructed in one							

Growth Guide 3.1 – Hattie Research

Standard 3: Curriculum Implementation

The teacher recognizes the importance of long-range planning and curriculum development. The teacher develops, implements, and evaluates curriculum based upon student, district and state standards data.

Quality Indicator 1: Implementation of curriculum standards

Emerging			Developing		Proficient		Distinguished
3E1) The emerging teacher... Makes informed decisions about instructional objects aligned to district mapping and pacing guides.			3D1) The developing teacher also... Consistently delivers a variety of learning experiences that are appropriate for curriculum and are aligned with state and district curriculum and assessments.		3P1) The proficient teacher also... Uses state/district curriculum guides with enough facility to anticipate skill gaps and/or misconceptions of students in order to deliver effective instruction.		3S1) The distinguished teacher also... Participates and/or demonstrates leadership for the evaluation and development of curriculum aligned to national, state, and district curriculum and assessments.
Not Present = 0	Weak = 1	Strong = 2	Weak = 3	Strong = 4	Weak = 5	Strong = 6	Exemplary = 7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Providing Worked Examples (.57 effect size)							
A form of demonstrating to students what success looks like; typically consist of a problem statement and the appropriate steps to a solution. Three steps: introductory phase, acquisition/training phase, test phase (assess learning). Reduces cognitive load for students such that they concentrate on the processes that lead to the correct answer and not just providing an answer.							

Growth Guide 3.2 – Hattie Research

Standard 3: Curriculum Implementation

Quality Indicator 2: Develop lessons for diverse learners

Emerging			Developing		Proficient		Distinguished
3E2) The emerging teacher... Implements lessons and activities aligned to the curriculum that recognizes the individual needs of diverse learners			3D2) The developing teacher also... Consistently implements lessons and activities that address the needs of diverse learners and responds to ongoing analysis of student performance based on multiple assessments and analysis of student needs.		3P2) The proficient teacher also... Evaluates the effectiveness of a variety of instructional strategies based on multiple assessment data, curriculum and an analysis of student needs.		3S2) The distinguished teacher also... Participates and/or demonstrates leadership in the development of instructional strategies and interventions to accomplish instructional goals based on multiple assessment data, curriculum and an analysis of student needs.
Not Present = 0	Weak = 1	Strong = 2	Weak = 3	Strong = 4	Weak = 5	Strong = 6	Exemplary = 7
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Acceleration (.72 effect size)							
Very bright students (gifted) being accelerated through curricula							
Testing (.30 effect size)							
Testing by itself is not as effective as remediation/feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective							

Growth Guide 3.3 – Hattie Research

Standard 3: Curriculum Implementation

Quality Indicator 3: Instructional goals and differentiated instructional strategies

Emerging		Developing		Proficient		Distinguished	
3E3) The emerging teacher... Uses differentiated instructional strategies to address student learning needs in meeting the objectives of the curriculum.		3D3) The developing teacher also... Systematically selects differentiated instructional strategies and content to meet student needs and enhance learning.		3P3) The proficient teacher also... Adjusts instructional goals and time and modifies instructional strategies, and content to meet students' needs and enhance learning.		3S3) The distinguished teacher also... Leads colleagues in discussions of instructional goals to identify methods for modifying instructional strategies, content, and adjusting time to meet students' needs and enhance learning.	
Score = 0	1	2	3	4	5	6	7
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Instructional Quantity (.84 effect size)							
The time (hours) in which the student is actively taught							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Comprehensive Interventions for LDS (.77 effect size)							
Combine direct instruction with strategy instruction with extended, deliberate practice; emphasis on meta-cognition							
Acceleration (.72 effect size)							
Very bright students (gifted) being accelerated through curricula							
Professional Development on student achievement (.51 effect size)							
Staff development and staff training sessions; Most effective included observations on actual classroom methods, microteaching, video/audio feedback, and practice							

Growth Guide 4.1 – Hattie Research

Standard 4: Critical Thinking

The teacher uses a variety of instructional strategies to encourage students’ critical thinking, problem solving, and performance skills.

Quality Indicator 1: Instructional strategies leading to student engagement in problem-solving and critical thinking

Emerging		Developing		Proficient		Distinguished	
4E1) The emerging teacher... Selects various types of instructional strategies and appropriate resources to achieve instructional goals and teach students critical thinking skills.		4D1) The developing teacher also... Assures student growth with frequent instructional opportunities for students to use critical thinking and problem solving skills.		4P1) The proficient teacher also... Effectively applies a range of instructional techniques that require students to think critically and problem-solve.		4S1) The distinguished teacher also... Fluently uses a range of instructional techniques that require critical thinking; serves as a leader by offering constructive assistance and modeling the use of strategies, materials and technology to maximize learning.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Challenge of Goals (.52 effect size)							
Students being given challenging yet achievable learning goals; teachers set challenging rather than “do your best”							
Questioning (.41 effect size)							
Most effective questions are high order “why, how and which is best” questions that cause students to really think; they need to be given time and do better in pairs than alone; important to analyze the questions students ask, too							

Growth Guide 4.2 – Hattie Research

Standard 4: Critical Thinking

Quality Indicator 2: Appropriate use of instructional resources to enhance student learning

Emerging		Developing		Proficient		Distinguished	
4E2) The emerging teacher... Uses a variety of instructional resources to enhance the teaching and learning process.		4D2) The developing teacher also... Purposefully selects and uses a variety of developmentally appropriate instructional resources to enhance academic performance and technological literacy.		4P2) The proficient teacher also... Assesses the effectiveness of instructional resources and developmentally appropriate instructional activities and adapts for promoting complex thinking and technological skills.		4S2) The distinguished teacher also... Applies research-based instructional resources including technology to enhance their own teaching, as well as being a potential resource to others.	
Score = 0	1	2	3	4	5	6	7
Computer-assisted instruction (.37 effect size)							
Effects for this are gradually rising as instruction becomes more interactive, engaging and better designed; use of computers are more effective when there is a diversity of teaching strategies; teacher is pre-trained; multiple opportunities for learning; student is in control of learning; peer learning is optimized							
Simulations and games (.33 effect size)							
Using a model or game to engage students in learning							
Instructional media (.30 effect size)							
Using state of the art visuals; media							

Growth Guide 4.3 – Hattie Research

Standard 4: Critical Thinking

Quality Indicator 3: Cooperative, small group and independent learning

Emerging		Developing		Proficient		Distinguished	
4E3) The emerging teacher... Employs individual and cooperative learning activities to promote critical thinking skills.		4D3) The developing teacher also... Uses a variety of learning situations, such as independent, small group and whole class to enhance individual and collective critical thinking skills.		4P3) The proficient teacher also... Effectively combines flexible and varied independent, cooperative and whole-class learning situations and applies grouping strategies to maximize student understanding and learning.		4S3) The distinguished teacher also... Models and/or shares with others the effective use of flexible and varied independent, collaborative and whole-class learning situations.	
Score = 0	1	2	3	4	5	6	7
Reciprocal Teaching (.74 effective size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Cooperative vs. Individualistic Learning (.59 effect size)							
Most powerful when students have acquired sufficient background knowledge to be involved in discussion and learning w/peers. Most useful when learning concepts, verbal problem-solving, spatial problem-solving, retention and memory. Effects increase with age.							
Peer tutoring (.55 effect size)							
Students teaching each other (peer-explaining, peer-checking, peer-assessing); students move to being teachers of themselves							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Peer effects (.53 effect size)							
Helping, tutoring, providing friendship, giving feedback, increasing the feeling as school is a place they want to come							

Growth Guide 5.1 – Hattie Research

Standard 5: Positive Classroom Environment

The teacher uses an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self-motivation.

Quality Indicator 1: Classroom management techniques

Emerging		Developing		Proficient		Distinguished	
5E1) The emerging teacher... Demonstrates basic classroom management techniques and addresses misbehavior to avoid the disruption of instruction.		5D1) The developing teacher also... Uses effective classroom management techniques including addressing misbehavior promptly and effectively with the least disruption of instruction.		5P1) The proficient teacher also... Adapts and develops classroom management techniques that address all student misbehavior ensuring little or no disruption of instruction.		5S1) The distinguished teacher also... Shares with others effective classroom management techniques that reduce the likelihood of misbehavior ensuring little or no disruptions to instruction.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Student disposition to learn (.48 effect size)							
Student motivation; students feeling in control of their learning experience; removing de-motivators							

Growth Guide 5.2 – Hattie Research

Standard 5: Positive Classroom Environment

Quality Indicator 2: Managing time, space, transitions, and activities

Emerging		Developing		Proficient		Distinguished	
5E2) The emerging teacher... Manages time, space, transitions, and activities in their classroom.		5D2) The developing teacher also... Effectively manages time, space, transitions, and activities to create an environment that enhances student engagement.		5P2) The proficient teacher also... Organizes, allocates, and manages time, space, transitions and activities to promote continuous student engagement and high levels of productivity.		5S2) The distinguished teacher also... Shares with others effective strategies for managing time, space, transitions and activities to promote continuous student engagement and high levels of productivity.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Instructional Quantity (.84 effect size)							
The time (hours) in which the student is actively taught							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Computer-assisted instruction (.37 effect size)							
Effects for this are gradually rising as instruction becomes more interactive, engaging and better designed; use of computers are more effective when there is a diversity of teaching strategies; teacher is pre-trained; multiple opportunities for learning; student is in control of learning; peer learning is optimized							
Simulations and games (.33 effect size)							
Using a model or game to engage students in learning							
Instructional media (.30 effect size)							
Using state of the art visuals; media							

Growth Guide 5.3 – Hattie Research

Standard 5: Positive Classroom Environment

Quality Indicator 3: Classroom, school and community culture

Emerging		Developing		Proficient		Distinguished	
5E3) The emerging teacher Builds awareness of the culture of the school and community in order to influence student relationships and build an effective classroom learning environment.		5D3) The developing teacher also... Develops a positive culture in the classroom and school to positively affect student relationships and learning.		5P3) The proficient teacher also... Maintains and enhances a positive culture in the classroom and school, creating a classroom environment which promotes positive student relationships and learning.		5S3) The distinguished teacher also... Actively engages students in discussing and evaluating the culture of the classroom, school and community to positively impact relationships and learning.	
Score = 0	1	2	3	4	5	6	7
Teacher-Student relationships (.72 effect size)							
Interestingly, “when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students.” “Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student.” Facilitate student development by demonstrating that they care for the learning of each as a person							
Home Factors (.57 effect size)							
Includes issues such as social class, help with homework, extent to which the learner’s education is thought to be important; includes measures of the socio-psychological environment and intellectual stimulation in the home. Most highly correlated factors with achievement were maternal involvement, variety and play materials.							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Peer effects (.53 effect size)							
Helping, tutoring, providing friendship, giving feedback, increasing the feeling as school is a place they want to come							
Parent Involvement (.51 effect size)							
Parent aspirations were the most important influence on student achievement whereas external rewards, homework surveillance, negative control and restrictions for unsatisfactory grades. Overall the higher hopes/expectations of parents the greater the students’ academic achievement							

Growth Guide 6.1 – Hattie Research

Standard 6: Effective Communication

The teacher models effective verbal, nonverbal, and media communication techniques with students, colleagues and parents to foster active inquiry, collaboration, and supportive interaction in the classroom.

Quality Indicator 1: Verbal and nonverbal communication

Emerging		Developing		Proficient		Distinguished	
6E1) The emerging teacher... Uses correct, effective verbal and non-verbal communication skills.		6D1) The developing teacher also... Consistently uses and fosters correct, effective verbal and nonverbal communication, including strategies to communicate with students whose first language is not Standard English or whose disability requires specific forms of communication.		6P1) The proficient teacher also... Evaluates the impact of and strategies for the correct and effective use of verbal and nonverbal communication.		6S1) The distinguished teacher also... Shares with others strategies for ensuring correct, effective verbal and nonverbal communication in their school and throughout the community.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Questioning (.41 effect size)							
Most effective questions are high order “why, how and which is best” questions that cause students to really think; they need to be given time and do better in pairs than alone; important to analyze the questions students ask, too							
Bilingual programs (.37 effect size)							
Two languages are used as a medium of instruction rather than immersion programs where students are instructed in one							

Growth Guide 6.2 – Hattie Research

Standard 6: Effective Communication

Quality Indicator 2: Sensitivity to culture, gender, intellectual and physical differences

Emerging		Developing		Proficient		Distinguished	
6E2) The emerging teacher... Is aware of personal bias in regard to differences in culture, gender, intellectual, and physical ability in classroom and its impact on student learning.		6D2) The developing teacher also... Demonstrates and promotes sensitivity to differences in culture, gender, intellectual, and physical ability in classroom communication and in responses to students' communications.		6P2) The proficient teacher also... Helps students to develop a respect for all through sensitivity to cultural, gender, intellectual and physical ability differences in classroom communication.		6S2) The distinguished teacher also... Promotes a respect for all and sensitivity to cultural, gender, intellectual and physical ability differences throughout the school and community.	
Score = 0	1	2	3	4	5	6	7
Teacher-Student relationships (.72 effect size)							
Interestingly, “when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students.” “Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student.” Facilitate student development by demonstrating that they care for the learning of each as a person							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Home Factors (.57 effect size)							
Includes issues such as social class, help with homework, extent to which the learner’s education is thought to be important; includes measures of the socio-psychological environment and intellectual stimulation in the home. Most highly correlated factors with achievement were maternal involvement, variety and play materials.							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Parent Involvement (.51 effect size)							
Parent aspirations were the most important influence on student achievement whereas external rewards, homework surveillance, negative control and restrictions for unsatisfactory grades. Overall the higher hopes/expectations of parents the greater the students’ academic achievement							
Bilingual programs (.37 effect size)							
Two languages are used as a medium of instruction rather than immersion programs where students are instructed in one							

Growth Guide 6.3 – Hattie Research

Standard 6: Effective Communication

Quality Indicator 3: Learner expression in speaking, writing and other media

Emerging		Developing		Proficient		Distinguished	
6E3) The emerging teacher... Supports and expands learner expression in speaking, writing, listening, and other media ensuring it adheres to district policy.		6D3) The developing teacher also... Develops students in directing their own safe, free and respectful expression in speaking, writing, listening, and other media ensuring it adheres to district policy.		6P3) The proficient teacher also... Promotes respect, safe and free expression in the school and the larger school community ensuring it adheres to district policy.		6S3) The distinguished teacher also... Shares with others strategies for promoting respect, safe and free expression in the school and the larger school community ensuring it adheres to district policy.	
Score = 0	1	2	3	4	5	6	7
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Reciprocal Teaching (.74 effective size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Self-verbalization / self-questioning (.64 effect size)							
Provides assistance in searching for needed information and increased understanding of the messages of the material to be learned. The internal dialogue of the learner is made verbal.							
Peer effects (.53 effect size)							
Helping, tutoring, providing friendship, giving feedback, increasing the feeling as school is a place they want to come							
Bilingual programs (.37 effect size)							
Two languages are used as a medium of instruction rather than immersion programs where students are instructed in one							

Growth Guide 6.4 – Hattie Research

Standard 6: Utilizing Effective Communication

Quality Indicator 4: Technology and media communication tools

Emerging		Developing		Proficient		Distinguished	
6E4) The emerging teacher... Demonstrates knowledge and understanding of technology and media communication tools for purposeful instruction.		6D4) The developing teacher also... Implements instruction that encourages technology and media communication tools use for learning and models those techniques.		6P4) The proficient teacher also... Facilitates the students' effective use of technology and media communication tools.		6S4) The distinguished teacher also... Either mentors, or assists students in mentoring, members of the school and community in the use of technology and media communication tools.	
Score = 0	1	2	3	4	5	6	7
Reciprocal Teaching (.74 effect size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Computer-assisted instruction (.37 effect size)							
Effects for this are gradually rising as instruction becomes more interactive, engaging and better designed; use of computers are more effective when there is a diversity of teaching strategies; teacher is pre-trained; multiple opportunities for learning; student is in control of learning; peer learning is optimized							
Simulations and games (.33 effect size)							
Using a model or game to engage students in learning							
Instructional media (.30 effect size)							
Using state of the art visuals; media							

Growth Guide 7.1 – Hattie Research

Standard 7: Student Assessment and Data Analysis

The teacher understands and uses formative and summative assessment strategies to assess the learner’s progress and uses both classroom and standardized assessment data to plan ongoing instruction. The teacher monitors the performance of each student and devises instruction to enable students to grow and develop, making adequate academic progress.

Quality Indicator 1: Effective use of assessments

Emerging		Developing		Proficient		Distinguished	
7E1) The emerging teacher...		7D1) The developing teacher also...		7P1) The proficient teacher also...		7S1) The distinguished teacher also...	
Demonstrates the use of formal and informal assessments to determine progress towards specific learning goals.		Effectively uses multiple formal and informal student assessments to address specific learning goals, including modifications for students with special needs.		Identifies student’s prior knowledge, progress during instruction and achievement at the end of an instructional unit to demonstrate individual and whole class learning.		Shares knowledge and expertise with others on the effective use of assessments to generate data demonstrating progress toward individual and whole class learning.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Direct Instruction (.82 effect size)							
Active learning in class. Seven steps include: Define learning intentions; aware of and know success criteria of performance; building commitment and engagement in the learning task; presentation of the lesson; guided practice (work is marked and corrective work); closure; and independent practice							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Mastery Learning (.50 effect size)							
Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes							
Testing (.30 effect size)							
Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective							

Growth Guide 7.2 – Hattie Research

Standard 7: Student Assessment and Data Analysis

Quality Indicator 2: Assessment data to improve learning

Emerging		Developing		Proficient		Distinguished	
7E2) The emerging teacher... Demonstrates basic strategies for accessing, analyzing and appropriately using information and assessment results to improve learning activities.		7D2) The developing teacher also... Reviews student trend data and growth in learning through a comparison of student work (i.e. pre-/post- test results or similar mechanisms) to inform instructional decisions.		7P2) The proficient teacher also... Uses tools such as rubrics, scoring guides, performance analyses, etc., that clearly identify the knowledge and skills intended for students to acquire in well-defined learning goals.		7S2) The distinguished teacher also... Is able to model and/or share information and expertise with others on the use of a wide variety of assessments and evidence that they improved the effectiveness of instruction.	
Score = 0	1	2	3	4	5	6	7
Self-reported grades (1.44 effect size)							
Students knowledgeable about their chance of success; awareness of what they know about a subject and how they will likely perform							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Student disposition to learn (.48 effect size)							
Student motivation; students feeling in control of their learning experience; removing de-motivators							
Testing (.30 effect size)							
Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective							

Growth Guide 7.3 – Hattie Research

Standard 7: Student Assessment and Data Analysis

Quality Indicator 3: Student-led assessment strategies

Emerging		Developing		Proficient		Distinguished	
7E3) The emerging teacher... Uses assessment strategies and timely descriptive feedback to involve learners in some personal-goal setting and self-assessment activities		7D3) The developing teacher also... Purposefully teaches students to use assessment data to think about their own learning, including setting personal learning goals.		7P3) The proficient teacher also... Adjusts and adapts strategies for teaching students how to use assessment data in thinking about their own learning, including setting personal goals, based on unique student strengths, needs and learning styles.		7S3) The distinguished teacher also... Model for others how to provide timely descriptive feedback and the engaging of students in establishing personal learning goals, self-assessment, and using evidence to report on their own progress to the teacher, parents, and others.	
Score = 0	1	2	3	4	5	6	7
Self-reported grades (1.44 effect size)							
Students knowledgeable about their chance of success; awareness of what they know about a subject and how they will likely perform							
Piagetian Programs (1.28 effect size)							
Students knowing the ways in which they think and how it is constrained by their stages of development (sensorimotor stage, preoperational stage, concrete operational stage and formal operational stage)							
Students prior cognitive ability (1.04 effect size)							
Student understanding of their level of achievement and self-reported grades (includes: IQ and similar measures)							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Reciprocal Teaching (.74 effective size)							
Teaching cognitive strategies intended to lead to improved learning outcomes. Emphasis on teachers enabling students to learn and use strategies such as summarizing, questioning, clarifying, and predicting. Dialogue between teacher and students around text. Students take turns as teacher and lead dialogue to bring meaning to written word with assistance to learn to monitor their own learning and thinking.							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Peer tutoring (.55 effect size)							
Students teaching each other (peer-explaining, peer-checking, peer-assessing); students move to being teachers of themselves							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Student disposition to learn (.48 effect size)							
Student motivation; students feeling in control of their learning experience; removing de-motivators							

Growth Guide 7.4 – Hattie Research

Standard 7: Student Assessment and Data Analysis

Quality Indicator 4: Effect of instruction on individual/class learning

Emerging		Developing		Proficient		Distinguished	
7E4) The emerging teacher... Observes the effect of class instruction on individual and whole class learning.		7D4) The developing teacher also... Collects relevant information and data about current instruction to plan future instruction.		7P4) The proficient teacher also... Engages in ongoing assessment of progress of individual students and whole class in order to advance each individual's learning of instructional objectives through modifications to instructional strategies.		7S4) The distinguished teacher also... Is capable of modeling for others the use of ongoing, consistent assessment throughout the instructional process to gather data about the effect of instruction to enhance individual and class achievement.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Remediation Feedback (.65 effect size)							
Diagnosing what students find difficult and getting students to fix it; improving performance on an assessment (feed forward)							
Mastery Learning (.50 effect size)							
Tests and retests of easy material; high pass mark; extra work and retest for those who do not pass or on weak material; numerous feedback loops based on small units of well-defined appropriately sequenced outcomes							
Testing (.30 effect size)							
Testing by itself is not as effective as remediation / feedback where the test is used to find what the student needs to improve and they then do corrective work; should provide feedback to teacher to be really effective							

Growth Guide 7.5 – Hattie Research

Standard 7: Student Assessment and Data Analysis

Quality Indicator 5: Communication of student progress and maintaining records

Emerging		Developing		Proficient		Distinguished	
7E5) The emerging teacher...		7D5) The developing teacher also...		7P5) The proficient teacher also...		7S5) The distinguished teacher also...	
Communicates general information about student progress knowledgeably, responsibly, and ethically based on appropriate indicators, to students, families, and/or colleagues.		Uses evidence to communicate student progress, knowledgeably and responsibly, based on appropriate indicators.		Uses holistic evidence from multiple data points to detail student achievement continuously throughout instruction.		Is able to mentor colleagues in the use of student performance evidence and managing records to effectively communicate student progress.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Teacher Clarity (.75 effect size)							
Important for the teacher to communicate the intention of the lesson and the notion of what success means for these intentions							

Growth Guide 7.6 – Hattie Research

Standard 7: Student Assessment and Data Analysis

Quality Indicator 6: Collaborative data analysis process

Emerging		Developing		Proficient		Distinguished	
7E6) The emerging teacher... Engages in a collaborative process of data analysis with colleagues at the grade, department and school level.		7D6) The developing teacher also... Works in teams to share and analyze data to measure accomplishment of curricular goals to inform grade-department level and/or school-wide decisions.		7P6) The proficient teacher also... Helps to establish, maintain and/or participate in professional learning communities to share and analyze data to measure accomplishment of curricular goals and plan for curricular modification.		7S6) The distinguished teacher also... Acts in a leadership position when working in teams to share and analyze data to measure accomplishment of curricular goals and to use this information to inform his/her instruction.	
Score = 0	1	2	3	4	5	6	7
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Professional Development on student achievement (.51 effect size)							
Staff development and staff training sessions; Most effective included observations on actual classroom methods, microteaching, video/audio feedback, and practice							

Growth Guide 8.1 – Hattie Research

Standard 8: Professionalism

The teacher is a reflective practitioner who continually assesses the effects of choices and actions on others. The teacher actively seeks out opportunities to grow professionally in order to improve learning for all students.

Quality Indicator 1: Self-assessment and improvement

Emerging		Developing		Proficient		Distinguished	
8E1) The emerging teacher...		8D1) The developing teacher also...		8P1) The proficient teacher also...		8S1) The distinguished teacher also...	
Generally uses self-assessment and problem-solving strategies to reflect on practice in order to influence students' growth and learning.		Consistently engages in reflective practice and consistently applies this to his/her instructional process and to modify future instruction.		Continuously engages in a variety of self-assessment and problem-solving strategies which have implications for student growth and learning, within the classroom and the larger school environment.		Models and/or serves as a mentor, in how to engage in reflective practice and in the use of, policies about, and training for using assessment data and other sources of information about student performance.	
Score = 0	1	2	3	4	5	6	7
Instructional Quality (1.00 effect size)							
Teachers ability to identify essential representations of the subject; guide learning through classroom interactions; monitor learning and provide feedback; attend to affective attributes; and influence student outcomes; Includes students view of the teaching quality.							
Providing Formative Evaluation (.90 effect size)							
Feedback on teacher performance; willingness to see negative evidence; students telling teachers how much/well they have learned							
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Professional Development on student achievement (.51 effect size)							
Staff development and staff training sessions; Most effective included observations on actual classroom methods, microteaching, video/audio feedback, and practice							

Growth Guide 8.2 – Hattie Research

Standard 8: Professionalism

Quality Indicator 2: Professional learning

Emerging		Developing		Proficient		Distinguished	
8E2) The emerging teacher... Is aware of and utilizes resources available for professional learning.		8D2) The developing teacher also... Applies knowledge gained from a variety of sources to the benefit of students in the classroom.		8P2) The proficient teacher also... Shares new knowledge and expertise with colleagues to benefit the learning of students in multiple classrooms.		8S2) The distinguished teacher also... Evaluates, procures and creates resources for professional development and actively participates in professional development in the larger professional community.	
Score = 0	1	2	3	4	5	6	7
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Professional Development on student achievement (.51 effect size)							
Staff development and staff training sessions; Most effective included observations on actual classroom methods, microteaching, video/audio feedback, and practice							

Growth Guide 8.3 – Hattie Research

Standard 8: Professionalism

Quality Indicator 3: Professional rights, responsibilities and ethical practices

Emerging			Developing		Proficient		Distinguished	
8E3) The emerging teacher... Demonstrates professionalism and ethical behavior by adhering to the code of conduct and aligning classroom practices to district policies and school procedures.			8D3) The developing teacher also... Consistently exhibits professionalism in all situations and ensures that classroom practices align to district policies and school procedures.		8P3) The proficient teacher also... Assists colleagues by consistently modeling professionalism throughout the school and district and the broader community.		8S3) The distinguished teacher also... Influences the framing, revision and advocating of policies and procedures that promotes ethical and professional behavior of all educators.	
Score = 0	1	2	3	4	5	6	7	

Growth Guide 9.1 – Hattie Research

Standard 9: Professional Collaboration

The teacher has effective working relationships with students, parents, school colleagues, and community members.

Quality Indicator 1: Induction and collegial activities

Emerging		Developing		Proficient		Distinguished	
9E1) The emerging teacher...		9D1) The developing teacher also...		9P1) The proficient teacher also...		9S1) The distinguished teacher also...	
Engages in supporting the school’s vision, mission, values and goals, participates in curriculum and staff development, and works with their trained mentor to strengthen relationships in the school and community.		Contributes to achieving the mission, vision, values and goals, including monitoring and evaluating progress toward these goals, and other school improvement efforts.		Actively engages in relationship building efforts in the school, district and community and contributes and shares knowledge and expertise in order to assist in the collective improvement of professional practice.		Informally (or formally as a mentor) is available as a resource to colleagues in the school and/or district in achieving a shared mission, vision, values and goals and relationship building efforts through collegial activities and the induction process.	
Score = 0	1	2	3	4	5	6	7
Micro Teaching (.88 effect size)							
Conducting mini-lessons and engaging in discussions about the lesson; often involves video-taping							
Professional Development on student achievement (.51 effect size)							
Staff development and staff training sessions; Most effective included observations on actual classroom methods, microteaching, video/audio feedback, and practice							

Growth Guide 9.2 – Hattie Research

Standard 9: Professional Collaboration

Quality Indicator 2: Collaborating to meet student needs

Emerging		Developing		Proficient		Distinguished	
9E2) The emerging teacher...		9D2) The developing teacher also...		9P2) The proficient teacher also...		9S2) The distinguished teacher also...	
Identifies ways to work with others across the system to provide needed services to support individual learners.		Works with colleagues and administrators at the school level and in the larger professional community to develop strategic, school-based systems to address student needs.		Consistently works with colleagues and administrators to develop strategic, school-based systems to address student needs and assists in monitoring the effectiveness of those systems.		Is capable of taking a leadership role or serving as an informal resource in working with the larger professional community in how to work with others across the system to identify and provide needed services to support individual learners.	
Score = 0	1	2	3	4	5	6	7

Growth Guide 9.3 – Hattie Research

Standard 9: Professional Collaboration

Quality Indicator 3: Cooperative partnerships in support of student learning

Emerging		Developing		Proficient		Distinguished	
9E3) The emerging teacher... Develops relationships with colleagues and cooperative partnerships with students and families to support students' learning and well-being.		9D3) The developing teacher also... With colleagues, creates and cultivates new partnerships with students, families and community members to support students' learning and well-being.		9P3) The proficient teacher also... Consistently engages with colleagues and administrators at the school and district level to develop, maintain and further partnerships with students, families and community members to support students' learning and well-being.		9S3) The distinguished teacher also... Takes an active leadership role or serve as an informal resource at the school and district level in developing partnerships with students, families and community members to support students' learning and well-being.	
Score = 0	1	2	3	4	5	6	7
Teacher-Student relationships (.72 effect size)							
Interestingly, “when students, parents, teachers and principals were asked about what influences student achievement, all BUT the teachers emphasized the relationships between the teachers and the students.” “Building relationships implies agency, efficacy, respect by the teacher for what the student brings to the class (from home, culture, and peers) and recognition of the life of the student.” Facilitate student development by demonstrating that they care for the learning of each as a person							
Class environment (cohesion) (.53 effect size)							
Positive classroom climate; the sense that the teacher and the students are working toward positive learning gains							
Parent Involvement (.51 effect size)							
Parent aspirations were the most important influence on student achievement whereas external rewards, homework surveillance, negative control and restrictions for unsatisfactory grades. Overall the higher hopes/expectations of parents the greater the students' academic achievement							