

Study Characteristics							
Review characteristics and quality assessment for studies providing unique effects							
First Author	Year	Design Restrictions	Regions Restrictions	Study Range Earliest - Latest	Sample Age Restrictions (Age Range) ¹	Outcomes Assessed	Exposures Assessed
Abrami	2015	Include: Experimental; Quasi-experimental	None specified	2009–2015	Early childhood; School-age Children (Primary/Elementary)	<ul style="list-style-type: none">Literacy: Listening comprehensionLiteracy: PhonicsLiteracy: Phonic awarenessLiteracy: Reading comprehensionLiteracy: Reading fluencyLiteracy: Vocabulary knowledge	<ul style="list-style-type: none">Intervention: Literacy (Abracadabra; in schools)
Adelantado-Renua	2019	Include: Cross-sectional studies	None specified	1982–2019	Children; Adolescents (5.7-18.0)	<ul style="list-style-type: none">Learning: GeneralLiteracy: GeneralNumeracy: General	<ul style="list-style-type: none">Screen use: GeneralTV programs and movies: GeneralVideo games: General
Aghasi	2020	Include: Observational	None specified	2007–2016	All (14.2-15.8)	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">Internet use: General
Andrade	2019	Include: Interventions	None specified	2010–2017	Children; Adolescents	<ul style="list-style-type: none">Healthy behavior: Self-efficacyPsychological health: DepressionPsychological health: EnjoymentSelf-perceptions: GeneralSelf-perceptions: Self-esteem	<ul style="list-style-type: none">Video games: Physically active
Bartel	2015	None	None specified	2004–2014	Adolescents (12.2-17.7)	<ul style="list-style-type: none">Sleep: BedtimeSleep: DurationSleep: Time to fall asleep	<ul style="list-style-type: none">Computer use: GeneralInternet use: GeneralScreen use: General (mobile phone)TV programs and movies: GeneralVideo games: General
Blok	2002	None	None specified	1990–2000	All (5.4-11.5)	<ul style="list-style-type: none">Literacy: Reading fluency	<ul style="list-style-type: none">Intervention: Literacy
Bossen	2020	Include: Randomised controlled trials	None specified	2011–2018	Children (10.0-15.7)	<ul style="list-style-type: none">Body compositionCardiometaabolic health: FitnessPhysical activity: GeneralPhysical health: Muscular fitness	<ul style="list-style-type: none">Video games: Health promoting content
Boyland	2016	Include: Experimental	None specified	2004–2015	Children; Adolescents (6.0-10.4)	<ul style="list-style-type: none">Diet: Food intake	<ul style="list-style-type: none">Advertising: Unhealthy food
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
Carter	2016	Include: All quantitative designs	None specified	2011–2015	Children; Adolescents (10.6-17.0)	<ul style="list-style-type: none">Sleep: Inadequate durationSleep: LethargySleep: Poor quality	<ul style="list-style-type: none">Screen use: General (mobile phone at bed time)
Champion	2019	Include: Randomised controlled trials	None specified	2003–2017	School-age Children (11.4-15.9)	<ul style="list-style-type: none">Body compositionDiet: Fat consumptionDiet: Fruit and vegetable intakeDiet: Fruit intakeDiet: Sugary drinks and snacksPhysical activity: GeneralPhysical activity: Moderate-to-vigorous intensityRisky behavior: Alcohol consumptionRisky behavior: SmokingScreen time: General	<ul style="list-style-type: none">Intervention: Lifestyle risk behaviour (at school)
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
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)
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: Mathematics (in schools)
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
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
Darling	2017	Include: Intervention	None specified	2006–2016	Children; Adolescents (8.7-16.0)	<ul style="list-style-type: none">Body compositionDiet: Healthy dietary behaviourPhysical activity: General	<ul style="list-style-type: none">Intervention: To promote health (via mobile phone)
de Oliveira	2016	Include: Observational	None specified	2010–2014	Adolescents	<ul style="list-style-type: none">Cardiometaabolic health: Metabolic Syndrome	<ul style="list-style-type: none">Screen use: General
Fang	2019	Include: Cohort; Case-control; Cross-sectional	None specified	2006–2019	Children; Adolescents	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">Computer use: GeneralScreen use: GeneralTV programs and movies: General
Ferguson	2017	None	None specified	2005–2017	Children; Adolescents	<ul style="list-style-type: none">Risky behavior: Sexual activityRisky behavior: Sexual activity (initiation of sex)	<ul style="list-style-type: none">Screen use: Sexual content
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: Advergames
Gardella	2017	Include: Cross-sectional	Include: North America	2006–2014	Adolescents (12.5-16.2)	<ul style="list-style-type: none">Learning: Educational achievement problemsLearning: School attendance problems	<ul style="list-style-type: none">Internet use: Cyberbullying victimization
Ghobadi	2018	Include: Cohort; Case-control; Cross-sectional Exclude: Interventions	None specified	2009–2014	Children; Adolescents	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">TV programs and movies: Mealtime
Graham	2015	Include: Experimental; Quasi-experimental	None specified	2004–2011	School-age Children (Primary/Elementary/School)	<ul style="list-style-type: none">Literacy: Writing	<ul style="list-style-type: none">Intervention: Writing feedback
Hammersley	2016	Include: Randomised controlled trials	None specified	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)
Hassan-Saleh	2019	Include: Experimental; Quasi-experimental	None specified	2008–2016	Children; Adolescents	<ul style="list-style-type: none">Literacy: Pronunciation	<ul style="list-style-type: none">Intervention: Pronunciation
Hernandez-Jimenez	2019	Include: Experimental; Quasi-experimental	None specified	2009–2017	Children; Adolescents	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">Video games: Physically active
Hurwitz	2018	None	Include: North America	1997–2018	Early childhood/pre-school; School-age Children (Early Primary/Elementary)	<ul style="list-style-type: none">Literacy: General	<ul style="list-style-type: none">Intervention: Literacy videos
Janssen	2020	Include: Experimental; Cross-sectional; Longitudinal	None specified	2007–2019	Children	<ul style="list-style-type: none">Sleep: Duration	<ul style="list-style-type: none">Screen use: General
Kates	2018	None	None specified	2008–2016	School-age Children	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">Screen use: General (mobile phone)
Kroesbergen	2003	Include: Within subject design; between subject design	None specified	1985–1999	School-age Children (Primary/Elementary) (7.0-11.3)	<ul style="list-style-type: none">Numeracy: General	<ul style="list-style-type: none">Intervention: Mathematics (via computer in classrooms)
Kucukalkan	2019	Include: Experimental	None specified	2007–2016	School-age Children (Primary/Elementary)	<ul style="list-style-type: none">Numeracy: General	<ul style="list-style-type: none">Intervention: Mathematics
Lanca	2020	Include: Cohort; Case-control; Cross-sectional; Intervention trials. Exclude: Case reports; Retrospective studies.	None specified	2007–2016	Children; Adolescents	<ul style="list-style-type: none">Eye health: Myopia	<ul style="list-style-type: none">Screen use: General
Li	2010	Include: Experimental; Quasi-experimental	None specified	1991–2005	School-age Children	<ul style="list-style-type: none">Numeracy: General	<ul style="list-style-type: none">Intervention: Mathematics
Liao	2008	Include: All quantitative designs	Include: Taiwan	1990–2003	School-age Children (Primary/Elementary)	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">Intervention: Education (via computer)
Liao	2014	Include: Randomised controlled trials	None specified	1999–2012	Children; Adolescents (4.0-14.7)	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">Intervention: Screentime reduction
Liu	2016	Include: Cross-sectional; Case-control; Longitudinal	None specified	2001–2014	All (10.9-18.0)	<ul style="list-style-type: none">Psychological health: Depression	<ul style="list-style-type: none">Screen use: General
Liu	2019	Include: All quantitative designs	None specified	2007–2014	All (13.3-16.6)	<ul style="list-style-type: none">Psychological health: AnxietyPsychological health: DepressionPsychological health: Satisfaction	<ul style="list-style-type: none">Social Media: Instant messagingVideo games: General
Madigan	2020	Include: Observational Exclude: Qualitative	None specified	1973–2019	Children (0.5-10.6)	<ul style="list-style-type: none">Literacy: General	<ul style="list-style-type: none">Intervention: Education (general)Screen use: GeneralScreen use: General (covieving)TV programs and movies: CovievingTV programs and movies: EducationalTV programs and movies: GeneralTV programs and movies: General (in background)
Mares	2005	None	None specified	1969–1989	Children	<ul style="list-style-type: none">Aggression: Towards peersCognition: Reducing stereotypesProsocial Behavior: AltruismSocial interactions: General	<ul style="list-style-type: none">TV programs and movies: General
Mares	2013	Exclude: Experimental	Exclude: North America	1973–2010	Children	<ul style="list-style-type: none">Cognition: Moral reasoning and perception of out-groupsLearning: GeneralLearning: Literacy and numeracyLearning: Physical and social environment	<ul style="list-style-type: none">Intervention: Sesame Street
Marshall	2004	None	None specified	1985–2002	Children; Adolescents	<ul style="list-style-type: none">Body compositionPhysical activity: General	<ul style="list-style-type: none">TV programs and movies: GeneralVideo games: General
Martins	2019	Include: All quantitative designs	None specified	2003–2018	All	<ul style="list-style-type: none">Aggression: Towards peers	<ul style="list-style-type: none">Screen use: General
McArthur	2012	Include: Randomised controlled trials and quasi-RCTs.	None specified	1994–2009	All (6.7-16.2)	<ul style="list-style-type: none">Literacy: Phonics	<ul style="list-style-type: none">Intervention: Literacy (phonics; via computer)
McArthur	2018	Include: Randomised controlled trials and quasi-RCTs.	Include: English speaking countries	1994–2015	Children; Adolescents	<ul style="list-style-type: none">Literacy: General	<ul style="list-style-type: none">Intervention: Literacy
Oldrati	2020	Include: Group-control experimental design	None specified	2006–2018	School-age Children	<ul style="list-style-type: none">Cognition: Cognitive FunctioningCognition: Executive FunctioningCognition: Verbal skillsCognition: Visuospatial skillsNumeracy: GeneralPsychological health: Adjustment	<ul style="list-style-type: none">Intervention: Cognitive training
Paik	1994	None	None specified	NA	Children; Adolescents	<ul style="list-style-type: none">Antisocial Behaviour: General	<ul style="list-style-type: none">TV programs and movies: Violent content
Pearce	2016	Include: All quantitative designs	None specified	1986–2012	Children; Adolescents	<ul style="list-style-type: none">Psychological health: Internalizing	<ul style="list-style-type: none">TV programs and movies: Scary content
Peng	2011	None	None specified	2001–2010	Children; Adolescents	<ul style="list-style-type: none">Cardiometaabolic health: Maximum oxygen consumptionPhysical activity: Energy expenditurePhysical activity: Heart rate	<ul style="list-style-type: none">Video games: Physically active
Poorolajal	2020	Include: Observational	None specified	1995–2018	Children; Adolescents	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">TV programs and movies: GeneralVideo games: General
Prescott	2018	Include: Longitudinal	None specified	2008–2017	All (8.9-16.0)	<ul style="list-style-type: none">Aggression: Towards peers	<ul style="list-style-type: none">Video games: Violent content
Rodriguez-Rocha	2019	Include: Experimental; Quasi-experimental	None specified	1999–2018	All (4.5-15.4)	<ul style="list-style-type: none">Diet: Fruit and vegetable intake	<ul style="list-style-type: none">Intervention: Fruit and vegetable
Sadeghirad	2016	Include: Randomised controlled trials	None specified	1978–2014	Children; Adolescents (3.8-11.0)	<ul style="list-style-type: none">Diet: Unhealthy food choice	<ul style="list-style-type: none">Advertising: Unhealthy food
Schroeder	2013	Include: Experimental; Quasi-experimental	None specified	2001–2009	All	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">Intervention: With digital characters
Scionti	2019	Include: Interventions	None specified	2009–2019	Children (4.3-6.1)	<ul style="list-style-type: none">Cognition: Exective functioning	<ul style="list-style-type: none">Intervention: Cognitive training
Shin	2019	Include: Interventions	None specified	2013–2018	Children; Adolescents (12.0-15.7)	<ul style="list-style-type: none">Body compositionDiet: Sugary drinksPhysical activity: GeneralScreen time: General	<ul style="list-style-type: none">Intervention: To promote health (via mobile phone app)Intervention: To promote health (via mobile phone)Intervention: To promote health (via text message)
Slavin	2014	Include: Randomised controlled trials; Quasi-experimental; Observational	None specified	2000–2011	School-age Children (Primary/Elementary)	<ul style="list-style-type: none">Science: General	<ul style="list-style-type: none">Intervention: Science (in schools)
Takacs	2014	Include: Experimental; Quasi-experimental	None specified	1980–2014	NA	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">e-Books: Narration
Takacs	2019	Include: Randomised controlled trials and quasi-RCTs.	None specified	2001–2016	Children	<ul style="list-style-type: none">Cognition: Executive Functioning (accuracy)Cognition: Exective Functioning (cognitive flexibility)Cognition: Executive Functioning (inhibition)Cognition: Executive Functioning (working memory)	<ul style="list-style-type: none">Intervention: Education (via computer)
Tekedere	2016	None	None specified	2010–2015	All	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">Intervention: Augmented reality (in schools)
Vahedi	2018	Include: Interventions (pre-post or controlled). Exclude: Cross-sectional	None specified	2015–2016	School-age Children (Middle/High School)	<ul style="list-style-type: none">Risky behavior: Media literacyRisky behavior: Risk taking (attitude)	<ul style="list-style-type: none">Intervention: Media literacy (web-based)
Vannucci	2020	Exclude: Qualitative; Case studies	None specified	2011–2018	Adolescents (12.6-18.0)	<ul style="list-style-type: none">Risky behavior: Risk taking (general)Risky behavior: Risky sexual behaviourRisky behavior: Substance abuse	<ul style="list-style-type: none">Social Media: General
Xie	2018	Include: Experimental; Quasi-experimental; Pre-test post-test	None specified	2010–2018	Children (1.8-5.9)	<ul style="list-style-type: none">Learning: General	<ul style="list-style-type: none">Intervention: Education (via touch screen)
Zhang	2016	Include: Cohort; Case-control; Cross-sectional	None specified	2001–2014	Children	<ul style="list-style-type: none">Body composition	<ul style="list-style-type: none">TV programs and movies: General
Zhou	2020	Exclude: Non-empirical studies; Qualitative; Systematic reviews or meta-analyses	None specified	2009–2018	All	<ul style="list-style-type: none">Healthy behavior: GeneralHealthy behavior: Self-efficacyPsychological health: Enjoyment	<ul style="list-style-type: none">Video games: Health promoting content
Zucker	2009	Include: Randomised controlled trials; Quasi-experimental; Observational	None specified	1997–2006	School-age Children (Primary/Elementary)	<ul style="list-style-type: none">Literacy: DecodingLiteracy: Reading comprehension	<ul style="list-style-type: none">e-Books: General
¹ Where provided							

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