



Transcript for Staffroom Catch-Up Episode 3: “We can do amazing things!”

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 am 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 Catherine Gee. Catherine, could we start with you telling us about your current role, please?

Catherine: Hi. So I'm Catherine Gee, and I'm a primary school teacher from a large school in Devon. Um, I am currently the year 4 teacher. I'm also a maths lead where I'm responsible for children from nursery all the way up to year 3, but work very closely with the maths lead who works with children in years 4, 5 and 6. Um, as well as that, I'm also a mastery specialist, um, for the NCTM and I work for the Jurassic Maths Hub and have also run the year 5 to 8 transition program for them.

Fran: Fantastic. I will come back and ask you about more of that later on. Thank you very much indeed for setting the scene for us.

Um, I would like to share with you to begin with, um, a line from a Sondheim musical, er, 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.

Catherine: I think that my, um, episode is when I was teaching a year 1 class and I had a colleague who is much younger than me, and he came into my classroom and one of the children went up to him and said, “Ooh, are you

Miss Gee's dad?" [Fran laughs] And it, it didn't go down very well with him, but I thought it was a great compliment and found that very, very funny.

Fran: Superb! I like it! And really interestingly, some other, er, contributions from other interviewees are also to do with children's concepts of time. I'm beginning to think there is an unmined, you know, kind of box of delights to be opened at a later date about this. Thank you very much indeed. That's fabulous.

Okay, so let's start then with, um, could you tell us what the word research means to you in an educational setting connected with your work?

Catherine: So for me, um, research means how people have gone and looked into different areas of education and tried to find out as much as they possibly can about that topic. My field of research has changed recently in terms of what research actually is and how we use it. I always used to think it was ... we would share research from people which they had been and investigated, and whether it's things that have happened in their classroom or a larger scale. But then my thinking changed because sometimes we use research which has been put together by somebody based on a lot of other people's research. So [Fran: Ah!] my mind and understanding at the moment is, um, going through different phases, if that makes sense.

Fran: It does make sense. And um, when you say er, your original thinking about research was, um, that they had first-hand experience of, um, collecting data from an educational setting. How have you then come across their results? I don't want to put words in your mouth, so I'm trying to be careful about the language I use. But from those researchers conducting the work to you knowing about it, what happens in between? What medium are you finding out about it through, or have you found out about it, via?

Catherine: [Sighs] To be honest, it's been through a variety of mediums, so some of it has been through published research papers. Um, some of it has been through books which have been put together, um, and then for other bits it's been using things like Twitter and that, where people have carried out their own research studies on a very small scale, um, and then have shared that, but also to go with that in our own classrooms and in our own schools. Once a teacher has gone and started to look at an area and started to collect data on an area that they have been working on. So it's a broad spectrum of different things.

Fran: Absolutely. That's a really wide reach, isn't it, from teachers as researchers in the classroom, as you say, collecting their own data about their own classes or possibly classes in their schools. And then right the way up to, um, you mentioned published research papers, er, potentially

in journals, I guess um, in other formats too sometimes. Um, research is published online as well as, you know, actual physical things that come through our letterboxes, um, or email accounts perhaps.

You also mentioned, um, two others. So books, first of all. Can I, um, er, ask the question, how do you find out what you're interested in reading in terms of educational research?

Catherine: Um, so at the moment, most of my er, research reading is, is based around maths, um, and just wanting to find out what the current practices are, how things are changing and what people's views are on, um. I suppose also I will go and look at research if it's ... maybe I've been introduced to a new way of teaching or a new idea in teaching and I want to find out a bit more about it, or I want to have an idea of where it's worked, how it's worked, and whether it's just been in a specific area that it has gone, "Wow!" Um, because [Fran: Right!] sometimes they'd have a piece of research done in a very affluent school or affluent area. But is that the same as if you went and did it in another school, which wasn't in the same circumstance? So I'd like to find out a bit more about what's gone on behind the scenes as well.

Fran: Absolutely. And, um, what you're talking about, of course, is er, interrogating the research and asking questions of it and digging into where the sample was taken from; er, how big it was; when perhaps the data is from; whether it's up to date and relevant or whether changes have happened in between. And all of those things that I suspect for some teachers, that is exactly how they would chime with your experience, and for other practitioners who perhaps don't or haven't yet engaged with research in the way that you're talking about, sounds perhaps less familiar because certainly sometimes professional learning can feel as though it is something you take on board that other people do to you, almost. And um, the-the-the not only the right, but the expectation to have conversations about that and to decide what you want to take on and how you interpret it is part of that learning process, I think, that you're describing – that professional learning that, you know, hopefully lots of us have the opportunity to, to, um, experience in our careers.

Catherine: Definitely. And I think for me, it's, as I've gone into further into my career, it probably using research a lot more than we were previously. And I don't know whether that's how things have just evolved or whether that's where I am.

Fran: So that sounds really interesting. And your reflection on whether it's the changing of the situation we now find ourselves in, in the educational professional world, perhaps in this country and in others. But, or whether it's a combination of that and where you are in the progression of your career

that's meant you are seeking out things more, as well as perhaps their availability in the general teaching ether.

You mentioned books and Twitter. I wonder how you find things that you're interested in reading and how you get access to them.

Catherine: It was hearing you say that because as you w-, as you posed that question, I was thinking actually a lot of the research that I'm reading in books has probably been started by a post that someone has put on Twitter, um, **Fran:** Ah!] saying, "Oh, I've read this" or sharing, sharing a bit of research. And I, that's then almost just given me that little insight into it where I wanted to go and find out more. So then I've gone and looked at the book, bought the book, um, and maybe sometimes not read the entire book, but just read the elements that are key to me at that moment in time. And it could be then that I go back and look at it again at different times. Um, but I think that's how I choose the books I'm doing, because someone has posted something.

Um, and I think with that, though, you always have to have that air of caution, don't you? Because it's only one person's piece of research. Sometimes when it goes into the book it's what one person's done, and that's why I then like to go and find something slightly different or another person's interpretation. So then you can compare the two and see which works for you, um, and what the similarities and difference is in how they conducted their study, what they found, um, and what the implications are for it.

Fran: That makes a lot of sense to me. Hearing you, er, say exercise caution and this is how I would go about it. I also very much like the advice of pick and choose what you are interested in from something like a book or a research article even, and then feel free to come back to it at another point. Feels very reassuring. It isn't that you have to work your way through all of it – um, some research articles are very short, they're just a couple of pages, and some of them are really not! Doing that skim of what is it, looking at the abstract, perhaps, if you're looking at a journal paper, for example, to give an idea of the whole story and then thinking, "Okay, the bit I'm really interested in is that" and then finding that and taking it out. But then corroborating it with other people's um, opinions sounds like a, a really rich way of making decisions for yourself without just taking something wholesale and feeling as though you have to adopt it.

Catherine: Mm. And I think the best piece of advice for me was as, just as you said, it's how you read a piece of research in, especially when it's in a journal, because I think a lot of the time I was probably put off from reading a research paper because I was thinking they were, some of them like you say were so long. And I was like, "It's going to take me a long time." But

when somebody said, “Read the first part,” or “Read the abstract, read the conclusion, read something else.” Then, um, that is what then opened up more to research papers for me because I felt that if it was fine, then um, it was okay.

Fran: And that's really useful: you feeling you have permission to interact with the literature in the way that makes most sense to you.

Okay, so you've talked a bit about how you access research and, um, the decisions you make and how you very often go back and reflect on it. And you've mentioned Twitter and er, those listeners who can't see, but Catherine's face gets very animated when she describes these things. And so I am in absolutely no doubt as to how she feels about some of this!

Um, but do you find that, um, when you have a particular feeling about a piece of research, it er, impacts on the use you make of it, or do you sometimes find that regardless of how you feel about it, you are still eager to find out more?

Catherine: I think initially it does sway me slightly and I might put it down and think, “Oh no, I don't agree with this.” But then it's almost as if I go away and do that subconscious reflection. And I, if I didn't agree with it to begin with, I almost want to go back and find out a bit more about it, because it, we, I'll have that niggling feeling that maybe I didn't look into it enough and I need to find out more about it before I feel that I can make any judgment. Because actually someone has put a lot of time and effort into doing that, and I need to really understand what's behind it before I can make a final judgment.

Fran: That's very impressive to hear. And certainly, again, going back to a book analogy, I have found it helpful if I've started a book and I'm really not, you know, kind of feeling it or it's not a page turner that I hoped it would be, sometimes hearing about it from someone else's perspective. So, a friend might say, “Oh, yes, I really struggled with the first two chapters, but keep going because actually in chapter, whatever it is, things change slightly,” or “I started to get the hang of the writing style,” or something like that. And I guess you're describing that permission, that time to go back and think differently about it, and that even if you didn't try or it didn't chime with you first time round, I love the fact that you're describing a curiosity that remains, even if the findings aren't aligned with your initial interest, perhaps, I think is what you're saying.

Catherine: Definitely. And I think like, like you said, it's, with that book, sometimes it might be the frame of mind that you were in at the time as you're reading it. And if you go back and you read that book again, then you have a different approach to it. So I think it's the same with, with um, with research as well.

Fran: What a wise thing to say! You know, my frame of mind makes a lot of difference! We talk about it for our students very often. We forget the same applies to – I forget the same applies to me. It's very useful to have it pointed out. Thank you kindly.

Okay. So um, having described, described all the sorts of ways that you um, er, might access things and have done so and increasingly er, over the course of your er, professional career as it develops, would you like to tell us a bit more about some of your current work? Um, what that involves and maybe the impact, if any, that your, um, engaging with educational research has had w-, a-and the things that bring you joy? Er, mostly, because the animation is apparent when you talk about it.

Catherine: So um, I think when I use my research most is when I'm doing my, um, maths hub work. So um, as I said earlier, I'm a mastery specialist, so I have the privilege of working with lots of different teachers from around Devon. And we always begin our teacher research groups by looking at a piece of research and unpicking it. If we are not sure about things, we ask questions about it, we might find another piece of research which goes alongside it and we can compare the two. And we always think about how that research can then be used in our own classrooms.

So an example is the, um, private talk public conversation. It's all about the different ways that we can encourage children to talk and how we um, we can set that up within our classrooms, through ... So by sharing that with the other teachers that I'm working with, we can discuss it. Think about the ideas that would work in our classrooms, and then we all choose just one, one idea because we want it to be something that we can go away, we can try in our classroom, and then we come back to our next meeting and we talk about the impact that that, that it has on the children in our classrooms.

And we're very reflective, as in saying that actually sometimes it may not work in our classroom at that time. But if it doesn't work, it's absolutely fine. We just need to reflect on why it hasn't worked and then go, go on from there.

So, and then each time we have a teacher research group, we introduce a new piece of er, reading and we go through the same process. And we've actually been doing it in our own school as well, where we've been thinking about, um, open ended maths questions and going back to looking at how we use those and what the benefits are for the children, but also how we can support the children when we're access, accessing these types of questions. Because for some children they will find them hard to start with. But by supporting them, we can do, do amazing things.

Fran: Ah, there's so much in what you've just said and listeners, what you may have caught in the background are some of the children in Catherine's school, I think, er, in another room and she has the most amazing focus in a ... you'd never know from her face or her tone of voice that things are going on in the background. So thank you very much for continuing anyway, Catherine!

There was a lot in that. Um, what I took from you dissecting those pieces of research at the beginning of the teacher research groups that you run as a mastery specialist, is that critique doesn't always have to be critical and that being able to reflect on something, even the things that didn't go well, isn't a, um, a barrier or a means of, you know, stopping th-those thoughts in that conversation, but actually um, something to kind of take out and inspect and look on all sides and say, "Okay, maybe this wasn't the right time," or "I wonder if such and such had an impact that previously we hadn't considered," or, you know, suddenly reared its head, left field, that was unanticipated, and being able to sift out, er, you know, the, the meaningful or the meaningful to you and what you're going to try in your setting is a real skill that, as you're describing it, I recognised, takes time and effort and honing in our own professional heads. Quite apart from bringing it back in and making use of it in, in where we are.

Okay. So um, your work as a mastery specialist, do you um, do you also share some of that in your current setting, or are those two, um, spheres um, separate from each other?

Catherine: No, we do share, so I will always, always try out as well the ideas that I have read in the research papers before I go into the schools, um, and before we have our teacher research group so that I know ... any pitfalls that there might be or anything that someone will say, 'Well, I don't think this would work because this might happen.' Um, so I like to try all the different things out beforehand and also see what impact it has on my children. Because like I say, we, we're talking very much about our work is, as a research group. So if I've got that experience to be able to share with them, then I can talk about that and say, 'Well, yeah, this is how it worked here, but in my class this is what happened.' And als, also I think it gives the people I'm working with that permission to say if it doesn't work in their own classrooms.

So I think sometimes, and I've been guilty of this, you've read something in a book, you've read something in a paper, and you're thinking, 'Oh, it must work in my classroom because it's worked there.' But when it doesn't, you think, 'It's me. What's happened?' So I think by going in and saying to everyone, 'This is what I've done, I've tried it. This worked' or 'This didn't work.' It gives them permission, and I think they'll then be more reflective on how they're using the research.

But yeah, I tend to use, all the research papers that I've shared with others I will try out with children in my class and share with other members of staff as well.

Fran: Fantastic stuff. What I hear you talking about is the confidence to work alongside colleagues and for them not to feel as though it is any judgment on them personally, but much rather on the focus on the pedagogy and on what the learners are experiencing, and to shift that, that spotlight, as it were, can feel much more liberating, I think, for people than thinking, 'Ooh, I've got to get this right. You know, you've given me this recipe and I've got to produce the cake for the wedding. Oh help!' Rather than saying, 'Actually, we're all gonna try making this cake and then we're gonna bring it together and try it.' And – not in the manner of Bake Off, rank them – but say, 'Well, actually, this didn't work as expected'. And talk about that what came up can be immensely bonding for teachers. And as you say, they are more willing to be reflective of their own practice when they realise it's not a, you know, a best in show competition.

Okay. You've talked extensively about how you, er, engage with research and your critique of it and what choices you make when you're deciding what to use for your own practice. And in those teachers' groups that you work with for the NCTM.

Um, I wonder if you have any thoughts that you would be happy to share with people who haven't found themselves in the position that you're currently in, who maybe are unsure about where to start.

Catherine: I think for me it's um, just finding out about the key area that you want to be learning about, um, and furthering your understanding of, because if you've got that key interest there, then you've almost got that, that way in, um, that way into the research that you're gonna look at. I think you have to have that, that commitment. And if you're only just starting out, just finding that research paper, which is just a small one, and then looking at that, um, or a s-, or a chapter in a book and I think just talking to colleagues and seeing if they've got any recommendations, um.

Fran: Ahhh! That...

Catherine: That works well.

Fran: Yeah, I'm sorry, I didn't mean to cut across. That was more of a, 'Oh, yes! I totally tally with that' and have certainly been given things that, had the person who was offering them to me not been the recommender, I might have bypassed or they might not have caught my eye. Um, but somebody saying, 'Oh, there's a thing on' or 'Oh, you're gonna love this graphic' or

‘Have you seen the very surprising ...’ whatever the results are. The personal recommendation, I think you're right, is absolutely, um, crucial.

And the, I loved hearing what you said about find your interest. I had, um, a friend who was, er, looking to become more active recently and was saying very dolefully, [speaks sadly] ‘Which of these sports exercise classes do you think I should look at?’ And I was saying, ‘Well, I mean, are you interested in any of them?’ And they were saying, ‘Nnn, not really, but they are available.’ And I was saying, ‘Okay, well, I think we're on a nonstarter if you're not very interested and you're going to have to make yourself go. What are you interested in? What do you like doing?’ And they were saying, ‘I really like dancing.’ And I was like, ‘Well, dancing’s exercise!’ And they were like, ‘Really?’ I was like, ‘Well, totally! Let's find a dance class! That, you know, you're, you like the look of or that you think you'd be prepared to go along to with some support. And at least then we're starting on something that you're interested in.’ So saying to teachers, you know, ‘What are you interested in? Are you, have you been intrigued by the fact that learners in your class behave in this way or that they don't behave in this way? And I wonder what feeds into that and what interests children?’ or ‘Have you been surprised by how well things go when you use a particular manipulative? And have you ever wondered why that is?’ And tapping into those, you know, kind of wonderings that we have as teachers that we are en-, trying to encourage in our learners all the time, but that there are answers to?

I think I hadn't realised, certainly when I was a classroom teacher and didn't engage much with what we're talking about in terms of educational research – and there weren't NCTM research groups quite so obviously available for people to tap into – that I was very unaware of all of this information was out there. I didn't know that, never mind how to engage with it, which is perhaps more of a barrier now for teachers who are interested but just don't know how to get their hands on it, or where to start, or don't have someone who might make a personal recommendation like you've described. So yep, the person and the being interested and, ‘Oh, let's go with that as a starting point’ sounds like a fabulous recommendation to begin with.

I-I wonder if, as we've talked, there has been anything that you've thought, ‘Ah! That reminds me of...’ or ‘Ooh, there's a, something...’ in your work that you haven't had the opportunity to tell us about yet that you would like to or that you wanted to make sure that we touched on.

Catherine: I think the other thing I just wanted to add is, I think it always makes it more interesting if you're doing the research reading, when you have got someone to talk about research with, because I think it's **[Fran:** Ah!] that dialogue that you have with people as well that almost clarifies

your ideas and what you're reading. Because one key thing that I've noticed sometimes when I've been part of research groups as being the person who's been given the work to read, is people can interpret it in different ways. So you may interpret it differently to how another person does. And by having that conversation with them, you can bring that general conclusion together. Um, so I think that's, that's really important. And I think also if you've got that added interest in it by being able to discuss it with someone, you're more likely to keep going and delve deeper and deeper into it.

Fran: That sounds like a great piece of advice. I am reminded of a session that I was lucky enough to sit in on recently at a conference that was about an educational book club, and they were saying exactly what you've just described, that, you know, um, that people had had different interpretations and that they hadn't always agreed with them. But it had been interesting to hear a point of view that hadn't necessarily been something that had come up for them whilst they were engaging with the text, or the information or the data or whatever it was.

I certainly have been in classrooms where children have listened to somebody else and then gone, 'Ah! I didn't think about it like that!' And of course, the opportunity to do that as teachers and to hear the, 'Oh, you saw the such and such and so and so!' And 'I missed that element of it. I wonder if I do think that's important or not or whether that doesn't change the story for me. But at least it's a facet that I hadn't considered until you brought it into my sphere of consideration, I guess.'

So, so the having someone to talk about it with, and the book club I was mentioning was a-a available online. And so the people were saying we started it in lockdown when we couldn't meet together, but actually, um, we gained members who otherwise are geographically isolated and not in a position – either they teach in a very small or rural school or they are er, international and just interested in this particular book or particular topic – and therefore they can come and find people who are willing to engage in dialogue about it, which makes it all the richer for them. And er, very often in this case, the author was present to kind of answer questions, so that was another dimension, again, that, you know, was you were able to engage with and, and put questions of your own wanderings directly to, you know, the person who was responsible for this.

Well, I think that's a great place to draw it together. Those of you who were listening particularly carefully might have noticed two squeaking door noises. And Catherine continued absolutely without, er, interruption, um, er, as a colleague managed to come into the room behind her and back again. But

if you didn't spot that, I just thought I would allude to it because she's done superbly professionally throughout.

Um, Catherine, it has been a joyous conversation to have with you. Thank you so much for sharing your wealth of experience and your opinions and, um, and thought prompts, I think I'm going to say, because I've certainly got a lot to go away and think about.

Um, I'd like to invite you, the listeners, to engage with Cambridge Mathematics um, 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'll look forward to hearing from you, and goodbye until next time.