Associations Between Exposures and Education Outcomes

Outcome	Specific Outcome	Exposure	Lead Author, Date	r with 95% CI	I²	K	N	Indiv. Data	Eggers	Excess Signif.	
Learning	Literacy and numeracy	Screen-based intervention: Sesame Street	Mares, 2013	0.14 [0.08, 0.20]		15	7,604	✘	–	–	
	General	Screen-based intervention: Sesame Street	Mares, 2013	0.14 [0.10, 0.19]		24	10,596	✘	–	–	
	Physical and social environment	Screen-based intervention: Sesame Street	Mares, 2013	0.17 [0.09, 0.24]		13	7,797	✘	–	–	
	Educational achievement problems	Internet use: Cyberbullying victimization	Gardella, 2017	0.15 [0.13, 0.17]	0%	7	7,768	✔	✘	✔	
	School attendance problems	Internet use: Cyberbullying victimization	Gardella, 2017	0.20 [0.18, 0.21]	0%	9	25,242	✔	✘	✔	
	General	Screen-based intervention: Education (via computer)	Liao, 2008	0.22 [NA, NA]		48	5,121	✘	–	–	
	General	Screen use: General (mobile phone)	Kates, 2018	-0.12 [-0.19, -0.05]		8	135,131	✘	–	–	
Literacy	General	TV programs and movies: Coviewing	Madigan, 2020	0.11 [0.01, 0.20]		9	3,376	✘	–	–	
	General	Screen-based intervention: Literacy	McArthur, 2018	0.22 [0.11, 0.33]	0%	6	294	✔	✘	✔	
	Phonics	Screen-based intervention: Literacy (phonics; via computer)	McArthur, 2012	0.15 [-0.02, 0.33]	0%	4	124	✔	✘	✔	
	Decoding	e-Books: General	Zucker, 2009	0.09 [-0.10, 0.28]	0%	2	109	✔	✘	✔	
	Reading comprehension	e-Books: General	Zucker, 2009	0.23 [0.10, 0.35]	44%	7	401	✔	✘	✔	
	Reading comprehension	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.03 [-0.03, 0.09]	0%	6	1,045	✘	–	–	
	Reading fluency	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.04 [-0.06, 0.14]	74%	6	1,725	✘	–	–	
	Vocabulary knowledge	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.05 [-0.04, 0.14]	50%	15	1,167	✘	–	–	
	Listening comprehension	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.09 [-0.06, 0.23]	82%	7	1,171	✘	–	–	
	Phonics	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.09 [0.04, 0.15]	0%	19	1,238	✘	–	–	
	Phonemic awareness	Screen-based intervention: Literacy (Abracadabra; in schools)	Abrami, 2015	0.16 [0.11, 0.21]	0%	20	1,753	✘	–	–	
	Writing	Screen-based intervention: Writing feedback	Graham, 2015	0.19 [0.08, 0.28]	0%	4	463	✘	–	–	
	General	Screen-based intervention: Literacy videos	Hurwitz, 2018	0.10 [0.07, 0.13]	0%	783	24,624	✘	–	–	
	Reading	Screen-based intervention: Reading (in schools)	Cheung, 2012	0.08 [0.06, 0.10]	78%	84	60,553	✘	–	–	
	Reading fluency	Screen-based intervention: Literacy	Blok, 2002	0.13 [0.07, 0.18]	62%	50	1,121	✘	–	–	
	General	TV programs and movies: General	Adelantado-Renau, 2019	-0.12 [-0.15, -0.09]	54%	8	16,761	✔	✘	✔	
	General	TV programs and movies: General (in background)	Madigan, 2020	-0.19 [-0.31, -0.06]	70%	5	2,792	✔	✘	✔	
Numeracy	General	Screen-based intervention: Mathematics (via computer in classrooms)	Kroesbergen, 2003	0.29 [0.23, 0.36]	0%	11	848	✔	✔	✔	
	General	Screen-based intervention: Mathematics (in schools)	Cheung, 2013	0.08 [0.06, 0.10]	72%	73	56,891	✔	✘	✔	
	General	Screen-based intervention: Dynamic geometry software	Chan, 2014	0.43 [0.29, 0.57]	92%	9	1,174	✔	✘	✔	
	General	TV programs and movies: General	Adelantado-Renau, 2019	-0.12 [-0.18, -0.07]	78%	7	14,115	✔	✘	✔	
	General	Screen-based intervention: Cognitive training	Oldrati, 2020	0.17 [0.04, 0.30]	68%	11	693	✔	✔	✔	
Science	General	Screen-based intervention: Science (in schools)	Slavin, 2014	0.21 [NA, NA]		6	2,384	✘	–	–	

Note:
Indiv. Data: Individual study data available for reanalysis.
Eggers: *P* > 0.05 for Egger's test of asymmetry, or too few studies to analyse (K < 10).
Excess Signif.: *P* > 0.05 for test for excess significance.

r with **95%** and 99.9% CIs