Associations Between Exposures and Education Outcomes

Outcome	Specific Outcome	Exposure	Age Group	Lead Author, Date	<i>r</i> with 95% CI	l ²	K	N	Indiv. Data	Eggers	Excess Signif.			
Learning	General	Screen use: General (mobile phone)	All	Kates, 2018	-0.12 [-0.19, -0.05]		8	135,131	×	-	-	-	—	
	General	Screen-based intervention: Sesame Street	Children	Mares, 2013	0.14 [0.10, 0.19]		24	10,596	×	-	-			
	Literacy and numeracy	Screen-based intervention: Sesame Street	Children	Mares, 2013	0.14 [0.08, 0.20]		15	7,604	×	-	-		_	
	Physical and social environment	Screen-based intervention: Sesame Street	Children	Mares, 2013	0.17 [0.09, 0.24]		13	7,797	×	_	-		_ _	•
	Educational achievement problems	Internet use: Cyberbullying victimization	Adolescents	Gardella, 2017	0.15 [0.13, 0.17]	0%	7	7,768	~	×	•			D
	School attendance problems	Internet use: Cyberbullying victimization	Adolescents	Gardella, 2017	0.20 [0.18, 0.21]	0%	9	25,242	~	×	•			0
	General	Screen-based intervention: Education (via computer)	Children	Liao, 2008	0.22 [0.15, 0.29]		48	5,121	×	_	_			-0-
	General	Screen-based intervention:	Children	Schroeder, 2013	0.27 [0.17, 0.36]	0%	5	348	×	_	_			
		With digital characters											l I	
Literacy	General	TV programs and movies: General	All	Adelantado-Renau, 2019	-0.12 [-0.15, -0.09]	54%	8	16,761	~	×	•		OIII	
	General	Screen-based intervention: Education (general)	Children	Madigan, 2020	0.15 [-0.03, 0.31]		7	1,228	×	-	-			
	General	TV programs and movies: Coviewing	Children	Madigan, 2020	0.11 [0.01, 0.20]		9	3,376	×	-	-		-0	-
	General	TV programs and movies: General	Children	Madigan, 2020	-0.15 [-0.21, -0.09]		26	12,337	×	-	-	-0	-	
	General	TV programs and movies: General (in background)	Children	Madigan, 2020	-0.19 [-0.31, -0.06]	70%	5	2,792	~	×	•	•	-	
	Pronunciation	Screen-based intervention: Pronunciation	All	Hassan Saleh, 2019	0.22 [NA, NA]	82%	6	302	×	-	-			0
	General	Screen-based intervention: Literacy	All	McArthur, 2018	0.22 [0.11, 0.33]	0%	6	294	~	×	•		_	0
	Phonics	Screen-based intervention: Literacy (phonics; via computer)	All	McArthur, 2012	0.15 [-0.02, 0.33]	0%	4	124	~	×	•			
	Decoding	e-Books: General	Children	Zucker, 2009	0.09 [-0.10, 0.28]	0%	2	109	~	×	•	_		+
	Reading comprehension	e-Books: General	Children	Zucker, 2009	0.23 [0.10, 0.35]	44%	7	401	~	×	•			0
	Listening comprehension	Screen-based intervention:	Children	Abrami, 2015	0.09 [-0.06, 0.23]	82%	7	1,171	×	_	_			<u> </u>
	Phonics	Literacy (Abracadabra; in schools) Screen-based intervention:	Children	Abrami, 2015	0.09 [0.04, 0.15]	0%	19	1,238	x	_	_			
	Phonomic awareness	Literacy (Abracadabra; in schools) Screen-based intervention:	Children	Abrami, 2015	0.16 [0.11, 0.21]	0%	20	1,753	•	_	_			
	Reading comprehension	Literacy (Abracadabra; in schools) Screen-based intervention:	Children	Abrami, 2015	0.03 [-0.03, 0.09]	0%	6	1,045	×	_	_			
		Literacy (Abracadabra; in schools) Screen-based intervention:		·		74%	6	1,725	•••	_	_			
	Reading fluency	Literacy (Abracadabra; in schools) Screen-based intervention:	Children	Abrami, 2015	0.04 [-0.06, 0.14]				*	-	-			
	Vocabulary knowledge	Literacy (Abracadabra; in schools) Screen-based intervention:	Children	Abrami, 2015	0.05 [-0.04, 0.14]	50%	15	1,167	×	-	-			
	Writing	Writing feedback Screen-based intervention:	All	Graham, 2015	0.19 [0.08, 0.28]	0%	4	463	×	-	-			
	General	Literacy videos Screen-based intervention:	Children	Hurwitz, 2018	0.10 [0.07, 0.13]	0%	783	24,624	×	-	-		IIOI	
	Reading	Reading (in schools)	All	Cheung, 2012	0.08 [0.06, 0.10]	78%	84	60,553	×	-	-		O	
	Reading fluency	Screen-based intervention: Literacy	All	Blok, 2002	0.13 [0.07, 0.18]	62%	50	1,121	×	-	-		=0	-
Numeracy	General	Screen-based intervention: Mathematics	Children	Küçükalkan, 2019	0.29 [0.24, 0.34]	86%	31	2,290	×	_	_			
	General	TV programs and movies: General	All	Adelantado-Renau, 2019	-0.12 [-0.18, -0.07]	78%	7	14,115	~	×	•			
	General	Screen-based intervention:	All	Oldrati, 2020	0.17 [0.04, 0.30]	68%	11	693	*	•				
		Cognitive training Screen-based intervention:			-			848	•	·	•			
	General	Mathematics (via computer in classrooms) Screen-based intervention:	Children	Kroesbergen, 2003	0.29 [0.23, 0.36]	7204	11		•	✓	•			
	General	Mathematics (in schools) Screen-based intervention:	All	Cheung, 2013	0.08 [0.06, 0.10]	72%	73	56,891	~	×	•		101	
	General	Dynamic geometry software	All	Chan, 2014	0.43 [0.29, 0.57]	92%	9	1,174	~	×	✓			
Science	General	Screen-based intervention: Science (in schools)	Children	Slavin, 2014	0.21 [0.15, 0.26]		6	2,384	×	_	-			