



Transcript for Staffroom Catch-Up

Episode 2: “My colleague and I climbed into this skip”

Fran: Hello and welcome to this first practitioner podcast series from Cambridge Mathematics. I'm Fran Watson and I'm a member of the writing team and school liaison lead at Cambridge Mathematics. Part of my role is to talk to teachers about products we design and very excitingly, creating new opportunities like this to have conversations with educational practitioners.

This series is called Staffroom Catch-Up and some of the things we expect to touch on are people's interpretations of the word ‘research’, how they feel about it, and how it affects the work they do in classrooms.

As all these people have been recorded in their settings, I'm going to issue a challenge to listeners to tally the number of interruptions in each episode, and then we can see if our tallies align at the end.

Today I'm here with Esther O'Connor. Esther, could we start with you telling us about your current role?

Esther: Hi there, Fran. I'd be delighted and thanks very much for inviting me to, to join this podcast. Um, I have the privilege to lead and learn as the early years leader. It's a fab-fabulous school, international school, er, British school in Brussels. Um, alongside this, I've been innovation leader across primary.

Fran: Amazing stuff. That sounds really interesting. Um, so to begin with, before we talk more about um, er, the meaty questions, I'd like to share with you um, a line from a Sondheim musical, which goes [sings] “Something familiar, something peculiar, something for everyone. A comedy tonight!” And ask you to share something either peculiar or familiar that you found funny, that you've experienced, connected with your work.

Esther: Love the singing, Fran! Fabulous. [Fran laughs] So working in the early years, hopefully many early as teachers will relate to this. I was thinking about this. I could have mentioned millions of funny moments in my [Fran laughs] everyday. Working with 3- to 5-year-olds, you know, this, this rich range of joy that happens, er, but one that really stands out to me was actually my very first year of teaching, when a child, you know, messy in the clay or paint and looks at me and I go, “Go on, go and wash your hands in the

toilet.” Now, he was gone a while [Fran vocalises] and I went and had a little look [Fran laughs] and of course, his hands were in the toilet. So I very soon realised [Fran continues laughing], you know, as a very young teacher, that actually young children take things in a very literal way! So I think that really enabled me to avoid many other mishaps maybe along the way. So just to be [Fran: OK!] very clear, with your language, with young children [laughs].

Fran: [laughs] I think it's a good rule of thumb for, for all teachers being clear with language. But I love that example. Thank you very much for sharing. Um, okay. So, um, let's er, talk about some of these questions that we're going to chat about today and start with ... Can I ask you what the word 'research' in an educational context means for you?

Esther: I think for me, in terms of er, you know er, research, in terms of the field of, of education, really means a lot where it, it helps educators to develop, er, evaluate and improve our educational practice. It almost evokes that reflective, er, practice, I find, er. For example, I was really, really lucky to be part of a research project that help, er, helped us to understand whether or not playful thinking is only applicable to early years, or could it be a powerful way of promoting innovative thinking in our older children, er, agency, student agency?

So, the, the research that we've used, whether that's within your setting or equally when you're reading vast research from other educators, I feel it almost gives you an opportunity to create your rationale. It helps us deal with unexpected and unidentified problems as well. Um, I think in a nutshell it really promotes improvements. Er, for example, we were really, really privileged to be part of Helen William's Playful Maths, and I have her book right here, er, [Fran chuckles], where, where I really enjoyed the way that Helen reached out to our school, where we were asked to trial some of her vignettes and then feedback, some of the mathematical experiences or activities or pedagogical approaches.

And not only did it give us a really rich opportunity to work with other international schools as well as UK settings, but it helped us evaluate our own practice and improve our practice based on rich research.

Fran: That sounds super interesting, Esther. Can I ask ... you mentioned there um, a project you were involved with with Helen Williams, and she, um, contacted your school and other international schools as well as schools in the UK. Can I ask what form the feedback for that took? Were you doing it individually or as a staff or interacting with staff members from other schools? How did that work?

Esther: That's very interesting question, Fran. Our Early Years team actually starts from age 1 to 5, and so [**Fran:** Right] within that department there are different sections. So, when I'm thinking about how that worked internally, it was really interesting in our collaborative planning sessions where we could hear and listen from each other in terms of different age groups and trialling different outcomes that came.

And equally, having spoken to other international schools online, er, we would discuss elements that w-where we maybe took a different angle and they did too. So, it almost provoked lots of key philosophy within teaching mathematical skills in our young, young children that's not just one way. There are many ways.

Fran: Sometimes certainly teachers have told us that talking to other teachers about um, shared experiences, these use of the vignettes that you mentioned from Helen's book, um, prompts thinking and response in a kind of springboard fashion that maybe even if they'd taken the time to reflect on it on their own, wouldn't have resulted in the same kind of um, responses and, and thoughts that kind of come out of that.

Okay. And you also mentioned that you do some joint planning er, with your team. Is that a matter of course, and is that er, in-inspired or um, prompted by external stimuli, or is that something that, you know, er, works in different ways?

Esther: That is actually very cool elements of our school collaborative planning. It's a-a big principle that we have developed over the years. So professional learning is, is key for us, and our collaborative planning really aims to put the child at the centre. So whatever we're, when we have that golden time to meet as a team, it's essential that we're not driven by contents like, "Oh, we've got to get through all these things!" But actually at the heart of everything is the child – what we observe, how we see the unique learner – and therefore we hope to build a really rich opportunity to plan and i-inform our planning with what we know is developmentally appropriate and also accurate next steps. So it's a-a really essential er, system, I would say, that allows for er, that informed planning and informed practice that is relevant, meaningful and equally challenging for our learners.

Fran: And listeners, I wish you could see Esther as I, we're talking to each other, because er, rarely do I meet someone who gesticulates as much as I do. But her, th-th-the hands are telling as much of the story as the words that you're hearing. So I hope you can imagine that at least a little for yourselves. Thank you, Esther!

Okay. Um, you er, were telling us ... I-I can see how animated you are as you're talking about this. Um, how did you come to know first about Helen's work? I'm interested in what way it crossed your radar, as it were.

Esther: The wonderful world of Twitter! So [Fran laughs] we share, we share a lot as a school as well as personally. I-I share from a very professional angle, um, and the department that we have here, er, we-we share lots er, with our early years. And what, what I really find useful with Twitter is you can really learn a lot. So it's a-a really rich opportunity to learn, so professional learning, whether it's tapping into experts such as Helen, really valued educationalists within the field, but equally sharing practice that provokes er, reflection and questioning. And I-I find it has a, a wonderful way where you can reach out to international schools as well as schools that are local to you. So we, we reached ... Helen actually reached out to us and, er, maybe enjoyed seeing some of the practice that we have in action linked to maths er, with a particular link to [loose parts](#) actually, which is something we've been trialling. Er, so yeah, that's how that relationship started, er. Very grateful to Helen. She's very inspirational.

Fran: [laughs] Well, and it's wonderful to hear teachers talk about um, those practitioners that they find inspiring or where they get their information from. We're hoping that these podcasts will be of interest to people er, in different stages of their career who might already use Twitter but who might not have thought about it and, y-you know, different ways in which they garner information that feeds into their professional learning like you've been talking about.

Okay. You mentioned loose parts there. Um, I wonder if you'd like to talk more about, er, any work that you've done that that has inspired and then had further impact, perhaps?

Esther: Well the phrase 'loose parts' is-is something that maybe is a key word now in early years, but I'm very passionate that we know where it came from. It actually, believe it or not, didn't come from an educator. It came from an architect. Um, I actually have forgotten his name! That's really bad. But, er, [Fran laughs] he-he wrote a journal all about the power of loose parts. And loose parts are defined by ... Basically, c-, it could be anything that has an unprescribed, er, purpose, if you like. So, a conker to a 3-year-old could be many things. Lots of conkers in a pan, in a home corner could be dinner! So loose parts can provoke such creative thinking.

Loose parts can come in different forms: natural objects from like, say, er, conkers ... Oh yes, it's come to me – Simon Nicholson, the, the journal. So loose parts could be anything. And what I will do actually, Fran, is give you [some images](#) that may help put that into context.

Fran: Fabulous. Thank you. We'll put those, um, available for listeners in the same place that they get the podcast. So that would be great.

Esther: And I have one example actually that I can share with you which the image will, will enable people to see better, but ... I'm, I'm a bit of a saddy, where I found a skip that was full of those mosaic tiles, and my colleague and I climbed into this skip and we got all these tiles out. [Fran laughs] And the beautiful thing about these tiles, they were all different sizes, different shapes, different colours. And we carefully took them apart – the tiny ones – and I just put them in a basket. They were all different sizes and old, from a charity shop, little frames, different size frames. And I watched a 3-year-old, and I've shared this with Helen, tessellate these tiles in a very mathematical way. He was doing arrays of three and was able to subitise, show me cardinality, was able to tell me how many were in his frame of ... Yeah, and the maths lead here, I shared it with him and he, he showed it to his Year 6, and was like, "This is what you're learning about!" [Fran laughing]

So that's what I mean about the beauty of loose parts. It could be anything from tiles to conkers, it could be large loose parts. It, it enables a world of maths, a world where we as the educator don't know where this could go, but we know the possibilities. So it gives you a range of opportunity for maths talk.

Fran: It sounds really fascinating and I can imagine that child putting tiles in as you're describing it into the frame. Um, I was having a conversation with another um, interviewee for one of these podcasts and we were talking about, um, comedians who prepare for improvisation and he was saying it's very like that in being an educator in his experience in that you don't follow a script, you're not learning a particular, you know, set of words to say, but you are trying to um, equip yourself with as much knowledge about the situation in which you and the learners are going to be so that you are able to pick up and run with a variety of ideas or to, you know, ask fruitful questions in a way that focuses on what's happened thus far. You're nodding along. I feel like this is chiming with you.

Esther: Absolutely! Just spot on, and actually, in early years we – not to use too much early years jargon – but we use the phrase 'enabling environment'. So, an environment where a 3-year-old can walk in, and continuously they have zones. So they have a maths area, a DT, a creative ... But we know maths is everywhere, and sometimes I'm teaching ... For example, I've just left kindergarten, which is aged 3 to 4, and the Playdough area, they're just doing the most beautiful pattern making. I haven't told them to do it! It, they've just done some gorgeous maths opportunity there. And like you say, it's, for me, it's about ensuring that you know your curriculum, you know the desirable outcomes, that's all embedded in your, your head as an educator. And what you're doing is facilitating that learning with really meaningful moments that you can provoke; adult led, but equally valuing those independent

opportunities that are really provoked by valid resources that you've given, and, and we call those provocations.

So, if I happen to have – and this is a-a great one that I was just amazed by – I put a chessboard out that I again got from a charity shop! Perfect! [Fran chuckles] And children love real things. So when I talk about loose parts, they love real things. We need to trust them with real stuff. So I got a load of those washers with the little hole, you know, from I think it was actually from Wilko's or somewhere like that. And, and then another element which buttons, buttons come in different sizes. They have different holes. That's a perfect ... So, so what we're saying is think carefully about what we provide our children. And the golden chestnut was a dice! Just put a dice there. Let's see, you know. And these are 3-year-olds.

And the most beautiful moment happened where two children created their own game. I didn't tell them how. And they rolled, and they were subitising rolls, and a lovely discussion about the five-ness of five came. And at one point the child turns to me and says, "Esther, there are other ways to make five, aren't there?" Like that's like, "Yes! There are!" And, [Fran laughs] my heart was just, yeah, it w-, it was powerful.

And I guess what, what we're thinking about is, why are you giving those stimuli? What will it provoke? But with a blend of adult interaction and child led learning can give powerful moments and obsessing over your skills, knowing where they need to go, but in a way that's meaningful and interacting, not interfering.

Fran: That's a really clear distinction, isn't it? And I certainly know. I've been a teacher who, after on reflection, has interfered too much and thought, "Ah, okay, there was a, a better way of standing alongside and, er, observing perhaps more than, than interacting than", that I didn't get the balance right.

Esther: There's a wonderful [book](#), actually, by Julie Fisher, and she writes fabulous research about Interacting question mark Interfering. So it's knowing how to carefully and expertly, engage with children rather than trying to fit your agenda. A classic in early years: a child's doing some amazing building and they're tessellating – they've used, you know, measurement in their building and they've, they've really thought about how to make it balance – and they may have some animals on there and the adult comes up and goes, "So how many legs does the" you know, "giraffe have?" [Fran laughs] Rather than let's think about that real careful thinking that's happened behind that construction.

In early years, we, we talk about this as the heartbeat of our curriculum. It's called the characteristics of effective learning. So it, it's just a wonderful, huge foundation of our, our curriculum. And it's all about those life skills, resilience, risk taking, er, motivation, engagement. So how are young children, how

motivated are they? Have they got that intrinsic motivation, or is it about the end result? But it's about the process of learning and lifelong learning. And I feel as adults, we can mo... we can model that. And that's, that's a huge part of our role.

Fran: Right! Well, and that, that's really an interesting point you made. I wonder – you were saying about modelling lifelong learning as adults. You mentioned Twitter already, um, I guess X now. You also mentioned a book and I-I wonder how you find – other than Twitter, perhaps – how you know what to read, what signposts you, what piques your curiosity to then develop your professional learning?

Esther: Really interesting. I-I must say at the school I'm at, professional learning is really valued. It's not only valued, but it's, it's delivered in a way that facilitates reflective practice. So we have a, a wide range of professional learning partners. For example, a professional learning partner of ours, and we held a huge symposium at our school. We had many guests invited; Rachel Lofthouse, who has a huge, vast range of, of knowledge around coaching and mentoring and how powerful that can be in terms of pedagogical coaching.

Er, equally, we tap into excellent theorists such as Ferre Laevers, who worked on wellbeing and involvement skills, and tracking that in young children. We all know that wellbeing should be at the heart of everything that we do, because when a child feels good about how they learn and how engaged they are, they will learn really well. So, very fortunate that professional learning is, is very much facilitated here.

And I do, I must say from a young age, my experience, I find that children are natural mathematicians. Numbers matter, you know, "How old are you? But I'm four! You're three still!" You know, how big you are or how many things you can hold in your hands, you know. All those things are mathematical. And if we just take those lovely natural moments to provoke, you know, thinking about different skills within maths, then it-it can be really, really powerful. Finding like common challenges with our youngest that involve number sense, for example, or spatial awareness or fractions.

I'll send you a photo – have a beautiful example which is in our building area. Rather than throwing all the construction blocks in a box, we, we shadow. Now that's a bit of an early years word – maybe you know it?

Fran: Ah, I have come across this! I saw a beautiful picture the other day. Am I right in thinking it's where you, you set out things and the, the base on which they sit, or the shelf or the space is silhouetted so that the children know they can put that back. I'd, I'd not come across it until recently, but it was a

teacher was showing me that they had not merely set them out in rows, but had made almost like a tangram pattern as a silhouette, so the children had to think carefully about how they were putting those blocks back to fit that space.

Esther: Exactly this. So yeah, spot on Fran, that's, that's exactly how we do it. So for example we'll have the L-, the long, the medium, the short blocks, but equally, er, a square, two triangular shapes. So they're playing with fractions and lots of people come into our setting, and they go, "It's so tidy, you must spend hours!" No, the children are doing it.

So tidy up time, [Fran laughs] I actually, this is another bit of research, looked at that and when you actually count how many, you know, how much time in your day for early years is tidying up, it's quite, quite a, a lot of time, so maximising that bit of, you know, time into a learning opportunity is powerful. And, and actually one example where I could see the impact of this, the children had realised they, they were building this beautiful construction, really thinking about what they were using. And they'd, they'd realised they'd, er, went out of squared sort of shape, block shapes. And one, one girl said, "Ah no, but we can use the two triangular shape." So it's like, "Yes, they've got it!" So, [Fran vocalises and laughs] it's, it's wonderful. And I, I learned this phrase from a wonderful early years guru, er, Ruth Swailes: er, "Choose it, use it, put it back." So purposeful thinking when we are learning as well across the continuous provision.

And just going back to that role of the practitioner, that is key in early years. Er, we often talk as a school, we reflect a lot about how much are we wondering with our children in a playful learning. So, you will probably hear a culture of, "I wonder what?" "I wonder if?" Or "I wonder what would happen if?" Um, and making sure when we're playing alongside, we're thinking about questioning such as, "This looks interesting. I wonder what you're thinking about?" rather than, "Oh wow, look, you've really built those blocks in some..." you know, in a symmetrical way. But it provokes reasoning; another opportunity for mathematical rich talk.

Fran: Beautiful stuff. I can get a-a really clear image of it as you, as you're talking about it in my head. You've talked, er, about how supportive your school is and that you have accessed in a variety of ways, either through Twitter or reading, um, for yourself, um, er, you know, a whole plethora of research opportunities and what you consider that to mean in your own setting.

I wonder, Esther, if you have any advice for listeners who perhaps haven't found themselves in settings that foster their, um, their use of research

in quite the ways that you've experienced. Do you have any, um, any thoughts that you'd like to share on that, on, on people overcoming perhaps challenges that they might, um, imagine would be barriers to them doing this sort of work or, um, accessing the sorts of things you've been talking about?

Esther: Mm. W- one thing I would advise is go for it in your own practice. So, even if you secretly are reading the most amazing bit of er, you know, research, er, for example, [Pedagogy of Play](#). I can't help but tell you lots of different bits of research that I've been reading that inspire, for example, Pedagogy of Play, a rich bit of research, go look for it online, you can download it, PDF file. One example's Area. They've looked at a range of research about how, what would playful learning look like with our older children? What principles are behind that? And it's rich research in class. Let's say for example, you've looked at that but your school won't promoting research- informed practice. I would still go for it in my own classroom with my children, and I think that's your research for yourself too.

So I guess it's, it's keep banging on that drum and saying, you know, questioning, and having that reflective practice is key. Um, I know for us as a school, we've really developed our practice; for example, within the early years it used to be a list which, adult led. Here's the activity, [**Fran:** Right] we're delivering it. And we looked at one specific part – the role of the adult, the role of the practitioner – and we realised that we can still foster, if we're thinking about maths, er, reasoning, systematic thinking, seeking to make sense of the world around us, being understood, that the unique child should be understood.

And the biggest part is that reflective practice of our, our role not being in our box – this is my agenda, this is my planning – but being responsive to the children. So I guess what I'm saying is, co-construct the curriculum with your children and you will see the massive benefits to that.

Um, if I just think about play, it's highly misunderstood. Er, people think it's very linear, very easy, but it's actually quite complex because play is not predictable, um, and play actually takes a huge amount from the adults, the practitioner, to be straight away informed, straight away with it. Almost like assessment is happening in that moment and it's how you respond to what your learners have said, which actually takes a lot more skill than following maybe a scheme that's set out. [Chuckles]

Fran: Right. I can well imagine, and I love what you're saying about the responsiveness and you mentioned that lovely thing that I, er, will hold on to, which is research for yourself and what it means in your setting.

Fantastic stuff. Okay. I-I wonder... Y-you've talked at length about all sorts of interesting things that we could follow up to, then. Is there anything else that you have perhaps as we've been chatting, thought, "Ooh, that's a side bar." Is there anything else that you wanted to share or mention before we bring our conversation to a close?

Esther: Well, I would say in conclusion, I would encourage any listeners to put the child at the center of everything that we do. Doesn't matter what age. Um, and think about almost developmental pathways. So, if I was to give maybe three top tips, I would say provide effective experiences that are meaningful, purposeful, engaging. Number two, interacting, er, sensitively, joyfully with our children, er, because what we do is powerful. What we show is powerful and children will feel it, and they'll feel valued or they'll feel that there's another agenda going on. So interacting sensitively, recognising our role in that as well. And I would say the third one – this is only because I'm a bit like this! – be obsessed with helping children to reflect on their learning and deepen their understanding rather than racing through a very content-driven curriculum. But let's get to know our learners, to deepen their understanding. So maybe a culture of routinely asking, "What do you notice?"

Fran: Glorious! I think that's a beautiful way to finish and recognising and knowing our learners feels like something that I'm sure every teacher will feel and recognise, um, for themselves.

Okay, er, Esther, it has been such a joyous conversation. Thank you very much for sharing all of your experiences.

Um, I would like to invite you, the listeners, to engage with Cambridge Mathematics on X (formerly known as Twitter) or in the comment section on our website to share your thoughts about the conversation you've heard today, or the ideas that we've been discussing.

Perhaps you'd like to share your story too!

We look forward to hearing from you, and goodbye until next time.