Visible Learning^plus 250+ Influences on Student Achievement

STUDENT

		ES
Prior knowledge & background		
Creativity and achievement	🔵	0.40
Non-standard dialect use	🔴	-0.29
Field independence	🔵	0.68
Piagetian programs	🔵	1.28
Prior - high school to university	🟢	0.60
Prior - to adult performance	🟢	0.38
Prior ability	🔵	0.94
Prior achievement	🔵	0.55
Self-reported grades	🔵	1.33
Working memory	🔵	0.57
Beliefs, Attitudes and Dispositions		
Attitude to content domains	🟢	0.35
Concentration/Persistence/Engagement	🔵	0.56
Grit/ Incremental vs. entity thinking	🟢	0.25
Mindfulness	🟢	0.29
Morning vs. eveningness	🟡	0.12
Personality	🟢	0.26
Self-concept	🔵	0.41
Self-efficacy	🔵	0.92
Stereotype threat	🟢	0.33
Task value	🔵	0.46
Motivational approach, orientation		
Achieving motivation and approach	🔵	0.44
Boredom	🔴	-0.49
Deep motivation and approach	🟢	0.69
Depression	🔴	-0.36
Lack of stress	🟡	0.17
Mastery goals	🟡	0.06
Motivation	🔵	0.42
Performance goals	🔴	-0.01
Reducing anxiety	🔵	0.42
Surface motivation and approach	🔴	-0.11
Physical Influences		
ADHD	🔴	-0.90
Breastfeeding	🟡	0.04
Deafness	🔴	-0.61
Drugs	🟢	0.32
Ethnicity	🟡	0.12
Exercise/Relaxation	🟢	0.26
Gender on achievement	🟡	0.08
Illness (lack of)	🟢	0.26
Pre-term birth weight	🔵	0.57
Relative age within a class	🔵	0.45
Sleep	🔴	-0.05

CURRICULA

		ES
Reading, Writing, and the Arts		
Comprehension programs	🔵	0.47
Comprehensive instructional	🔵	0.72
Drama/Arts programs	🟢	0.38
Exposure to reading	🔵	0.43
Music based programs	🔵	0.37
Phonics instruction	🔵	0.70
Repeated Reading programs	🔵	0.75
Second/Third chance programs	🔵	0.53
Sentence Combining programs	🟡	0.15
Spelling programs	🔵	0.58
Visual-Perception programs	🔵	0.55
Vocabulary programs	🔵	0.62
Whole language	🟡	0.06
Writing programs	🔵	0.45
Math and Sciences		
Manipulative materials on math	🟢	0.30
Mathematics	🔵	0.59
Science	🔵	0.48
Use of calculators	🟢	0.27
Other curricula programs		
Bilingual programs	🟢	0.36
Career Interventions	🟢	0.38
Chess	🟢	0.34
Conceptual change programs	🔵	0.99
Creativity programs	🔵	0.62
Diversity courses	🟡	0.09
Extra-curricula programs	🟡	0.20
Integrated Curricula programs	🔵	0.47
Juvenile delinquent programs	🟡	0.12
Motivation/ character programs	🟢	0.34
Outdoor/ Adventure programs	🔵	0.43
Perceptual-Motor programs	🟡	0.08
Play Programs		
Social skills programs	🟢	0.39
Tactile stimulation programs	🔵	0.58

HOME

		ES
Family structure		
Adopted children	🟢	0.25
Divorced or remarriage	🟢	0.23
Fathers	🟢	0.20
Other family structure	🟡	0.16
Family dynamics		
Corporal punishment in the home	🔴	-0.33
Home environment	🔵	0.52
Home visiting	🟢	0.29
Parental autonomy support	🟡	0.15
Parental Involvement	🔵	0.50
Television	🔴	-0.18
Family resources		
Immigrant status	🟡	0.01
Parental employment	🟡	0.03
Socioeconomic status	🔵	0.52
Welfare Policies	🔴	-0.12

SCHOOL

		ES
Other school effects		
Counseling effects	🟢	0.35
School calendars/timetables	🟡	0.09
School effects	🔵	0.48
Suspension/ Expelling students	🔴	-0.20
School resourcing		
Finances	🟢	0.21
External accountability systems	🟢	0.31
Types of school		
Charter Schools	🟡	0.09
Religious Schools	🟢	0.24
Single sex schools	🟡	0.08
Summer school	🟢	0.23
Summer vacation effect	🔴	-0.02
Pre-school experiences		
Different types of early intervention	🟢	0.29
Early Intervention	🔵	0.44
Early Intervention in the home	🟢	0.27
Head start programs	🟢	0.33
Pre school programs	🟢	0.26
Pre school with at risk students	🔵	0.56
School compositional effects		
College halls of residence	🟡	0.05
Desegregation	🟢	0.28
Diversity of students	🟡	0.10
Middle schools interventions	🟡	0.08
Military deployment	🔴	-0.16
Mobility	🔴	-0.34
Out of school curricula experiences	🟢	0.26
School choice	🟡	0.12
School size	🔵	0.43
Leadership		
Collective teacher efficacy	🔵	1.57
Principals/ School leaders	🟢	0.32
School climate	🟢	0.32

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

Key for rating

- 🔵 Potential to considerably accelerate student achievement
- 🔵 Potential to accelerate student achievement
- 🟢 Likely to have positive impact on student achievement
- 🟡 Likely to have small positive impact on student achievement
- 🔴 Likely to have a negative impact on student achievement

ES Effect size calculated using Cohen's *d*

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CLASSROOM

	ES
Classroom composition effects	
Ability grouping	0.12
Class size	0.21
Detracking	0.09
Mainstreaming	0.27
Multi-grade/age classes	0.04
Open vs. Traditional	0.01
Retention	-0.32
Small group learning	0.47
Within class grouping	0.18
School curricula for gifted students	
Ability grouping for gifted students	0.30
Acceleration	0.68
Enrichment	0.53
Classroom influences	
Background music	0.10
Classroom behavioral	0.62
Classroom cohesion	0.44
Classroom management	0.35
Cognitive behavioural programs	0.29
Decreasing disruptive behavior	0.34
Mentoring	0.12
Not being liked in class	-0.19
Peer influences	0.53

Key for rating

- **(blue)** Potential to considerably accelerate student achievement
- **(light blue)** Potential to accelerate student achievement
- **(green)** Likely to have positive impact on student achievement
- **(yellow)** Likely to have small positive impact on student achievement
- **(red)** Likely to have a negative impact on student achievement
- **ES** Effect size calculated using Cohen's d

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TEACHER

	ES
Teacher attributes	
Teacher clarity	0.75
Teacher credibility	0.90
Teacher effects	0.32
Teacher estimates of achievement	1.62
Teacher expectations	0.43
Teacher personality	0.23
Teacher performance pay	0.05
Teacher verbal ability	0.22
Teacher student interactions	
Student rating of quality of teaching	0.50
Teachers not labeling students	0.61
Teacher-Student relationships	0.52
Teacher education	
Micro teaching	0.88
Professional development	0.41
Teacher education	0.12
Teacher subject matter knowledge	0.11

TEACHING: Focus on student learning strategies

	ES
Strategies emphasizing student meta-cognitive/ self-regulated learning	
Elaboration & Organisation	0.75
Elaborative-Interrogation	0.42
Evaluation and reflection	0.75
Meta-cognitive strategies	0.60
Seeking help from peers	0.83
Self-regulation strategies	0.52
Self-verbalization & Self-questioning	0.55
Strategy monitoring	0.58
Transfer Strategies	0.86
Student focused interventions	
Aptitude/treatment interactions	0.19
Individualized instruction	0.23
Matching style of learning	0.31
Student centered teaching	0.36
Student control over learning	0.02
Strategies emphasizing student perspectives in learning	
Peer tutoring	0.53
Volunteer tutors	0.26
Learning strategies	
Deliberate practice	0.79
Effort	0.77
Help seeking	0.60
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	
Behavioral organizers/ Adjunct questions	0.42
Cognitive task analysis	1.29
Concept mapping	0.64
Goal commitment	0.40
Goal difficulty	0.59
Goal intentions	0.48
Goals	0.68
Learning hierarchies	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
Feedback	0.70
Providing formative evaluation	0.48
Questioning	0.48
Response to intervention	1.29
Types of testing	0.12
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
Humour	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 & strategies	0.43
Teaching strategies	0.57

TEACHING: Focus on implementation method

	ES
Implementations using technologies	
Clickers	0.22
Computer assisted instruction	0.47
Gaming/ simulations	0.35
Intelligent tutoring systems	0.48
Interactive video methods	0.54
Mobile phones	0.37
One on one laptops	0.16
Online, 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-/ Team teaching	0.19
Comprehensive Teaching Reforms	0.28
Interventions for learning disabled students	0.77
Special College programs	0.21
Teaching creative thinking	0.34