Raising Your Child in a Digital World

Finding a healthy balance of time online without techno tantrums and conflict

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The positive impact technology can have on children's learning and development

It's important to acknowledge that there are many benefits to young children using technology. Technology provides new opportunities for young children's learning. As the joint position statement from the National Association for the Education of Young Children (NAEYC) and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College in the US reveals, there's a swell of research that confirms that when used intentionally and in developmentally appropriate ways, children benefit from technology.

Ways in which technology can support young children's learning include:

1 **catering to visual preference** – it's often said that a picture tells a thousand words. This is especially true for today's learners who are predominantly visual learners. They're growing up in a highly visual world, surrounded by images from TV, computers, mobile devices, advertising displays and traditional media.

   As humans, the visual cortex in our brain is five times larger than the auditory cortex: we're literally wired to gravitate towards visual images. Technology offers unique opportunities to cater for this visual preference by allowing children to view and create their own visual images.

   Today's children also have a keen eye for aesthetics and know what looks good, so they're keen to create visually pleasing work. Technology allows them to easily do this (for example, preschoolers can make digital stories with animated characters using apps like Book Creator and Toontastic).

2 **compensating for emerging skills** – technology can be a wonderful tool to compensate for and support young children's emerging skills. It can also provide assistance to children with additional learning needs. For example, technology can allow children to create a digital story where they narrate it with their own voice (using the two apps mentioned above).

   This is empowering for young learners or for children with additional learning needs as it allows them to create work that's commensurate with what they're capable of producing. This often isn't the case if children are required to use more traditional learning materials like pencil and paper.

3 **allowing choice** – whether it's picking which YouTube clip to watch, making a choice within a video game or selecting the correct answer in an app, children love choice. Technology provides a smorgasbord of choices for children. This freedom to choose is one of the appealing factors for children, especially given that so many live very regimented and timetabled lives where their choices are predominantly made for them.

4 **editing made easy** – technology makes it very easy for children to create and edit digital work. It's much easier to press delete and retype something than it is to erase and rewrite something.

   Children are much more likely to revise and improve digital work than they are more traditional forms of work. I've observed many children edit their voice recordings or movies because there were errors, omissions or the work wasn't of a pleasing quality. Very rarely do we see children use the same level of persistence or revision with more traditional forms of media like pencil and paper.

5 **providing instant feedback and gratification** – today's children crave instant gratification. They want to know straight away if they're right or wrong. They want instant access to information. They have grown up in a world where they download and listen to music online rather than saving up their pocket money to buy records, tapes or CDs.

   When children use technology that provides instant feedback, it allows them to confirm (or reject) their understandings. It also prevents them from perpetuating mistakes. For example, when a child is playing an app and they receive instant feedback that tells them that 6 x 9 does not equal 56, they're instantly forced to reconcile their error.

   This form of instant feedback provides cognitive conflict for the learner and means that children can learn concepts more quickly and accurately, especially where there is factual content to learn (like mathematics facts, phonics and spelling).

6 **allowing interactive learning** – young children can learn from interactive, educational media such as apps, websites and video games. When children interact with content on a screen, they have the chance to experiment with their ideas, make predictions and confirm or reject their hypotheses by manipulating objects or data on a screen.

   This dynamic interaction supports learning. For example, using the app Motion Math Hungry Guppy, children can learn about basic number facts by feeding digit bubbles to a fish. If the child feeds the fish the correct digits that add up to the total

specified on the fish's back, the fish swallows the bubble and grows bigger. If the child feeds the incorrect numbers to the fish, then the fish rejects the answer and spits the bubbles out.

In this example, children are manipulating ideas and dynamically testing out their thinking and receiving instant feedback. This is a very interactive experience and quite different to simply answering maths algorithms on a worksheet or textbook.

7 **providing opportunities to create content** – technology gives young children powerful tools to *create* digital content (and not just consume it as they've previously done with TV and DVDs). Today's digital kids are creating, uploading and sharing digital work in online spaces.

   In my work as a researcher and teacher, I've seen preschoolers record, edit and share videos. I've seen kindergarten students create their own digital books with animations, background music and narration. I've seen primary school-aged children plan, create and edit their own animations or augment reality productions using apps like Aurasma and FETCH! Lunch Rush. And they're doing all of this with common technology tools: tablets, laptops and digital cameras.

8 **providing instant access to information** – children can quickly google information and have it at their fingertips within seconds. This can enable children to instantly access information and extend their learning at critical moments in their learning, rather than delaying or hindering their learning because they need to locate information in books or other traditional sources.

9 **allowing differentiation** – educators and parents are spoilt with an array of choices when it comes to children's educational technology. We can find apps, websites, games, videos and animations that meet children's precise learning needs and preferences. For children with additional learning needs, they can revise concepts and consolidate their learning (often in a fun and engaging way).

Unlike more traditional forms of instruction, where we relied on textbooks and worksheets, we now have quick and affordable access to digital resources that can support learning.

New ways to play and communicate

Children are now playing in cyber worlds and digital technologies offer exciting opportunities to enrich children's play experiences. While techno toys and digital play experiences are no substitute for more traditional toys, they can offer new ways of playing. From interactive TV to apps and gaming consoles, young children's play experiences can expand as they enter and explore new worlds and create music, books, videos and animations (see Chapter 6 for more details).

Technology can also broaden children's opportunities to communicate. Video-chat capabilities allow children to have meaningful conversations with distant family members, which enriches their relationships and develops their language skills. Parents can see and send photos and videos of their children to other family members to facilitate interaction while young children can watch and share photos and videos of themselves and their family members allowing them to revisit and discuss important family events. They can also interact in real-time by playing online games.

In short: be alert, not alarmed

We can fear or ignore the technological invasion in our children's lives – or we can guide our children to learn healthy and helpful habits about how to live and thrive in a digital world. Our children need us to be technology mentors. We need to accept that when technology is used intentionally and in developmentally appropriate ways, it can support and promote young children's development.

In order to navigate the appropriate use of technology and guide our children, we need to be armed with evidence-based information and facts, not techno myths. As parents and educators, we need to focus on the positive potential technology offers young children, while also mitigating any potential adverse impacts on their development.

We also need to be mindful that children's screen time isn't displacing other critical aspects of childhood. There are simple things that we can do to ensure that they're developing sustainable

and healthy technology habits that won't compromise their long-term health and development (without having to ban the TV or unplug the gaming console).

It sounds relatively simple, but the most important thing that we can do as parents raising children in a digitally saturated world is to provide them with a balance of experiences. Children need to climb trees, build sand castles, run around with their friends, ride their bikes and experience the many wonderful things that childhood offers. Technology must not interfere with or compromise these experiences. Instead, we need to find ways to weave technology into childhood in ways that complement and enhance these more traditional aspects of childhood.

It's critical that we teach our little ones how to form healthy and sustainable habits with technology. To do this effectively, we need to model healthy media habits ourselves – easier said than done, I know! – and teach our children how to unplug from devices. We want them to use technology intentionally and appropriately so that it *supports*, not *stifles*, their development.

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The next chapter will give an overview of the seven essential building blocks for a child's development and highlight how technology can stifle and/or support each of these building blocks, depending on how it's used.