

Review Characteristics							Review characteristics for studies providing unique effects									
Review Characteristics							Review characteristics and quality assessment for meta-analyses providing unique effects									
Review Characteristics							Quality Assessment ¹									
First Author	Year	Design Restrictions	Sample Restrictions	Review Range: Earliest - Latest	Sample Age Restrictions (Age Range) ²	Outcomes Assessed	Exposures Assessed	Elig. Crit. ³	Lit. Search	Dual Screen	Dual Qual. ⁴	Study: Listed ⁵	Pub. Bias ⁶	Hetero		
						<ul style="list-style-type: none">• Literacy: Listening comprehension• Literacy: Phonics• Literacy: Phonomic awareness• Literacy: Reading comprehension• Literacy: Reading fluency• Literacy: Vocabulary knowledge	<ul style="list-style-type: none">• Intervention: Literacy (Abracadabra; in schools)		U	U	L	H	L	L	L	
Abrami	2020	Include: Experimental designs	None specified	2009–2019	School-age Children (Early Primary, Elementary)											
Adelantado Renau	2019	Include: Cross-sectional studies	None specified	1982–2019	Children; Adolescents (5.7–18.0)	<ul style="list-style-type: none">• Learning: General• Literacy: General• Numeracy: General	<ul style="list-style-type: none">• Screen use: General• TV programs and movies: General• Video games: General		L	L	L	L	L	L	L	
Andrade	2019	Include: Interventions	Include: Overweight and obese	2010–2017	Children; Adolescents	<ul style="list-style-type: none">• Healthy behavior: Self-efficacy• Psychological health: Depression• Psychological health: Enjoyment• Self-perceptions: General• Self-perceptions: Self-esteem	<ul style="list-style-type: none">• Video games: Physically active		U	L	L	U	L	H	L	
Arztmann	2022	None specified	None specified	2008–2020	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none">• Learning: Behavior• Learning: Motivation	<ul style="list-style-type: none">• Video games: Educational (with computer)		U	H	H	H	H	L	L	
Aspiranti	2020	Include: Interventions	Include: Autism	2013–2015	School-age Children (Primary, Elementary)	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Intervention: Education (via touch screen)		U	L	L	H	L	H	L	
Bartel	2015	None	Exclude: Atypical population (except for delayed sleep phase disorder or insomnia)	2004–2014	Adolescents (12.2–17.7)	<ul style="list-style-type: none">• Sleep: Bedtime• Sleep: Duration• Sleep: Time to fall asleep	<ul style="list-style-type: none">• Computer use: General• Internet use: General• Screen use: General (mobile phone)• TV programs and movies: General• Video games: General		L	L	U	U	L	U	U	
Beck Silva	2022	Include: Randomised controlled trials and quasi-RCTs.	Exclude: Any disease Mental disorders	1999–2019	Adolescents	<ul style="list-style-type: none">• Diet: Fat consumption	<ul style="list-style-type: none">• Intervention: Nutrition (in schools)		L	L	L	L	L	H	L	
Benavides-Varela	2020	Include: Randomised controlled trials	Include: Math difficulties	2006–2018	Children	<ul style="list-style-type: none">• Numeracy: Mathematics	<ul style="list-style-type: none">• Intervention: Mathematics		U	H	L	H	L	L	L	
Blok	2002	None	Include: Regular students, poor readers or dyslexics Exclude: Severe or multiple disabilities	1990–2000	All (5.4–11.5)	<ul style="list-style-type: none">• Literacy: Reading fluency	<ul style="list-style-type: none">• Intervention: Literacy		U	L	H	H	L	H	L	
Bossen	2020	Include: Randomised controlled trials	Include: Chronic disease	2011–2018	Children (10.0–15.9)	<ul style="list-style-type: none">• Body composition• Cardiomtabolic health: Fitness• Physical activity: General• Physical activity: Muscular fitness	<ul style="list-style-type: none">• Video games: Health promoting content		U	L	L	L	H	L	L	
Boylard	2016	Include: Experimental	None specified	2004–2015	Children; Adolescents (5.0–15.4)	<ul style="list-style-type: none">• Diet: Food intake	<ul style="list-style-type: none">• Advertising: Unhealthy food		H	L	L	U	L	L	L	
Byun	2018	Include: All quantitative designs	None specified	2006–2014	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Video games: Numeracy		U	U	U	H	H	H	H	
Cao	2020	Include: designs with control groups	Exclude: Brain damage	2002–2019	Children (3.4–14.3)	<ul style="list-style-type: none">• Cognition: Executive functioning• Cognition: Executive Functioning (cognitive flexibility)• Cognition: Executive Functioning (inhibition)• Cognition: Executive Functioning (working memory)	<ul style="list-style-type: none">• Computer use: Executive functioning training		U	H	U	H	L	L	L	
Champion	2019	Include: Randomised controlled trials	None specified	2003–2017	School-age Children (11.4–15.9)	<ul style="list-style-type: none">• Body composition• Diet: Fat consumption• Diet: Fruit and vegetable intake• Diet: Fruit intake• Diet: Sugary drinks and snacks• Physical activity: General• Physical activity: Moderate-to-vigorous intensity• Risky behavior: Alcohol consumption• Risky behavior: Smoking• Screen time: General	<ul style="list-style-type: none">• Intervention: Lifestyle risk behaviour (at school)		L	L	L	L	L	L	L	
Chan	2014	Include: Experimental; Quasi-experimental	None specified	2002–2012	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Dynamic geometry software		U	H	H	H	L	L	L	
Chauhan	2017	Include: pre-post designs with or without control group	None specified	2001–2016	School-age Children (Primary, Elementary)	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Screen use: General (in schools)		U	L	U	H	H	L	L	
Chen	2020	Include: Experimental designs	None specified	2008–2019	All	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Video games: Educational (with competition)		U	H	U	H	H	H	L	
Cheung	2012	Include: Randomised controlled trials	None specified	1982–2010	School-age Children	<ul style="list-style-type: none">• Literacy: Reading	<ul style="list-style-type: none">• Intervention: Reading (in schools)		U	L	L	H	H	L	L	
Cheung	2013	Include: Experimental; Quasi-experimental	None specified	1980–2010	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Numeracy (in schools)		L	H	H	U	L	L	L	
Cho	2018	Include: experimental designs with control group	None specified	2008–2013	All	<ul style="list-style-type: none">• Learning: Second language	<ul style="list-style-type: none">• Screen use: General (mobile phone for language learning)		U	H	U	H	L	L	L	
Clausen	2022	Include: Longitudinal; Retrospective	None specified	2004–2018	All	<ul style="list-style-type: none">• Psychological health: ADHD• Psychological health: ADHD Symptoms (Inattention)	<ul style="list-style-type: none">• Screen use: General		U	L	U	H	L	H	L	
Clinton	2019	Include: randomised controlled trials	Exclude: Disabilities	2011–2016	All	<ul style="list-style-type: none">• Literacy: Reading performance	<ul style="list-style-type: none">• Screen use: Reading (vs paper)		U	H	U	U	L	L	L	
Comeras-Chueca	2021	Include: randomized and non-randomized controlled trials (control group with no intervention or traditional exercise intervention)	Exclude: Disabilities, diseases or disorders, overweight or obese	2008–2019	All (4.5–11.6)	<ul style="list-style-type: none">• Body composition• Cardiomtabolic health: Fitness	<ul style="list-style-type: none">• Video games: Physically active		L	L	L	U	L	H	L	
Comeras-Chueca	2021	Include: randomized and non-randomized controlled trials with no intervention or traditional exercise intervention	Exclude: Overweight and obese	2010–2020	All (8.0–14.0)	<ul style="list-style-type: none">• Body composition: BMI z-score• Body fat percentage• Body composition: Fat-free mass• Body composition: Waist circumference	<ul style="list-style-type: none">• Video games: Physically active		L	L	L	U	L	H	L	
Coyne	2018	None	None specified	1975–2017	Children; Adolescents	<ul style="list-style-type: none">• Prosocial Behavior: General	<ul style="list-style-type: none">• Screen use: Prosocial content		L	L	L	H	L	L	L	
Cunningham	2021	Include: Quantitative designs	None specified	2014–2018	All (11.2–16.8)	<ul style="list-style-type: none">• Psychological health: Depression	<ul style="list-style-type: none">• Social Media: General (duration)		U	L	L	H	L	L	L	
Cushing	2010	Include: All quantitative designs; Experimental	None specified	1989–2009	Children; Adolescents	<ul style="list-style-type: none">• Healthy behavior: General	<ul style="list-style-type: none">• Intervention: Health behaviours		U	L	H	H	L	L	L	
Darling	2017	Include: Intervention	None specified	2006–2016	Children; Adolescents (9.7–16.0)	<ul style="list-style-type: none">• Body composition• Diet: Healthy dietary behaviour• Physical activity: General	<ul style="list-style-type: none">• Intervention: To promote health (via mobile phone)		U	L	U	U	L	H	H	
Eirich	2022	Include: experimental or observational	Exclude: Atypically developing	1978–2021	Children (0.5–11.0)	<ul style="list-style-type: none">• Psychological health: Externalizing• Psychological health: Internalizing	<ul style="list-style-type: none">• Screen use: General		U	L	L	L	L	L	L	
Feng	2021	Include: Quantitative designs	Include: Healthy children	2017–2019	Early childhood; Preschool	<ul style="list-style-type: none">• Body composition: BMI z-score	<ul style="list-style-type: none">• Screen use: General (meeting guidelines)		L	L	L	L	L	H	L	
Ferguson	2017	None	None specified	2005–2017	Children; Adolescents	<ul style="list-style-type: none">• Risky behavior: Sexual activity• Risky behavior: Sexual activity (initiation of sex)	<ul style="list-style-type: none">• Screen use: Sexual content		U	L	L	H	L	L	L	
Ferguson	2020	Include: Experimental, correlational, or longitudinal	None specified	2009–2013	All (7.8–17.5)	<ul style="list-style-type: none">• Aggression: General	<ul style="list-style-type: none">• Video games: Violent content		L	U	L	L	L	L	L	
Folkvord	2018	Include: Interventions	None specified	2007–2018	Children; Adolescents	<ul style="list-style-type: none">• Diet: Food intake (calories)	<ul style="list-style-type: none">• Advertising: Advergaming		U	L	L	U	L	H	L	
Furenes	2021	Include: experimental or quasi-experimental	Exclude: Cochlear implants or autism	2002–2019	Pre-school; School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none">• Literacy: Reading comprehension• Literacy: Vocabulary learning	<ul style="list-style-type: none">• e-Books: General		H	H	L	U	L	L	L	
Gardella	2017	Include: Cross-sectional	None specified	2004–2016	Adolescents (12.5–14.2)	<ul style="list-style-type: none">• Learning: Educational achievement; problems• Learning: School attendance problems	<ul style="list-style-type: none">• Internet use: Cyberbullying victimization		U	L	L	U	L	L	L	
Garzon	2019	Include: Experimental with control group	None specified	NA	All	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Augmented reality (in schools)		U	H	U	H	H	L	L	
Graham	2015	Include: Experimental; Quasi-experimental	None specified	2004–2011	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none">• Literacy: Writing	<ul style="list-style-type: none">• Intervention: Writing feedback		U	L	H	H	L	L	L	
Hammerle	2016	Include: Randomised controlled trials	Exclude: Those with special needs, require a special diet, or have a condition that would limit physical activity	2003–2013	Children; Adolescents	<ul style="list-style-type: none">• Body composition	<ul style="list-style-type: none">• Intervention: To promote healthy weight (obesity prevention)		L	L	H	L	L	H	L	
Hao	2021	Include: Experimental with control group	Exclude: Disabilities	2012–2018	School-age Children	<ul style="list-style-type: none">• Learning: Second language vocabulary	<ul style="list-style-type: none">• Intervention: English as foreign language		U	L	L	L	L	H	L	
Hassan-Saleh	2019	Include: Experimental														