

Hattie's 2017 Updated List of Factors Influencing Student Achievement

 www.evidencebasedteaching.org.au/hatties-2017-updated-list/

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In this article, you will find Hattie's 2017 updated list of factors influencing student achievement.

In 2017, [Visible Learning Plus](#) published an updated list of factors that impact on student learning, along with *how much* impact that each factor had.

These factors include things that:

- Teachers, school leaders, students or parents can control
- Teachers, school leaders, students or parents can influence

The factors also include things that:

- Are outside of teachers', school leaders', students' or parents' control

This list builds on [Hattie's 2016 update](#) and now contains 250+ factors.

Hattie's 2017 Updated List of Factors

You can see Hattie's 2017 updated list of factors in the table below. Note, you can click on the table headers to see results:

- Alphabetically, by source of influence

- Alphabetically, by aspect
- Alphabetically, by factor
- From highest to lowest, by effect size (or lowest to highest)

Source of Influence	Aspect	Factor	Effect Size
Student	Physical Influences	ADHD	-0.9
Student	Physical Influences	Deafness	-0.61
Student	Motivation & Mental State	Boredom	-0.49
Student	Motivation & Mental State	Depression	-0.36
School	School Compositional Effects	Mobility	-0.34
Home	Family Dynamics	Corporal punishment in the home	-0.33
Classroom	Classroom Composition Effects	Retention	-0.32
Student	Prior Knowledge & Background	Non-standard dialect use	-0.29
School	Other School Effects	Suspending or expelling students	-0.2
Home	Family Dynamics	Television	-0.18
School	School Compositional Effects	Military deployment	-0.16
Home	Family Resources	Welfare policies	-0.12
Student	Motivation & Mental State	Surface motivation and approach	-0.11
Student	Physical Influences	Sleep	-0.05
School	Types of Schools	Summer vacation effect	-0.02
Student	Motivation & Mental State	Performance goals	-0.01
Classroom	Classroom Composition Effects	Open vs. traditional classrooms	0.01
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in distance education	0.01
Home	Family Resources	Immigrant status	0.01
Teaching: Student Learning Strategies	Student focused interventions	Student control over learning	0.02
Home	Family Resources	Parental employment	0.03
Classroom	Classroom Composition Effects	Multi-age classes	0.04
Student	Physical Influences	Breastfeeding	0.04
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Humour	0.04
Teacher	Teacher Attributes	Teacher performance pay	0.05
School	School Compositional Effects	College halls of residence	0.05

Source of Influence	Aspect	Factor	Effect Size
Student	Motivation & Mental State	Mastery goals	0.06
Curricula	Reading, Writing & Arts	Whole language	0.06
School	School Compositional Effects	Middle school interventions	0.08
School	Types of Schools	Single sex schools	0.08
Curricula	Other Curricula Programs	Perceptual-motor programs	0.08
Student	Physical Influences	Gender	0.08
School	Types of Schools	Charter schools	0.09
Classroom	Classroom Composition Effects	Detracting	0.09
School	Other School Effects	School calendars and timetables	0.09
Curricula	Other Curricula Programs	Diversity courses	0.09
Teacher	Teacher Education	Subject matter knowledge	0.09
Classroom	Classroom Influences	Background music	0.1
School	School Compositional Effects	Diversity of students	0.1
Curricula	Other Curricula Programs	Juvenile delinquent programs	0.12
Classroom	Classroom Influences	Mentoring	0.12
Student	Beliefs, Attitudes, Dispositions	Morning vs Eveningness	0.12
Student	Physical Influences	Ethnicity	0.12
School	School Compositional Effects	School choice	0.12
Teacher	Teacher Education	Teacher education	0.12
Classroom	Classroom Composition Effects	Ability grouping	0.12
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Feedback	Types of testing	0.12
Teaching: Focus On Implementation Method	Implementation Using Out of School Learning	Distance education	0.13
Home	Family Dynamics	Parental autonomy support	0.15
Curricula	Reading, Writing & Arts	Sentence combining programs	0.15
Teaching: Focus On Implementation Method	Implementation Using Out of School Learning	Home school programs	0.16
Home	Family Structure	Other family structure	0.16
Teaching: Focus On Implementation Method	Implementation Using Technology	One on one laptops	0.16
Student	Motivation & Mental State	Lack of stress	0.17

Source of Influence	Aspect	Factor	Effect Size
Classroom	Classroom Composition Effects	Within class grouping	0.18
Teaching: Focus On Implementation Method	Implementation Using Technology	Web-based learning	0.18
Classroom	Classroom Influences	Not being liked in class	0.19
Teaching: Student Learning Strategies	Student focused interventions	Aptitude/treatment interactions	0.19
Teaching: Focus On Implementation Method	Implementation Using School-Wide Teaching Initiatives	Co- or Team teaching	0.19
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Learning hierarchies	0.19
Curricula	Other Curricula Programs	Extracurricular programs	0.2
Home	Family Structure	Fathers	0.2
School	School Resourcing	Finances	0.21
Teaching: Focus On Implementation Method	Implementation Using School-Wide Teaching Initiatives	Special college programs	0.21
Classroom	Classroom Composition Effects	Class size	0.21
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in small groups	0.21
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Discovery based learning	0.21
Teaching: Focus On Implementation Method	Implementation Using Technology	Visual audio/visual methods	0.22
Teacher	Teacher Attributes	Teacher verbal ability	0.22
Student	Physical Influences	Exercise and relaxation activities	0.22
Teaching: Focus On Implementation Method	Implementation Using Technology	Clickers	0.22
Home	Family Structure	Divorced or remarried	0.23
Teacher	Teacher Attributes	Teacher personality	0.23
Teaching: Student Learning Strategies	Student focused interventions	Individualised instruction	0.23
Teaching: Focus On Implementation Method	Implementation Using Technology	Programmed instruction	0.23
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in science	0.23
School	Types of Schools	Summer school	0.23

Source of Influence	Aspect	Factor	Effect Size
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Competitive vs. individual instruction	0.24
School	Types of Schools	Religious schools	0.24
Home	Family Structure	Adopted children	0.25
Student	Beliefs, Attitudes, Dispositions	Grit / Entity vs Incremental Thinking	0.25
School	Pre-school Experiences	Preschool programs	0.26
Student	Physical Influences	Illness (lack of)	0.26
Teaching: Focus On Implementation Method	Implementation Using Technology	Use of PowerPoint	0.26
Teaching: Student Learning Strategies	Strategies Emphasising Student Perspectives	Volunteer tutors	0.26
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Problem-based learning	0.26
Student	Beliefs, Attitudes, Dispositions	Personality	0.26
Curricula	Math and Sciences	Use of calculators	0.27
School	Pre-school Experiences	Early intervention in the home	0.27
Classroom	Classroom Composition Effects	Mainstreaming	0.27
School	School Compositional Effects	Desegregation	0.28
Teaching: Focus On Implementation Method	Implementation Using School-Wide Teaching Initiatives	Comprehensive Teaching Reforms	0.28
School	Pre-school Experiences	Different types of early intervention	0.29
Teaching: Focus On Implementation Method	Implementation Using Out of School Learning	Homework	0.29
Teaching: Focus On Implementation Method	Implementation Using Technology	Online digital tools	0.29
Home	Family Dynamics	Home visiting	0.29
Classroom	Classroom Influences	Cognitive behavioural programs	0.29
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in reading/literacy	0.29
Student	Beliefs, Attitudes, Dispositions	Mindfulness	0.29
Curricula	Math and Sciences	Manipulative materials on math	0.3
Classroom	School Curricula for Gifted Students	Ability grouping for gifted students	0.3

Source of Influence	Aspect	Factor	Effect Size
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology with high school students	0.3
Teaching: Focus On Student Learning Strategies	Learning Strategies	Teaching test taking and coaching	0.3
School	Other School Effects	External accountability systems	0.31
Teaching: Student Learning Strategies	Student focused interventions	Matching style of learning	0.31
School	Leadership	Principals and school leaders	0.32
School	Leadership	School climate	0.32
Student	Physical Influences	Drugs	0.32
Teacher	Teacher Attributes	Teacher effects	0.32
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Adjunct aids	0.32
School	Pre-school Experiences	Head start programs	0.33
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in mathematics	0.33
Student	Beliefs, Attitudes, Dispositions	Stereotype threat	0.33
Teaching: Focus On Implementation Method	Implementation Using School-Wide Teaching Initiatives	Teaching Creative Thinking	0.34
Curricula	Other Curricula Programs	Motivation / character programs	0.34
Curricula	Other Curricula Programs	Chess	0.34
Classroom	Classroom Influences	Decreasing disruptive behaviour	0.34
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Collaborative learning	0.34
Teaching: Focus On Implementation Method	Implementation Using Technology	Gaming simulations	0.35
Student	Prior Knowledge & Background	Attitude to content domains	0.35
School	Other School Effects	Counselling effects	0.35
Classroom	Classroom Influences	Classroom management	0.35
Teaching: Student Learning Strategies	Student focused interventions	Student centred teaching	0.36
Curricula	Other Curricula Programs	Bilingual programs	0.36
Curricula	Reading, Writing & Arts	Music based programs	0.37

Source of Influence	Aspect	Factor	Effect Size
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Success Criteria	Worked examples	0.37
Teaching: Focus On Implementation Method	Implementation Using Technology	Mobile phones	0.37
Curricula	Reading, Writing & Arts	Dramatic arts programs	0.38
Student	Prior Knowledge & Background	Prior - adult to performance	0.38
Curricula	Other Curricula Programs	Career interventions	0.38
Curricula	Play Programs	Social skills programs	0.4
Teaching: Focus On Implementation Method	Implementation Using Out of School Learning	After-school programs	0.4
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Goal commitment	0.4
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Inquiry-based teaching	0.4
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Cooperative learning	0.4
Student	Prior Knowledge & Background	Creativity & Achievement	0.4
Student	Beliefs, Attitudes, Dispositions	Self-Concept	0.41
Teacher	Teacher Education	Professional development	0.41
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology with college students	0.42
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Behavioural organisers/Adjunct questions	0.42
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in writing	0.42
Student	Motivation & Mental State	Motivation	0.42
Student	Motivation & Mental State	Reducing anxiety	0.42
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Elaborative Interrogation	0.42
Curricula	Other Curricula Programs	Outdoor adventure programs	0.43
School	School Compositional Effects	School size	0.43
Curricula	Reading, Writing & Arts	Exposure to reading	0.43
Teacher	Teacher Attributes	Teacher expectations	0.43

Source of Influence	Aspect	Factor	Effect Size
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Teaching communication skills and strategies	0.43
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Philosophy in schools	0.43
Classroom	Classroom Influences	Classroom cohesion	0.44
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Inductive teaching	0.44
Student	Motivation & Mental State	Achieving motivation and approach	0.44
School	Pre-school Experiences	Early intervention	0.44
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology with elementary students	0.44
Curricula	Reading, Writing & Arts	Writing programs	0.45
Student	Physical Influences	Relative age within the class	0.45
Teaching: Focus On Implementation Method	Implementation Using Technology	Computer assisted instruction	0.45
Student	Beliefs, Attitudes, Dispositions	Task value	0.46
Classroom	Classroom Composition Effects	Small group learning	0.47
Curricula	Other Curricula Programs	Integrated curriculum programs	0.47
Student	Beliefs, Attitudes, Dispositions	Self-concept	0.47
Curricula	Reading, Writing & Arts	Comprehension programs	0.47
Curricula	Math and Sciences	Science programs	0.48
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Feedback	Questioning	0.48
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Goal intentions	0.48
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Feedback	Formative evaluation	0.48
Teaching: Focus On Implementation Method	Implementation Using Technology	Intelligent tutoring system	0.48
School	Other School Effects	School effects	0.48
Teaching: Student Learning Strategies	Learning Strategies	Time on task	0.49

Source of Influence	Aspect	Factor	Effect Size
Home	Family Dynamics	Parental involvement	0.5
Teaching: Student Learning Strategies	Learning Strategies	Notetaking	0.5
Teacher	Teacher-Student Interactions	Student rating of teaching	0.5
Teaching: Student Learning Strategies	Learning Strategies	Underlining and highlighting	0.5
Home	Family Resources	Socio-economic status	0.52
Home	Family Dynamics	Home environment	0.52
Teaching: Student Learning Strategies	Learning Strategies	Record keeping	0.52
Teacher	Teacher-Student Interactions	Teacher-student relationships	0.52
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Self-regulation strategies	0.52
Classroom	Classroom Influences	Peer influences	0.53
Classroom	Curricula for Gifted Students	Enrichment	0.53
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Cooperative learning compared to competitive learning	0.53
Teaching: Student Learning Strategies	Strategies Emphasising Student Perspectives	Peer tutoring	0.53
Curricula	Reading, Writing & Arts	2nd chance programs (e.g. Reading Recovery)	0.53
Teaching: Focus On Implementation Method	Implementation Using Technology	Interactive video methods	0.54
Teaching: Student Learning Strategies	Learning Strategies	Practice testing	0.54
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Cooperative learning compared to individual learning	0.55
Student	Prior Knowledge & Background	Prior achievement	0.55
Curricula	Reading, Writing & Arts	Visual perception programs	0.55
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Self-verbalising and self-questioning	0.55
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology in other subjects	0.55
Student	Beliefs, Attitudes, Dispositions	Concentration, persistence and engagement	0.56
School	Pre-school Experiences	Preschool with at risk students	0.56

Source of Influence	Aspect	Factor	Effect Size
Teaching: Focus On Implementation Method	Implementation Using Technology	Technology with learning-needs students	0.57
Student	Prior Knowledge & Background	Working memory	0.57
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Teaching strategies	0.57
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Success Criteria	Mastery learning	0.57
Student	Physical Influences	Preterm birth weight	0.57
Curricula	Play Programs	Tactile stimulation program	0.58
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Goals	0.58
Curricula	Reading, Writing & Arts	Spelling programs	0.58
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Self monitoring	0.58
Teaching: Focus On Implementation Method	Implementation Using Out of School Learning	Service learning	0.58
Curricula	Math and Sciences	Mathematics	0.59
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Goal difficulty	0.59
Teaching: Student Learning Strategies	Learning Strategies	Spaced vs massed practice	0.6
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Direct Instruction	0.6
Teaching: Student Learning Strategies	Learning Strategies	Study skills	0.6
Teaching: Student Learning Strategies	Learning Strategies	Help seeking	0.6
Student	Prior Knowledge & Background	Prior-high school to university	0.6
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Metacognitive strategies	0.6
Teacher	Teacher-Student Interactions	Not labelling students	0.61
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Setting standards for self judgement	0.62
Curricula	Other Curricula Programs	Creativity programs	0.62

Source of Influence	Aspect	Factor	Effect Size
Classroom	Classroom Influences	Classroom behavioural	0.62
Curricula	Reading, Writing & Arts	Vocabulary programs	0.62
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Concept mapping	0.64
Teaching: Student Learning Strategies	Learning Strategies	Outlining and transforming	0.66
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Problem-solving teaching	0.68
Classroom	Curricula for Gifted Students	Acceleration	0.68
Student	Prior Knowledge & Background	Field Independence	0.68
Student	Motivation & Mental State	Deep motivation and approach	0.69
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Success Criteria	Feedback	0.7
Curricula	Reading, Writing & Arts	Phonics instruction	0.7
Curricula	Reading, Writing & Arts	Comprehensive instructional	0.72
Teaching: Student Learning Strategies	Learning Strategies	Summarization	0.73
Teaching: Student Learning Strategies	Learning Strategies	Rehearsal and memorisation	0.73
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Reciprocal teaching	0.74
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Evaluation & Reflection	0.75
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Elaboration and organisation	0.75
Curricula	Reading, Writing & Arts	Repeated reading programs	0.75
Teacher	Teacher Attributes	Teacher clarity	0.75
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Planning and prediction	0.76
Teaching: Student Learning Strategies	Learning Strategies	Mnemonics	0.76
Teaching: Focus On Implementation Method	Implementation Using School- Wide Teaching Initiatives	Interventions for the learning disabled	0.77
Teaching: Student Learning Strategies	Learning Strategies	Effort	0.77

Source of Influence	Aspect	Factor	Effect Size
Teaching: Student Learning Strategies	Learning Strategies	Deliberate practice	0.79
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Scaffolding	0.82
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Feedback	Classroom discussion	0.82
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Seeking help from peers	0.83
Teaching: Student Learning Strategies	Meta-cognition/Self-Regulated Learning	Transfer strategies	0.86
Teacher	Teacher Education	Micro teaching	0.88
Teacher	Teacher Attributes	Teacher credibility	0.9
Student	Beliefs, Attitudes, Dispositions	Self-Efficacy	0.92
Teaching: Student Learning Strategies	Learning Strategies	Strategy to integrate with prior knowledge	0.93
Student	Prior Knowledge & Background	Prior ability	0.94
Curricula	Other Curricula Programs	Conceptual Change Programs	0.99
Teaching: Teaching/Instruction Strategies	Teaching/Instruction Strategies	Jigsaw method	1.2
Student	Prior Knowledge & Background	Piagetian programs	1.28
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Learning Intentions	Cognitive task analysis	1.29
Teaching: Teaching/Instruction Strategies	Strategies Emphasising Feedback	Response to Intervention	1.29
Student	Prior Knowledge & Background	Self-reported grades	1.33
School	Leadership	Collective teacher efficacy	1.57
Teacher	Teacher Attributes	Teacher estimates of student achievement	1.62