Associations Between Exposures and Education Outcomes

Outcome	Specific Outcome	Exposure	Age Group	Population	Study Design	Lead Author, Date	*r* with 95% CI	I²	K	N	
Learning	General	TV programs and movies: General	Mixed	General	Cross-sectional only	Adelantado-Renau, 2019	-0.10 [-0.15, -0.04]	98%	18	62,135	
	General	TV programs and movies: General	Mixed	General	Mixed or unspecified	Williams, 1982	-0.09 [-0.13, -0.04]	96%	23	86,507	
	General	Video games: General	Mixed	General	Cross-sectional only	Adelantado-Renau, 2019	-0.08 [-0.12, -0.04]	40%	10	4,276	
	General	Video games: Educational (with instructional support)	Children	General	Experimental	Wouters, 2013	0.15 [0.05, 0.25]	66%	16	1,287	
	General	e-Books: Narration	Mixed	General	Experimental	Takacs, 2014	0.11 [0.05, 0.17]	56%	50	2,288	
	Literacy and numeracy	Screen use: Educational apps	Young children	General	Experimental	Kim, 2021	0.21 [0.13, 0.30]	76%	15	2,011	
	Literacy and numeracy	Screen use: Educational apps	Children	General	Experimental	Kim, 2021	0.15 [0.10, 0.20]	72%	36	5,447	
	Motivation	Video games: Educational	Children	General	Experimental	Wouters, 2013	0.16 [0.02, 0.31]	84%	10	1,183	
	Motivation	Video games: Educational (with competition)	Children	General	Mixed or unspecified	Arztmann, 2022	0.26 [0.17, 0.35]	82%	15	9,318	
	General	Screen use: General	Mixed	General	Cross-sectional only	Adelantado-Renau, 2019	-0.11 [-0.24, 0.01]	98%	18	13,100	
	General	Screen use: Touchscreens	Young children	General	Experimental	Xie, 2018	0.21 [0.15, 0.28]	86%	79	5,810	
	General	Screen-based intervention: Augmented reality (in schools)	Mixed	General	Mixed or unspecified	Tekedere, 2016	0.33 [0.25, 0.42]	68%	15	1,474	
	General	Screen-based intervention: Education (via touch screen)	Young children	General	Experimental	Xie, 2018	0.21 [0.15, 0.28]	86%	79	5,810	
	General	Screen-based intervention: Literacy (Abracadabra; in schools)	Mixed	General	Experimental	Major, 2021	0.09 [0.06, 0.12]	90%	15	52,377	
Literacy	General	Screen use: Educational apps	Children	General	Experimental	Kim, 2021	0.16 [0.06, 0.25]	58%	12	1,095	
	General	Screen use: General	Mixed	General	Observational - mixed	Madigan, 2020	-0.14 [-0.20, -0.09]	90%	38	18,318	
	General	Screen use: General (coviewing)	Mixed	General	Observational - mixed	Madigan, 2020	0.15 [0.02, 0.28]	96%	12	6,083	
	General	TV programs and movies: Educational	Mixed	General	Observational - mixed	Madigan, 2020	0.13 [0.03, 0.23]	82%	13	1,955	
	Phonics	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.09 [0.01, 0.17]	82%	11	4,954	
	Reading	Screen-based intervention: Reading (technology supported)	Children	Poor readers	Experimental	Neitzel, 2022	0.04 [0.01, 0.06]	0%	27	5,736	
	Reading comprehension	e-Books: General	Young children	General	Experimental	Furenes, 2021	-0.02 [-0.08, 0.03]	0%	26	1,192	
Numeracy	General	Screen use: Educational apps	Children	General	Experimental	Kim, 2021	0.15 [0.08, 0.21]	76%	24	4,352	
	General	Screen-based intervention: Mathematics	Mixed	General	Experimental	Li, 2010	0.27 [0.21, 0.33]	98%	85	36,793	
	General	Video games: Numeracy	Mixed	General	Mixed or unspecified	Byun, 2018	0.32 [0.21, 0.43]	88%	25	2,008	
	Mathematics	Video games: Educational	Mixed	General	Experimental	Tokac, 2019	0.06 [0.00, 0.12]	84%	39	6,557	

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