

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

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

Key for rating

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ES Effect size calculated using Cohen's *d*

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

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

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

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

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STUDENT	ES	CURRICULA	ES	HOME	ES	SCHOOL	ES
Prior knowledge and background		Reading, writing and the arts		Family structure		Leadership	
Field independence	0.68	Comprehensive instructional programs for teachers	0.72	Adopted vs non-adopted care	0.25	Collective teacher efficacy	1.57
Non-standard dialect use	-0.29	Comprehension programs	0.47	Engaged vs disengaged fathers	0.20	Principals/school leaders	0.32
Piagetian programs	1.28	Comprehension programs	0.38	Inact (two-parent) families	0.23	School climate	0.32
Prior ability	0.94	Drama/arts programs	0.43	Other family structure	0.16	School resourcing	
Prior achievement	0.55	Exposure to reading	0.37	Home environment		External accountability systems	0.31
Relating creativity to achievement	0.40	Music programs	0.37	Corporal punishment in the home	-0.33	Finances	0.21
Relations of high school to university achievement	0.60	Phonics instruction	0.70	Early years' interventions	0.44	Types of school	
Relations of high school achievement to career performance	0.38	Repeated reading programs	0.75	Home visiting	0.29	Charter schools	0.09
Self-reported grades	1.33	Second/third chance programs	0.53	Moving between schools	-0.34	Religious schools	0.24
Working memory strength	0.57	Sentence combining programs	0.15	Parental autonomy support	0.15	Single-sex schools	0.08
Beliefs, attitudes and dispositions		Spelling programs	0.58	Parental involvement	0.50	Summer school	0.23
Attitude to content domains	0.35	Visual-perception programs	0.55	Parental military deployment	-0.16	School compositional effects	
Concentration/persistence/ engagement	0.56	Vocabulary programs	0.62	Positive family/home dynamics	0.52	College halls of residence	0.05
Griff/incremental vs. entity thinking	0.25	Whole language approach	0.06	Television	-0.18	Desegregation	0.28
Mindfulness	0.29	Writing programs	0.45	Family resources		Diverse student body	0.10
Morning vs. evening	0.12	Math and sciences		Family on welfare/state aid	-0.12	Middle schools' interventions	0.08
Perceived task value	0.46	Manipulative materials on math	0.30	Non-immigrant background	0.01	Out-of-school curricula experiences	0.26
Positive ethnic self-identity	0.12	Mathematics programs	0.59	Parental employment	0.03	School choice programs	0.12
Positive self-concept	0.41	Science programs	0.48	Socio-economic status	0.52	School size (600-900 students at secondary)	0.43
Self-efficacy	0.92	Use of calculators	0.27			Other school factors	
Stereotype threat	0.33	Other curricula programs				Counseling effects	0.35
Student personality attributes	0.26	Bilingual programs	0.36			Generalized school effects	0.48
Motivational approach, orientation		Career interventions	0.38			Modifying school calendars/timetables	0.09
Achieving motivation and approach	0.44	Chess instruction	0.34			Pre-school programs	0.28
Boredom	-0.49	Conceptual change programs	0.99			Suspension/expelling students	-0.20
Deep motivation and approach	0.69	Creativity programs	0.62				
Depression	-0.36	Diversity courses	0.09				
Lack of stress	0.17	Extra-curricula programs	0.20				
Mastery goals	0.06	Integrated curricula programs	0.47				
Motivation	0.42	Juvenile delinquent programs	0.12				
Performance goals	-0.01	Motivation/character programs	0.34				
Reducing anxiety	0.42	Outdoor/adventure programs	0.43				
Surface motivation and approach	-0.11	Perceptual-motor programs	0.08				
Physical influences		Play programs	0.50				
ADHD	-0.90	Social skills programs	0.39				
ADHD – treatment with drugs	0.32	Tactile stimulation programs	0.58				
Breastfeeding	0.04						
Deafness	-0.61						
Exercise/relaxation	0.26						
Gender on achievement	0.08						
Lack of illness	0.26						
Lack of sleep	-0.05						
Full compared to pre-term/low birth weight	0.57						
Relative age within a class	0.45						

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

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