

Summary Review: American Academy of Pediatrics

Source: *Digital Ecosystems, Children, and Adolescents: Policy Statement (2026)*, its accompanying technical report, and the AAP Center of Excellence's *Using a Tablet at School*.

What it contributes:

The AAP recommends moving beyond a simple “screen time” framework and examining children's digital experiences in context. Its approach emphasizes the characteristics of the child, the quality and purpose of the content, emotional regulation, what technology may crowd out, and communication among children and adults. The AAP recognizes that well-designed educational technology can support learning while cautioning that much educational technology research measures relatively short-term outcomes and often does not examine what device use displaces during the school day.

Important limitations:

The AAP does not establish a single appropriate amount of school screen time, does not conclude that all forms of technology affect children similarly, and acknowledges that much digital-media research is observational and therefore cannot establish causation. Its 2026 policy statement also does not provide comprehensive guidance about generative AI, which the AAP identifies as the subject of separate forthcoming guidance.

Potential Research Takeaways

Evaluate technology by purpose, developmental appropriateness, content quality, adult guidance, learning benefit, and what the technology may displace—not simply by counting minutes of screen exposure.

This is an influential expert-policy source informed by a broad evidence review, but it should be considered alongside other educational research, SMFCSD data, student and teacher experience, and not treated as independent of other evidence.

Central Findings

The AAP's biggest conceptual shift is away from treating “screen time” as the primary question. Instead, it argues that children's experiences with technology need to be understood as part of a broader digital ecosystem. The study argues for the definition of an ecosystem that includes the child, caregivers, the technology and its design, and larger systems such as schools, communities, and policies. The AAP warns against reducing the issue to a simple calculation of minutes spent looking at a screen.

The AAP's framework: the “5 Cs”

Child — Who is the individual child? Age, developmental stage, temperament, strengths, vulnerabilities, and needs matter.

Content — What is the child actually doing? Creating, reading, communicating, practicing mathematics, watching entertainment, scrolling, and gaming are very different experiences.

Calm — Is technology a means of managing boredom, distress, or emotional regulation?

Crowding Out — What is technology replacing? Sleep, physical activity, conversation, play, reading, hands-on learning, relationships, or other developmentally important experiences?

Communication — Are adults and children talking about technology expectations?

What does the AAP say about technology in schools?

The AAP acknowledges evidence of educational benefits. It cites a systematic review of touchscreen research involving children ages 2–8 in which 34 of 54 studies reported positive effects, 17 reported mixed findings, and only two reported negative effects. Among the reported benefits were mathematics achievement and comprehension from appropriately designed interactive e-books. It also discusses a meta-analysis finding improved learning outcomes from touchscreen use among young children.

The AAP raises an important limitation that many educational-technology research studies measure short-term learning outcomes. The results in these studies are evaluated after brief periods of technology use. More than one-third of the studies in the touchscreen review involved immediate outcomes following short interventions. Consequently, evidence that a particular application helps children learn something does not necessarily tell us what happens when devices become a substantial part of the school day. That distinction is extremely important for the Task Force: Evidence that a particular technology can improve a particular learning outcome is not necessarily evidence that more technology use produces better learning overall.

Displacement

The AAP repeatedly emphasizes what technology may displace:

teacher-student interaction	movement
peer discussion	play
handwriting	collaborative problem solving
sustained reading	outdoor experiences
physical manipulatives	independent thinking

What the AAP does not establish

The AAP does not establish a scientifically validated maximum number of classroom screen minutes for K–8 students. The policy statement also acknowledges an important methodological limitation: much of the research on children and digital media is observational, because randomized experiments deliberately exposing children to potentially harmful levels of media are often impractical or unethical. Consequently, associations found in the literature frequently cannot establish causation. The AAP says it prioritizes longitudinal and meta-analytic evidence where possible and supplements that evidence with clinical expertise.

Summary Review: California Department of Education — Artificial Intelligence Guidance & Model Policy

Sources: California Department of Education, *Guidance for the Safe and Effective Use of Artificial Intelligence in California Public Schools* (developed in 2025) and *Model Policy: Artificial Intelligence in Education* (2026).

Central message

The California Department of Education takes a human-centered rather than prohibition-based approach to artificial intelligence. Its guidance discusses potential benefits of AI such as expanding access, personalizing learning, supporting educators, and reducing administrative burdens and significant risks involving privacy, academic integrity, bias, equity, student well-being, and overreliance on technology. CDE's central principle is that AI should enhance teaching and learning without replacing the relationships, professional judgment, critical thinking, and human interaction at the center of education.

This makes the guidance particularly relevant to the SMFCSD Technology Use Task Force because CDE does not frame the policy question as simply whether schools should "allow" or "ban" AI. Instead, it asks districts to establish the purposes, conditions, safeguards, expectations, and competencies necessary for responsible use.

Potential Research Takeaway

AI should be approached as an instructional and literacy issue, not simply a technology-access issue. SMFCSD should consider when AI adds educational value, what students should be able to accomplish independently, what developmental guardrails are appropriate, how student information will be protected, and what students need to learn to navigate an increasingly AI-rich world. The CDE model policy is particularly valuable as a policy-design source, while the Task Force should look to peer-reviewed research, developmental science, local SMFCSD evidence, and student/educator/family experience to answer questions about actual effects on learning and development.

Human-centered AI

CDE repeatedly emphasizes that human relationships are foundational to learning. AI can assist educators, but it should not substitute for educators' professional judgment or for students' opportunities to think, reason, communicate, and develop foundational skills.

CDE specifically describes AI as an enhancer, not a substitute. It suggests that appropriate uses may reduce routine administrative work and give educators more time for student interaction, while inappropriate implementation could undermine student development, educator-student relationships, and professional expertise.

AI literacy & not only AI access

The 2026 model policy recommends developmentally appropriate instruction in AI safety, literacy, ethical use, and critical evaluation. Students should learn how to question AI-generated information, verify claims, compare sources, recognize bias, and understand misinformation and other limitations of automated content. This is important because it distinguishes two very different questions: Should students use AI? and , What should students understand about AI? A district could place substantial limits on students' independent use of generative AI while simultaneously concluding that students need increasingly sophisticated AI literacy as they progress through school.

Developmental progression matters

The CDE guidance is written for TK–12, and does not treat students of all ages similarly. It incorporates developmentally appropriate AI literacy and emphasizes foundational academic skills, including literacy, numeracy, and multilingualism.

This supports the SMFCSD Task Force's consideration of different expectations for TK–2, grades 3–5, and grades 6–8, rather than creating one districtwide rule governing every student and every use. CDE's guidance should not be interpreted as establishing a scientifically validated AI readiness age. Its framework is policy and implementation guidance, not experimental evidence demonstrating that a particular age or grade is the correct point for independent AI use.

Educator discretion

CDE's model policy gives educators an important role in determining when and how AI may be used for particular assignments. Permitted use can vary from assignment to assignment, provided expectations and purposes are clearly communicated. AI should support learning rather than substitute for critical thinking or required academic work. The model also recommends that educators disclose their own AI use when appropriate, helping model responsible practices for students. This creates an important distinction for SMFCSD between: District guardrails — what tools, data practices, ages, and uses are permitted; and Educator instructional judgment — when an approved tool actually contributes to the learning objective.

Academic integrity requires more than AI detection

The model policy takes a position on academic integrity. Students are expected to produce original work consistent with assignment expectations and disclose AI use. CDE recommends that AI-detection software not serve as the sole basis for disciplinary action or a grade penalty. Instead, concerns should involve educator judgment, student engagement, alternative assessment, evidence of authorship, and opportunities for students and families to respond to allegations of misuse. For the Task Force, this suggests that AI changes not only acceptable-use rules but potentially how teachers design assignments and assess authentic student understanding.

Privacy and approved tools are major concerns

CDE places substantial emphasis on student privacy and institutional responsibility. The guidance distinguishes between open AI systems and more restricted systems and cautions districts about entering personally identifiable student information into open systems. The model policy goes considerably further, recommending authorized tools, vendor vetting, contractual safeguards, data restrictions, transparency about AI-driven data collection, parent/guardian rights, and pre-deployment review of tools for educational value, privacy, bias, ethics, and equity.

Equity

CDE describes AI as potentially expanding accessibility and reducing barriers to learning, including through personalization and Universal Design for Learning. At the same time, it warns that unequal access, algorithmic bias, privacy practices, and discriminatory outcomes could create or deepen inequities. The 2026 model therefore calls for an equity-focused AI strategy developed collaboratively with educators, administrators, students, and families, as well as regular review as technology evolves.

That is especially relevant to the structure of the SMFCSD Technology Use Task Force: CDE itself recommends a multistakeholder process rather than leaving AI policy solely to technology departments or vendors.

Continuous review

Another particularly useful principle is that AI governance should be ongoing. CDE recommends ongoing monitoring of AI use, stakeholder feedback, professional development, evaluation of emerging technologies, and periodic policy revision. CDE recommends reviewing and updating a district AI strategy at least biennially.

What this guidance does not establish

This distinction is important for the Task Force's evidence-review framework.

The CDE documents are official state guidance and model policy—not peer-reviewed research demonstrating the effects of AI on student learning or development. CDE explicitly states that its guidance is informative rather than prescriptive and that the model policy is exemplary and may be modified by local educational agencies. Compliance with the guidance itself is not mandatory, although underlying federal and state legal requirements remain applicable.

Therefore, these documents can help SMFCSD answer questions such as "What should responsible district AI governance include?" They cannot, by themselves, answer empirical questions such as "Does generative AI improve learning?", "At what age should students independently use AI?", or "How much AI use is developmentally appropriate?"

Those questions require additional research evidence and local evidence.

Summary Review: *Common Sense Media / Youth AI Safety Institute | Original survey report*

Use by Tweens and Teens (2026)

What it contributes:

This national survey paints a picture of children ages 9–17 are encountering and using artificial intelligence. Its particular value for the SMFCSD Technology Use Task Force is that it includes tweens ages 9–12, a group not always included in research focused on teenagers. The report examines how frequently young people use AI, the purposes for which they use it, their experiences with AI tools, and the guidance they receive from schools and adults. It highlights an important tension: young people's access to and use of AI is developing rapidly, while expectations, instruction, and safety education have not necessarily developed at the same pace.

The report is especially useful for understanding the student experience. Rather than answering whether AI improves learning, it helps the Task Force understand what students report doing with AI and where there may be gaps between student behavior, school expectations, and adult awareness. For SMFCSD, this supports examining not only rules governing AI use but also what students should know about accuracy, privacy, bias, responsible use, disclosure, verification, and when to seek help from an adult.

Important limitations:

This is an original survey report based largely on self-reported experiences, not an experimental study of AI's effects on learning or child development. It can identify patterns, differences among groups, and reported experiences, but it cannot establish that AI use causes particular academic, developmental, or well-being outcomes.

Potential Research Takeaway:

AI is already part of the environment in which many young people are learning and growing. The question for SMFCSD is therefore not only whether students should have access to AI, but what they need to understand about it, what uses are developmentally and educationally appropriate, and what guidance and safeguards should accompany its use. The Census is valuable evidence about student behaviors and experiences, but it should be considered alongside peer-reviewed research, developmental evidence, educator experience, student and family voice, and SMFCSD's own local data.

Summary Review: *Adolescents' Experiences of Online Harms by Platform* (2026); Lee et al., *JAMA Pediatrics*

What it contributes:

This peer-reviewed study provides a detailed look at the negative online experiences reported by U.S. adolescents ages 13–17. Researchers surveyed a nationally representative, probability-based sample of 472 adolescents from 47 states and examined experiences across 20 online platforms. The study found that negative experiences were common but varied substantially by platform. In the prior four weeks, 51.5% reported technology-related sleep disruption, 13.4% reported seeing unwanted sexual images online, 10.7% violent imagery, and 9.7% content encouraging self-harm. The study also found meaningful differences among platforms, suggesting that different digital environments should not be treated as equivalent.

For the SMFCSD Technology Use Task Force, an especially important contribution is the study's emphasis on specific technologies and specific harms rather than treating “screen time” or “technology” as a single exposure. By way of example, among users of each platform, reported exposure to violent imagery was higher on Instagram than YouTube, while reported effects on sleep also varied substantially by platform.

Important limitations:

This was a cross-sectional, self-reported pilot survey, so it identifies prevalence and associations but cannot establish that particular platforms caused the reported harms. The authors also caution that the sample is modest for platform-specific comparisons and that differences may reflect who uses each platform, not simply features of the platforms themselves. The participants were ages 13–17, and the study examined online platforms such as social media and YouTube and not K–8 classroom instructional technology.

Potential Research Takeaway:

Digital experiences should be evaluated with specificity. Evidence about social media, smartphones, YouTube, instructional applications, school-issued devices, and AI should not automatically be generalized from one category to another. This study provides important evidence about adolescent online harms, particularly for older students, but it should not by itself be used to draw conclusions about the effects of classroom technology on K–8 learning.

Summary Review: Children and Screens- *Digital Devices in Schools* (2025); Institute of Digital Media & Child Development

What it contributes:

This two-page research synthesis provides an accessible overview of evidence on personal phones in schools and school-issued instructional devices, with attention to academic performance, student attention, classroom climate, educator experiences, well-being, and privacy. The synthesis reports that phone restrictions may be associated with improvements in academic performance, attention and participation, classroom climate, and educator experiences, although findings related to mental health and well-being are more mixed and depend on contextual factors.

The report also examines school-issued devices separately from personal smartphones. It describes the academic evidence for school-issued devices as mixed: digital tools can support learning in some circumstances, but outcomes depend heavily on the technology, instructional purpose, implementation, and learning environment. It also raises concerns about student privacy and monitoring associated with school technology.

Important limitations:

This is a brief research synthesis, not an original peer-reviewed study or systematic review. It draws from research of varying designs, populations, settings, and strength of evidence. Its primary age focus is middle and high school students, limiting how directly some findings apply to SMFCSD's younger students.

SMFCSD Task Force takeaway:

"Digital devices" should not be treated as a single category. Personal smartphones, social media access, school-issued Chromebooks, instructional applications, and teacher-directed technology serve different purposes and present different benefits and risks. Evidence supporting restrictions on personal phones should therefore not automatically be interpreted as evidence supporting restrictions on instructional technology. Likewise, evidence that a particular educational technology can improve learning does not establish that all classroom device use is beneficial. The Task Force should examine the device, purpose, instructional context, age of the student, evidence of learning benefit, and potential unintended effects separately.

Summary Review: “The Effects of Educational Technology Interventions on Literacy in Elementary School: A Meta-Analysis” Review—Stanford Graduate School of Education

Stanford researchers conducted a meta-analysis of 119 studies published between 2010 and 2023, examining digital learning interventions for students in kindergarten through fifth grade. Technologies included computer programs, e-books, educational games, videos, and other digital literacy interventions.

The central finding is highly relevant to SMFCSD: educational technology is not a single intervention and does not produce a single effect. Effects varied according to the technology, literacy skill being taught, design of the intervention, and student population. Rather than asking whether digital technology supports literacy generally, educators need to ask which products, characteristics, and conditions are effective.

Why it matters for SMFCSD: This provides research supporting evaluating classroom technology use-by-use. A digital phonics intervention, e-book, instructional video, open internet browsing, or other app should not be assumed to have equivalent educational effects.

Important limitation: This is a meta-analysis of existing studies rather than a new randomized experiment, and the interventions varied substantially. It also focuses specifically on elementary literacy, so its findings should not automatically be generalized to every type of technology or subject.

SMFCSD Task Force takeaway:

There is no single answer to whether educational technology helps learning. Effectiveness depends on the specific tool, learning objective, instructional design, student population, and conditions under which it is used.

Summary Review: “Race to the Tablet? The Impact of a Personalized Tablet Educational Program” MIT Blueprint Labs / *Education Finance and Policy*; Setren (2023)

This study is valuable because it provides something relatively uncommon in educational-technology research: causal evidence from a randomized controlled trial. MIT-affiliated researcher Elizabeth Setren studied a personalized tablet program supplementing core instruction at a Boston charter middle school. The intervention produced a substantial positive effect in mathematics—approximately 0.20 standard deviations on end-of-year math achievement—but no statistically significant effect on the summative English assessment.

The same general technology intervention did not produce identical effects across academic subjects. It reinforces the importance of asking what students are doing with technology rather than treating device exposure itself as the intervention.

Why it matters for SMFCSD: The study provides evidence that purposeful, personalized, supplemental technology can improve learning under particular circumstances. It also demonstrates why districts should resist broad claims that either “technology improves achievement” or “technology harms achievement.” The answer depends on the implementation and outcome being measured.

Important limitation: The study examined a particular personalized program in one Boston charter middle school. It does not demonstrate that tablets generally improve mathematics achievement or that similar effects would occur in SMFCSD.

SMFCSD Task Force takeaway:

Technology can improve academic outcomes when it is intentionally designed and implemented for a specific instructional purpose, but positive effects in one subject or context should not be generalized to technology use overall.

Summary Review: Brookings Institution, Center for Universal Education | Research-Informed Policy Framework

What it contributes:

The framework offers a comprehensive approach for schools, governments, technology companies, and families to navigate AI in education. Developed through review of more than 400 articles and studies and consultation with more than 500 stakeholders, it recognizes both the potential of AI to support creativity, individualized learning, accessibility, and educators, and the risks of overreliance, diminished learning, weakened relationships, privacy concerns, and threats to student well-being. Its Prosper, Prepare, Protect framework is particularly useful for considering AI through multiple dimensions rather than approaching it simply as something schools should embrace or prohibit.

Important limitations:

This is a research-informed policy framework, not a peer-reviewed experimental study or systematic review. Its recommendations reflect the authors' and task force's interpretation of a large body of research combined with stakeholder consultation. It should therefore help identify questions, safeguards, and policy considerations, but should not be treated as independent proof that particular AI practices improve or harm student learning.

Potential Research Takeaway:

AI policy should simultaneously consider opportunity, preparation, and protection. The framework provides a useful structure for asking what AI might enable, what students and educators need to understand before using it, and what safeguards are necessary—but its recommendations should be tested against peer-reviewed research and SMFCSD's own evidence.

Summary Review: National Education Policy Center — *Fit for Purpose?* (2025)

What it contributes:

This double-blind peer-reviewed policy brief offers a deliberately critical examination of commercial digital platforms in public education. The authors argue that schools should evaluate technology not simply as an instructional “tool,” but as part of a larger ecosystem involving data collection, privacy, algorithms, commercial incentives, platform design, and corporate influence. It raises valuable questions about whether particular technologies advance schools' educational goals, what student data they collect, whose interests their design serves, and whether the same educational objective could sometimes be accomplished more effectively without technology.

Important limitations:

This is a policy brief advancing a particular argument, not an original experimental study or neutral systematic review of educational technology effectiveness. Its analysis intentionally focuses on risks associated with commercial digital platforms and makes broad recommendations concerning screen time, AI, commercialization, and regulation.

Possible Research Takeaway:

The brief provides an important critical perspective: districts should not assume that a digital product is educationally beneficial simply because it is marketed for schools. Technology should be evaluated against SMFCSD's educational goals, instructional evidence, privacy standards, developmental considerations, and available non-digital alternatives. At the same time, the paper should be considered as one perspective within a broader evidence base rather than as a definitive assessment of educational technology.