**[Karen Hope]:** There's something I wanted to share with you and get your thoughts on. I want to read to you something that the American author and professor of psychology, Alison Gopnik, who has written extensively on the study of children's learning and development, in her book, 'The Gardener and the Carpenter', she says, and I quote, "They gave her a device when she was only two years old. It had a sophisticated graphical interface sending signals along the optic nerve that swiftly transported her brain to an alternate universe. It was a captivating other world.

By the time she was seven, she would smuggle it into school and engage in it significantly under her desk." Alison goes on to say, "This child would sit motionless with it for hours on end, oblivious to everything around her. Its addictive grip was so great that she often stayed up half the night, unable to put it away." Alison then asks the reader, "Is this the tale of the dystopian technology, future?" and Alison says "No, this is an autobiography. The device is of course a book and I have been its willing victim all my life". My question to you is, are digital technologies to modern children what a book or a packet of crayons was to us?

**[Anne Kennedy]:** Oh, what a question? I might start by saying, if you haven't read Alison Gopnik's work and you're working with very young children, like you, Karen, I would highly recommend her books.

**[Karen Hope]:** This book.

**[Anne Kennedy]:** The Gardener and the Carpenter.

**[Karen Hope]:** The Gardener and the Carpenter. Yes.

**[Anne Kennedy]:** I think I'm correct in saying it was Alice who kind of introduced that whole notion of infant mental health and the notion of infancy, which she would say goes to about three.

**[Karen Hope]:** Yes. I think she does. I'd have to revisit that, but I'm pretty sure she was an early proponent of that.

**[Anne Kennedy]:** Yeah. The notion of infancy up to about three. That's quite interesting for us because we tend to say infant and toddlers. I think she talks about infancy as that period up to about three. So she's really interesting. She's highly respected. She's written so much. That is just, I mean in that one little bit. There's so much in it. I'm thinking about all the signals.

**[Karen Hope]:** Yes.

**[Anne Kennedy]:** If the books do that for us and they do that for me and they light up parts of my brain, what would digital technologies do? They must light up even more parts of our brain. Synapses must be working over time. You've got both sensory stuff coming in, movement stuff coming in, sound and music coming in, graphics. I think the signals would be incredibly high when children are engaged with digital technologies.

I think she's right. Sometimes that becomes addictive. You see that in children. Parents will say to you, I've had to put the iPad away. I have to ban the phone because they're just addicted to it. That's because it releases all those chemicals in the brain that make us feel good, and makes us want to do it again and again and again. It's absolutely likely that the digital technologies have that power with children.

**[Karen Hope]:** Anne, I like the fact she does give you clues. I do remember myself being told to put my book away. That they would take my book away if I didn't go to bed. She's really saying that it's the same, it fires up your brain. It gives you something that you want.

**[Anne Kennedy]:** Exactly. I can remember, it's a wonder I've got any vision at all because I used to read in the dark by moonlight under the blankets because my parents wanted me to sleep and I wanted to read. Even now, that reading at night is just so important before I go to sleep. What I have learned is that, I can't do the devices late at night because that's a different impact on the brain. We know that, that's researched the whole lighting is different. It affects the brain in different ways. I think she reminds us that we've got to think about all those things, our own experiences. We have to think about the digital technologies and our experiences. That sometimes we have to confront our fears.

**[Karen Hope]:** Yes. I think that might be what I got out of that as well, when I read it. Was that we have to confront our own bias or our own fears around it or our own concerns around it. She kind of in that beautiful paragraph also says, this is not new. It feels new, but there's been something that has hooked in children in every generation really. Whether it was elastics when you were at school or swap cards or whatever it is. There has been a currency that children have had that they really want. This idea that addressing your own fears about it might be a really good starting point when using technologies, digital technology with children.

**[Anne Kennedy]:** I think that's absolutely critical. I think there are fears. There's fears that I might not know enough, to keep control of it.

**[Karen Hope]:** Yes.

**[Anne Kennedy]:** There's fears whether it might do more harm than good. There's fears about how fast this stuff is and its addictive nature. That's part of that reflecting seriously on what we should be doing about it and why we might go there, and why we wouldn't. How we might talk with families about it and how we're going to. What would it look like? What would that digital pedagogy look like for infants and toddlers? How would I explain it to others? How would I make sense of it first to myself and then to others and to the children?

**[Karen Hope]:** So if you are an early learning centre, tuning in tonight, and I know that many of our participants and many people out there really grapple with this. I had some conversations earlier in the week with some people that were coming into this webinar tonight and said, "This is a big issue, this is a hot topic in our service, Karen. Some of us want to do it and some of us don't want to do it". I'm wondering if your advice to them would be to start off talking about digital pedagogy and starting at that point. What do you want as a service?

**[Anne Kennedy]:** Yeah.

**[Karen Hope]:** Is that what you'd suggest, or?

**[Anne Kennedy]:** I think you'd have to start those conversations around, what are the fears? What do we know about this? What's the research telling us? Could some of us do a bit of that reading and share it with the rest of the group? Not everyone has to read everything, but two people might read one thing and two people might, and that's the smart way to go. You've got to be efficient on this and then get some feedback. Do the same with families, talk to families about it and then confront the fears and then think about, okay, we've kind of addressed the fears. We've recognised that we don't have to know all the answers. What would we be comfortable with? I think you've got to be comfortable with your pedagogy. The only analogy I could bring, people might've looked at Bush Kinder for, example.

**[Karen Hope]:** Yes.

**[Anne Kennedy]:** If you've rushed into that, that was not a good idea. You need to think about it. What's this about? What are the risks? Why would we do it? What's to be gained? Then I think, do it sensibly. Some people start it in a small way and then extended it. That's a good thing to do. I'd say the same here, maybe just explore one aspect of the digital. Maybe with cameras, or maybe with the digital projector or something. What's possible? What could we do? Let's sit and let's document it. Let's see what happens because it could throw things up that you hadn't thought of before. It will.

**[Karen Hope]:** It will throw things up. I think that's a really good piece of advice, is to think about, think first before you do it. I think that's a good piece of advice in life generally, but it feels to me like sometimes people go and they buy iPads and they buy the cameras or the microscopes and it's a runaway train. Then everything they try to do to mitigate some of that or the things they didn't think about becomes very retrospective. The horse has bolted with some of it. There's not a lot of thought put into perhaps for their pedagogy about being deliberate and purposeful.

**[Anne Kennedy]:** Yeah. You do want to have a look at what's available. What have you got access to? Most, nearly I would presume almost every educator has got a phone. Many of them have got cameras as well, smart watches, just what's around us. We're not frightened to use other tools with young children.

**[Karen Hope]:** I don't recall conversations being had about clay in quite the same way that we're having about technology or crayons or paint. It's one of our suite of resources, I suppose we use with children.

**[Anne Kennedy]:** Yeah. That's my message. That would be my message. I think as I said at the start, come into this with curiosity. Come with curiosity to these big questions. It is a big question because we've identified that we have got some concerns about the overuse of these technologies and children gaining and getting addicted to them and not wanting to do other things that we think are important.

That's why there have been restrictions on their use in some quarters, because we don't want children to have a completely sedentary kind of way of being in our services. It doesn't have to be like that. If you're out and about with your camera or your this or your that. You're busy.

**[Karen Hope]:** You're very busy.

**[Anne Kennedy]:** We're not talking about sitting children down at a computer screen for an hour. That's not what we're talking about here.

**[Karen Hope]:** Maybe linking back to your point then about looking at other practice examples, what are other people doing? I always find that a useful place for services to start, is to build up a repertoire of information about how other places are working with this, because everybody is grappling with the same concepts here. That's where I know when I go into spaces I always think, that's a good idea. I never would have thought of that.

**[Anne Kennedy]:** Yes. I think you'll find, there will be increasingly special interest groups looking at this. Research broadens as practitioners get involved in the research. ECA for example has got their statement on digital technologies and young children.

**[Karen Hope]:** Yes.

**[Anne Kennedy]:** That's a good place to start.

**[Karen Hope]:** That's a great place to start.

**[Anne Kennedy]:** A good discussion document to have in a staff meeting or in a room meeting, because that highlights some of those benefits for children. If you can do this well. Yeah.

**[Karen Hope]:** Thinking about something that some of our participants tonight can take home. Do you have a kind of a take home message or something you'd like to say to the many people that we have tuned in tonight that might just be at the start of this journey, or are thinking about it, or partway along it, about the use of digital technologies? Particularly with, you know, under threes they are a vulnerable cohort, they're our very youngest citizens. I think that's something that people are always mindful of. When they think digital, oh, we don't want them. You don't want to have that. They're very young.

**[Anne Kennedy]:** Mm-hmm. I was thinking, at the last seminar, Andy spoke so beautifully about babies and toddlers and their capacity for learning. And she said, start with the babies.

**[Karen Hope]:** She did.

**[Anne Kennedy]:** I've been thinking about that. My take would be to follow on from that would be to say, follow the babies and toddlers in this digital exploration, and follow the evidence, both your own and somebody else's, the academic evidence.

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