



Read more information on effect size and the statistical implications for learning.

Effect Size

These are resources to help you understand effect size and the impact the rankings have on instruction and learning.

“Professor John Hattie’s Table of Effect Sizes”
www.teacherstoolbox.co.uk/T_effect_sizes.html

Influence	Effect Size	Source of Influence
Self-reported grades	1.33	Student
Teacher estimates of achievement	1.29	Teacher
Cognitive task analysis	1.29	Teacher
Piagetian programs	1.28	Teacher
Student's prior cognitive ability	.98	Student
Direct instruction	.82	Teacher
Feedback	.74	Teacher
Acceleration	.72	Student
Behavioural intervention programs	.62	Teacher
Mastery learning	.61	Teacher
Challenge of Goals	.59	Teacher
Working memory strength	.57	Student

Click to read article

“John Hattie’s Effect Sizes”

<https://lookoutforlearning.wordpress.com/perfect-pedagogy/john-hattie-geoff-petty-effect-sizes/>

John Hattie says **'effect sizes'** are the best way of answering the question **'what has the greatest influence on student learning?'**. In effect, Hattie's in depth research provides evidence to suggest the **most successful strategies to utilise in the classroom to increase student achievement**. The information below will take you through his findings.

An **effect-size of 1.0** is typically associated with:

- Advancing learners' achievement by one year or improving the rate of learning by 50%
- A two grade leap in GCSE, e.g. from a C to an A grade

An effect size of 1.0 is clearly enormous! (It is defined as an increase of one standard deviation)

Below is Hattie's table of effect sizes.

Influence	Effect Size	Source of Influence
Feedback	1.13	Teacher
Student's prior cognitive ability	1.04	Student
Instructional quality	1.00	Teacher



Effect Size (continued)

“The ‘Effect Size’ in Educational Research: What Is It & How to Use It?”

<https://www.illuminateed.com/blog/2017/06/effect-size-educational-research-use/#:~:text=One%20of%20the%20most%20commonly,in%20a%20range%20of%20scenarios>

Intervention	Effect Size (d)
Teacher estimates of achievement	1.62
Collective teacher efficacy	1.57
Self-reported grades	1.33
Piagetian programs	1.28
Conceptual change programs	1.16
Response to intervention	1.07
Teacher credibility	0.9
Micro teaching	0.88
Cognitive task analysis	0.87
Classroom discussion	0.82
Interventions for learning disabled	0.77
Interventions for the disabled	0.77
Teacher expectations	0.75
Reciprocal teaching	0.75
Feedback	0.73

From these results, we can determine, for example, that response-to-intervention systems produced a 1.07 standard deviation greater impact on student outcomes (higher test scores) than districts not implementing RtI approaches.

Furthermore, Hattie has identified what he terms the “Super Factors” on student outcomes:

- **Teacher estimates of achievement (d = 1.62).** Unfortunately, this reflects the accuracy of a teacher’s knowledge of their students and not “teacher expectations.” Therefore, this is not a factor teachers can use to boost student achievement.

“Effect Sizes in Education: Bigger Is Better Right?”

<https://evidenceforlearning.org.au/news/effect-sizes-in-education-bigger-is-better-right/>

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Effect sizes in education: Bigger is better right?

30 October 2020
by Drew Miller

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Dr Drew Miller is the Deputy Director of the Teachers and Teaching Research Centre at the University of Newcastle. Drew has extensive experience in quantitative analysis and is the leader of evaluation and impact at the [Quality Teaching Academy](#). The Academy aims to build the capacity of teachers, schools, and systems and has a vision of quality teaching for every student, every day.

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Effect Size (continued)

“Effect Size”

<https://youtu.be/6uYNVCy-8NA>

The screenshot shows a YouTube video player interface. At the top, the YouTube logo and a search bar are visible. The video title is "Effect size". The video content features a stick figure wearing a graduation cap and holding a calculator. A speech bubble next to the figure contains the number "1.7". Below the figure is a large red button that says "Click to watch video". The video player controls at the bottom show a progress bar at 1:14 / 3:22. Below the video, the video title "Effect Size" is repeated, along with the view count "82,574 views" and the date "May 4, 2016". There are icons for likes (959), dislikes, share, and save. The channel name "John Boniello" and "184 subscribers" are listed, along with a red "SUBSCRIBE" button. A disclaimer at the bottom states: "Much of the information used in this video comes from <http://www.cem.org/attachments/ebe/ES...>"