

### Repeating a year

Negative impact for very high cost based on limited evidence

Pupils who do not reach a given standard of learning join a class of younger students the following academic year.

Implementation cost

Evidence strength

Impact (months)







#### Subject breakdown

maths: 38 reading: 45 toolkit: 71

### School phase breakdown

primary: 60 secondary: 8 toolkit: 71

# **Technical Appendix**

The criteria used to judge the inclusion of studies in the Toolkit are:

- The population sampled involved early years and school age learners from 3-18 learning in their first language.
- The intervention or approach being tested was educational in nature, including named or clearly defined programmes and
  recognisable approaches classifiable according to the Toolkit strand definitions (e.g. peer tutoring or small group
  teaching). The intervention or approach is undertaken in a normal educational setting or environment for the learners
  involved, such as a nursery or school or a typical setting (e.g. an outdoor field centre or museum).
- A valid comparison was made between those receiving the educational intervention or approach and those not receiving
   it
  - Outcomes include the assessment of educational or cognitive achievement which reports quantitative results from testing of attainment or learning outcomes, such as by standardised tests or other appropriate curriculum assessments or school examinations or appropriate cognitive measures.
- The study design provided a quantitative estimate of the impact of the intervention or approach on the educational
  attainment of the sample, calculated or estimated in the form of an effect size (standardised mean difference) based on a
  counterfactual comparison.

Standardised mean differences and confidence intervals for the most appropriate estimates of the impact of the intervention or approach for the Toolkit were extracted from each included study, along with other study variables. These effect sizes were further synthesised into a single pooled effect using a random effects meta-analysis adopting a restricted maximum likelihood (REML) estimation methods. For the full details of the methodology see the <a href="Protocol and Analysis Plan">Protocol and Analysis Plan</a> (https://educationendowmentfoundation.org.uk/public/files/Toolkit/EEF\_Evidence\_Database\_Protocol\_and\_Analysis\_Plan\_June2019.pdf)

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## References (71)

The forest plot below is a graphical representation of the results of all included studies in this Toolkit strand. It shows the effect size and confidence interval of each study, and whether the particular intervention in that study was more or less effective than standard practice or other alternative interventions that the study looked at.

Studies that show an effect size result on the right-hand side of the red vertical red indicate that the particular intervention studied was more effective than standard practice. Studies that show an effect size on the left-hand size of the red vertical indicate that the particular intervention studied was less effective than standard practice.

Author  Mantzicopoulos (1992) 1_2	Title  Kindergarten Retention: Academic and Behavioral Outcomes through the End of Second Grade (American Educational Research Journal)	Effect Size	Effect Size (Graph)					
		Effect Size: 1.678 LCI: 1.233 UCI: 2.123 Weight: 1.469 Standard error: 0.227	-4	-2	0	2	4	
Coffield (1954) 1_2	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: 1.542 LCI: 0.683 UCI: 2.402 Weight: 1.125 Standard error: 0.438	-4	-2	0	2	4	
Peterson (1987) 1_1	A Longitudinal Study of the Effects of Retention/Promotion on Academic Achievement (American Educational Research Journal)	Effect Size: 1.105 LCI: 0.729 UCI: 1.481 Weight: 1.518 Standard error: 0.192	-4	-2	0	2	4	
Peterson (1987) 1_2	A Longitudinal Study of the Effects of Retention/Promotion on Academic Achievement (American Educational Research Journal)	Effect Size: 0.915 LCI: 0.341 UCI: 1.488 Weight: 1.368 Standard error: 0.293	-4	-2	0	2	4	
Mantzicopoulos (1992) 1_1	Kindergarten Retention: Academic and Behavioral Outcomes through the End of Second Grade (American Educational Research Journal)	Effect Size: 0.877 LCI: 0.478 UCI: 1.277 Weight: 1.502 Standard error: 0.204	-4	-2	0	2	4	
Lorence (2006)	Elementary grade retention in Texas and reading achievement among racial groups: 1994-2002 (Review of Policy Research)	Effect Size: 0.759 LCI: 0.699 UCI: 0.819 Weight: 1.651 Standard error: 0.031	-4	-2	0	2	4	



Author	Title	Effect Size	Effect Size (Graph)			
Mitchell (1968) 1_2	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in	Effect Size: 0.595 LCI: 0.225		I		
	the elementary schools of Rapid City (NA)	UCI: 0.966 Weight: 1.522 Standard error: 0.189	-4 -2	0	2	4
Peterson (1987) 1_3	A Longitudinal Study of the Effects of Retention/Promotion on Academic Achievement	Effect Size: 0.557 LCI: -0.2		÷ <b>=</b>	-	
	(American Educational Research Journal)	UCI: 1.315 Weight: 1.212 Standard error: 0.386	-4 -2	0	2	4
Alexander (1994) 1_4	On the success of failure: a reassessment of the effects of retention in the primary grades	Effect Size: 0.552 LCI: 0.144		I		
	(NA)	UCI: 0.96 Weight: 1.496 Standard error: 0.208	-4 -2	0	2	4
Pierson (1992) 1_2	Effect of Grade Retention on Self-System Processes, School Engagement, and Academic Performance	Effect Size: 0.546 LCI: 0.137		Į.		
	(Journal of Educational Psychology)	UCI: 0.955 Weight: 1.495 Standard error: 0.209	-4 -2	0	2	4
Mitchell (1968) 1_6	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in	Effect Size: 0.521 LCI: -0.197		+		
	the elementary schools of Rapid City (NA)	UCI: 1.239 Weight: 1.246 Standard error: 0.366	-4 -2	0	2	4
Abidin (1971)	Elementary school retention: An unjustifiable, discriminatory and noxious educational policy	Effect Size: 0.486 LCI: 0.115				
	(Journal of School Psychology)	UCI: 0.858 Weight: 1.521 Standard error: 0.19	-4 -2	0	2	4
Mariano (2013) RY	The Academic Effects of Summer Instruction and Retention in New York City	Effect Size: 0.481 LCI: 0.203				
	(Educational Evaluation and Policy Analysis)	UCI: 0.759 Weight: 1.577 Standard error: 0.142	-4 -2	0	2	4
Mitchell (1968) 1_4	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in	Effect Size: 0.469 LCI: 0.045		Į-		
	the elementary schools of Rapid City  (NA)	UCI: 0.893 Weight: 1.485 Standard error: 0.216	-4 -2	0	2	4
Alexander (1994) 1_2	On the success of failure: a reassessment of the effects of retention in the primary grades	Effect Size: 0.45 LCI: 0.157				
-	(NA)	UCI: 0.742 Weight: 1.569 Standard error: 0.149	-4 -2	0	2	4



<b>Author</b> Ogden (1971) 1_4	An Evaluation of Nonpromotion as a Method of Improving Academic Performance (NA)	Effect Size	Effect Size (Graph)					
		Effect Size: 0.358 LCI: -0.132 UCI: 0.848	-4	-2	0	2	4	
		Weight: 1.435 Standard error: 0.25						
Farley (1936) 1_3	Regarding repeaters: Sad effect of failures upon the child (The Nation's Schools)	Effect Size: 0.348 LCI: -0.125			-			
	(THE NUMBER OF THE NUMBER OF T	UCI: 0.821 Weight: 1.448 Standard error: 0.241	-4	-2	0	2	4	
Oldham (1982)	The Longitudinal Effects of Pupil Retention Practices in the First Three Grades	Effect Size: 0.246 LCI: -0.151						
	(NA)	UCI: 0.644 Weight: 1.503 Standard error: 0.203	-4	-2	0	2	4	
Gleason (2007)	The Short-Term Effect of Grade Retention on Peer Relations and Academic Performance of At-Risk First	Effect Size: 0.192 LCI: -0.081						
	Graders (The Elementary School Journal)	UCI: 0.466 Weight: 1.58 Standard error: 0.139	-4	-2	0	2	4	
Jacob (2004) 1_1	Remedial education and student achievement: A regression-discontinuity analysis	Effect Size: 0.162 LCI: 0.06						
	(Review of Economics and Statistics)	UCI: 0.264 Weight: 1.644 Standard error: 0.052	-4	-2	0	2	4	
Farley (1936) 1_2	Regarding repeaters: Sad effect of failures upon the child (The Nation's Schools)	Effect Size: 0.16 LCI: -0.193						
	(menduone concord)	UCI: 0.514 Weight: 1.533 Standard error: 0.18	-4	-2	0	2	4	
Anderson (1957) 1_2	The Identification and Evaluation of Differences among Promoted, Not Promoted, and Considered for	Effect Size: 0.159 LCI: -0.172						
	Nonpromotion but Promoted Pupils in Third Grades (NA)	UCI: 0.49 Weight: 1.547 Standard error: 0.169	-4	-2	0	2	4	
Farley (1936) 1_1	Regarding repeaters: Sad effect of failures upon the child (The Nation's Schools)	Effect Size: 0.09 LCI: -0.21						
	(	UCI: 0.391 Weight: 1.564 Standard error: 0.154	-4	-2	0	2	4	
Johnson (1990) 1_2	The effects of early grade retention on the academic achievement of fourth-grade students	Effect Size: 0.08 LCI: -0.567			_			
	(Psychology in the Schools)	UCI: 0.726 Weight: 1.307 Standard error: 0.33	-4	-2	0	2	4	



Author	Title	Effect Size	Effect Size (Graph)					
Mitchell (1968) 1_8	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in the elementary schools of Rapid City (NA)	Effect Size: 0.06 LCI: -0.725 UCI: 0.845 Weight: 1.189 Standard error: 0.4	-4 -2	0	2	4		
Phelps (1992)	Five to ten years after placement: The long-term efficacy of retention and pre-grade transition (Journal of Psychoeducational Assessment)	Effect Size: 0.03 LCI: -0.536 UCI: 0.596 Weight: 1.374 Standard error: 0.289	-4 -2	0	2	4		
Jimerson (2007) 1_2	A longitudinal study of grade retention: Academic and behavioral outcomes of retained students through adolescence (School Psychology Quarterly)	Effect Size: -0.005 LCI: -0.688 UCI: 0.678 Weight: 1.276 Standard error: 0.348	-4 -2	0	2	4		
Hong (2005) 1_2	Effects of Kindergarten Retention Policy on Children's Cognitive Growth in Reading and Mathematics (Educational Evaluation and Policy Analysis)	Effect Size: -0.018 LCI: -0.084 UCI: 0.048 Weight: 1.65 Standard error: 0.034	-4 -2	0	2	4		
Roderick (2005) 1_1	Retention Under Chicago's High-Stakes Testing Program: Helpful, Harmful, or Harmless? (Educational Evaluation and Policy Analysis)	Effect Size: -0.023 LCI: -1.806 UCI: 1.761 Weight: 0.547 Standard error: 0.91	-4 -2	0	2	4		
Ammons (1975)	A Study of the Effects of Non Promotion and Promotion as related to Achievement and Self-Concept of Elementary School Students (NA)	Effect Size: -0.024 LCI: -0.53 UCI: 0.482 Weight: 1.423 Standard error: 0.258	-4 -2	0	2	4		
Jacob (2004) 1_2	Remedial education and student achievement: A regression-discontinuity analysis (Review of Economics and Statistics)	Effect Size: -0.077 LCI: -0.191 UCI: 0.037 Weight: 1.641 Standard error: 0.058	-4 -2	0	2	4		
Alexander (1994) 1_6	On the success of failure: a reassessment of the effects of retention in the primary grades (NA)	Effect Size: -0.084 LCI: -0.434 UCI: 0.266 Weight: 1.535 Standard error: 0.178	-4 -2	0	2	4		
Jimerson (1997)	A Prospective, Longitudinal Study of the Correlates and Consequences of Early Grade Retention (Journal of School Psychology)	Effect Size: -0.133 LCI: -0.961 UCI: 0.694 Weight: 1.152 Standard error: 0.422	-4 -2	0	2	4		



Author	Title	Effect Size	Effect Size (Graph)					
Mitchell (1968) 1_9	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in the elementary schools of Rapid City (NA)	Effect Size: -0.181 LCI: -0.489 UCI: 0.127 Weight: 1.561 Standard error: 0.157	-4 -2	0	2	4		
Silberglitt (2006) 1_1	Examining the Effects of Grade Retention on Student Reading Performance: A Longitudinal Study (Journal of School Psychology)	Effect Size: -0.21 LCI: -0.607 UCI: 0.187 Weight: 1.504 Standard error: 0.203	-4 -2	0	2	4		
Griffith (2010)	Grade Retention of Students during Grades K-8 Predicts Reading Achievement and Progress during Secondary Schooling (Reading & Writing Quarterly)	Effect Size: -0.244 LCI: -0.337 UCI: -0.15 Weight: 1.645 Standard error: 0.048	-4 -2	0	2	4		
Niklason (1984)	Nonpromotion: A pseudoscientific solution (retention, grade failure) (NA)	Effect Size: -0.252 LCI: -0.651 UCI: 0.147 Weight: 1.502 Standard error: 0.204	-4 -2	0	2	4		
Pierson (1992) 1_1	Effect of Grade Retention on Self-System Processes, School Engagement, and Academic Performance (Journal of Educational Psychology)	Effect Size: -0.342 LCI: -0.672 UCI: -0.011 Weight: 1.547 Standard error: 0.169	-4 -2	0	2	4		
Mitchell (1968) 1_5	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in the elementary schools of Rapid City (NA)	Effect Size: -0.367 LCI: -1.078 UCI: 0.344 Weight: 1.252 Standard error: 0.363	-4 -2	0	2	4		
Coffield (1954) 1_8	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -0.371 LCI: -1.071 UCI: 0.329 Weight: 1.261 Standard error: 0.357	-4 -2	0	2	4		
Mitchell (1968) 1_1	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in the elementary schools of Rapid City (NA)	Effect Size: -0.385 LCI: -0.751 UCI: -0.019 Weight: 1.525 Standard error: 0.187	-4 -2	0	2	4		
Worth (1960)	Promotion or nonpromotion? (Educational Administration and Supervision)	Effect Size: -0.516 LCI: -0.863 UCI: -0.169 Weight: 1.537 Standard error: 0.177	-4 -2	0	2	4		



Author	Title	Effect Size	Effect Size (Graph)					
Wallihan (1955)	A comparative study of retardation in the primary grades of the San Diego, California, city schools (NA)	Effect Size: -0.547 LCI: -0.726 UCI: -0.368 Weight: 1.622 Standard error: 0.091	-4 -2 0 2	4				
Cooper (1980)	The Relationship between Nonpromotion and Achievement, Self-Concept, and Overt Behavior of Children Experiencing Difficulty in Kindergarten or First Grade (Education)	Effect Size: -0.568 LCI: -1.296 UCI: 0.159 Weight: 1.238 Standard error: 0.371	-4 -2 0 2	4				
Coffield (1954) 1_3	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -0.569 LCI: -1.147 UCI: 0.009 Weight: 1.364 Standard error: 0.295	-4 -2 0 2	4				
Alexander (1994) 1_3	On the success of failure: a reassessment of the effects of retention in the primary grades (NA)	Effect Size: -0.574 LCI: -0.982 UCI: -0.166 Weight: 1.496 Standard error: 0.208	-4 -2 0 2	4				
Roderick (2005) 1_2	Retention Under Chicago's High-Stakes Testing Program: Helpful, Harmful, or Harmless? (Educational Evaluation and Policy Analysis)	Effect Size: -0.577 LCI: -2.576 UCI: 1.422 Weight: 0.467 Standard error: 1.02	-4 -2 0 2	4				
Chansky (1964)	Progress of Promoted and Repeating Grade 1 Failures (The Journal of Experimental Education)	Effect Size: -0.591 LCI: -1.118 UCI: -0.064 Weight: 1.406 Standard error: 0.269	-4 -2 0 2	4				
Ogden (1971) 1_1	An Evaluation of Nonpromotion as a Method of Improving Academic Performance (NA)	Effect Size: -0.597 LCI: -0.998 UCI: -0.196 Weight: 1.501 Standard error: 0.205	-4 -2 0 2	4				
Coffield (1954) 1_5	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -0.597 LCI: -1.248 UCI: 0.054 Weight: 1.303 Standard error: 0.332	-4 -2 0 2	4				
Coffield (1954) 1_6	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -0.625 LCI: -1.708 UCI: 0.457 Weight: 0.947 Standard error: 0.552	-4 -2 0 2	4				



Author	Title	Effect Size	Effect Size (Graph)					
Beebe- Frankenberger	Sorting second-grade students: Differentiating those retained from those promoted	Effect Size: -0.628 LCI: -1.144			<b></b>			
(2004) 1_2	(Journal of Educational Psychology)	UCI: -0.112 Weight: 1.415 Standard error: 0.263	-4	-2	0	2	4	
Ogden (1971) 1_2	An Evaluation of Nonpromotion as a Method of Improving Academic Performance	Effect Size: -0.638 LCI: -1.143			<b>■</b> -1			
	(NA)	UCI: -0.133 Weight: 1.423 Standard error: 0.258	-4	-2	0	2	4	
Mitchell (1968) 1_3	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in	Effect Size: -0.674 LCI: -1.104						
	the elementary schools of Rapid City (NA)	UCI: -0.244 Weight: 1.48 Standard error: 0.219	-4	-2	0	2	4	
Hughes (1983)	Cognitive Development in Retained First Grade Pupils (Nonpromotion)	Effect Size: -0.712 LCI: -1.066						
	(NA)	UCI: -0.359 Weight: 1.533 Standard error: 0.18	-4	-2	0	2	4	
Hagborg (1991)	A follow-up study of high school students with a history of grade retention	Effect Size: -0.759 LCI: -1.225		-	<b>-</b>			
	(Psychology in the Schools)	UCI: -0.292 Weight: 1.453 Standard error: 0.238	-4	-2	0	2	4	
Mitchell (1968) 1_7	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in	Effect Size: -0.769 LCI: -1.587		-				
	the elementary schools of Rapid City (NA)	UCI: 0.05 Weight: 1.16 Standard error: 0.418	-4	-2	0	2	4	
Spithill (1965)	The effects of nonpromotion on achievement and maturation in the junior high school	Effect Size: -0.789 LCI: -1.196			<b>■</b> 1			
	(NA)	UCI: -0.381 Weight: 1.496 Standard error: 0.208	-4	-2	0	2	4	
McGill (1965)	A Comparison Study of the Gains Made by Non- Promoted and Promoted Students in the Snoqualmie	Effect Size: -0.873 LCI: -1.292		1 4	<b>■</b> I			
	Valley Elementary Schools (NA)	UCI: -0.453 Weight: 1.488 Standard error: 0.214	-4	-2	0	2	4	
Reynolds (1992)	Grade Retention and School Adjustment: An Explanatory Analysis	Effect Size: -0.919 LCI: -1.118						
	(Educational Evaluation and Policy Analysis)	UCI: -0.72 Weight: 1.614 Standard error: 0.102	-4	-2	0	2	4	



Author  Alexander (1994) 1_5	Title	Effect Size	Effect Size (Graph)					
	On the success of failure: a reassessment of the effects of retention in the primary grades (NA)	Effect Size: -0.931 LCI: -1.33 UCI: -0.532 Weight: 1.502 Standard error: 0.203	-4 -2	0	2	4		
Coffield (1954) 1_7	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -0.941 LCI: -2.066 UCI: 0.185 Weight: 0.916 Standard error: 0.574	-4 -2	0	2	4		
Dobbs (1967)	The effect of nonpromotion on the achievement of groups matched from retained first graders and promoted second graders (Journal of Educational Research)	Effect Size: -0.955 LCI: -1.491 UCI: -0.419 Weight: 1.399 Standard error: 0.274	-4 -2	0	2	4		
Dennebaum (1994) 1_2	Kindergarten Retention and Transition Classrooms: Their Relationship to Achievement (NA)	Effect Size: -1.098 LCI: -1.762 UCI: -0.434 Weight: 1.292 Standard error: 0.339	-4 -2	0	2	4		
Cosden (1995)	Kindergarten Practices and First-Grade Achievement for Latino Spanish-Speaking, Latino English-Speaking, and Anglo Students (Journal of School Psychology)	Effect Size: -1.118 LCI: -1.848 UCI: -0.389 Weight: 1.236 Standard error: 0.372	-4 -2	-   0	2	4		
Alexander (1994) 1_1	On the success of failure: a reassessment of the effects of retention in the primary grades (NA)	Effect Size: -1.242 LCI: -1.556 UCI: -0.928 Weight: 1.557 Standard error: 0.16	-4 -2	0	2	4		
Mitchell (1968) 1_10	A longitudinal study of the effects of nonpromotion and remedial summer school on educational achievement in the elementary schools of Rapid City (NA)	Effect Size: -1.274 LCI: -1.614 UCI: -0.934 Weight: 1.541 Standard error: 0.173	-4 -2	0	2	4		
Coffield (1954) 1_4	A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -1.317 LCI: -2.067 UCI: -0.567 Weight: 1.218 Standard error: 0.383	-4 -2	0	2	4		
Garner (1968) 1_1	The effect of age and certain other variables on the retention and subsequent achievement of first grade children (Education)	Effect Size: -1.317 LCI: -1.674 UCI: -0.959 Weight: 1.53 Standard error: 0.182	-4 -2	] 0	2	4		



Author  Coffield (1954) 1_1	Title  A longitudinal study of the effects of non-promotion on educational achievement in the elementary school (NA)	Effect Size: -1.339 LCI: -1.809 UCI: -0.869 Weight: 1.451 Standard error: 0.24	Effect Size (Graph)					
			-4	-2	0	2	4	
Laughlin (1982)	Effect of Nonpromotion on Self-Concept and Reading Achievement (NA)	Effect Size: -1.34 LCI: -1.722 UCI: -0.958 Weight: 1.514 Standard error: 0.195	-4	-2	0	2	4	