# TRANSCRIPT

DANIELLE TOON: Hello everyone. I'm Danielle Toon, Associate Director at Evidence for Learning and today I'm talking with Philippa Cordingley, the Chief Executive Officer of the Centre for the Use of Research and Evidence in Education, known as CUREE, which is based in the UK.

Philippa and myself are experts on an OECD Initial Teacher Preparation study and recently attended a symposium in Japan on understanding and using evidence to support initial teacher preparation, policy, reform and practice. In this podcast I'll be talking to Philippa about her 20 years of work to support teachers to use evidence in their teaching practice. We'll be talking about what evidence is in relation to practice, what good evidence use looks like, tools and resources to support teachers in relation to evidence use and the challenges facing teachers and school leaders in using evidence in classrooms and across the school.

Firstly, I'll ask Philippa to give us a bit of background about herself and on the work that CUREE does in the UK.


PHILIPPA CORDINGLEY: Well, it's a real pleasure to be here and hello everybody. I just can't tell you how excited we are to be connecting with what you're doing in Australia. The way that your stamp of play as evidence into professional, the construction of professional life entities and the work that I know that lots of different organizations are doing, is really very exciting to us. So it's wonderful to be part of the conversation.


DANIELLE TOON: Philippa, how did you get to become the CEO of CUREE and can you give us a little bit more information about what CUREE does on a day-to-day basis?


PHILIPPA CORDINGLEY: Well I set CUREE up because I got frustrated really, about the distance between doing really good research and whether or not it was making a difference in classrooms, to young people's learning, and teachers' professional lives and school leadership. I had been involved in a piece of research that had been lauded academically, was cited all over the world in academic journals, and I knew it took me three years to learn how to bring that to life and make it useful for schools, and in doing so I was studying whether continuing professional development support was making a difference to young people and to teachers.

In the three years study, I was finding really very little connection or even very little reason why there would be a connection in the great work by people like Joyce and Showers and great work about pedagogy, simply wasn't getting anywhere near the place where it could make a difference.

So, then I just thought, I'm going to do something about that. About a third of what we do is research, both large scale research and systematic reviews, but also smaller scale research and evaluation. About a third of what we do is translate it into tools and resources, that bring it to life so it can live in the excitement of teaching and learning in classrooms in schools, and about a third of what we do is work with groups of classroom teachers and school leaders and schools to build very strong professional learning environments.

Because on the whole, we think it makes a lot of sense that on the sound use of evidence there's work-based professional learning by educators and by school institutions.

DANIELLE TOON: Fantastic. I thought we'd start the discussion more formally about evidence in relation to practice, and trying to unpack what is evidence.

We talked a lot about this when we were in Japan recently and the different types of evidence and the different uses of evidence and how evidence fits into a bit of an eco-system that Philippa just mentioned and that the journey that evidence takes to go from researchers into classroom practice.

So Philippa, what's some of your thoughts on how do we define evidence and the types of evidence?

PHILIPPA CORDINGLEY: Well, I think the first thing to say is that there are loads in a data-rich world, you know with big data happening and being possible because of technology, the world is full of data but the thing that turns data into evidence is clarity of purpose. So when we know what we want to understand about young people's learning, what we want to understand about high-quality teaching and learning practices, when we know what we want to know about leadership, we can turn to loads of different kinds of data and then organize, in a systematic way to bring them together and analyze them.

But it's only when we've got powerful questions that we can turn data into evidence. And it's finding the right questions. Finding the questions in a form that research and evidence of various kinds can speak to, in ways that are useful, is just in its own right is quite a challenging thing. A guy called Shulman, he wrote about one of the things that's wrong with education research evidence, it's on the whole developed to feed the interests of the researchers and there isn't enough posing of important questions by practitioners.

And one of the things he was advocating that we have always tried to do in CUREE is to systematically collect the questions of teachers and school leaders about what is and isn't working in learning, and what might work better and use those to shape the education research agenda so that the education research that gets done ... usually public-funded, not always but often ... is evidence that makes a difference. So, I think it's the questions that turn data into evidence and the evidence that matters would be immeasurably better if we were much more systematic about finding out about what it is that teachers and school leaders want to know.

DANIELLE TOON: You've done a lot of work with professional learning communities in schools. Can you give us a few examples of some of the questions or the research questions that they've generated?

PHILIPPA CORDINGLEY: Well, one of the schools that leads 30 other schools on use of research and evidence systematically, started out wanting to identify a question that would matter to everyone in the school community to work - to students, to the teachers, school leaders to the community served by the school. So, we did some intuitive micro-inquiries to find out what kind of questions would excite and intrigue everyone, and the question that they decided to settle on initially was 'what does it look like when we're challenging every single student effectively?' Not just the students in the middle of the

achievement curve, not just struggling students, not just highly able students, but when we get challenge right for everybody.

And for a year we created a bit of a research map - which we'll come back to later - to organise the evidence from research about that and people worked through it and at the end of the year one of the things they decided was they hadn't got the question quite right. What they needed to understand was 'what does it look like when we help students be resilient in the face of challenge?' And what does it look like for example, when we're really making sure that struggling students have a chance to fail in order to experience the thrill of recovering from failure. And so, they added resilience to the question and then they also decided that the question wasn't quite precise enough in relation to depth so they added a question about 'what does it look like when challenge is focused on depth, not just on doing more?'

And so they did two more cycles across the years looking at those two sub-questions and then they decided that it was the thinking about thinking - that the question they wanted to look at was what's the role of meta-cognition: thinking about thinking in addressing challenges. And now they're just embarking on a new wave of work and the question has become 'what's the role of questioning and the intent behind questioning in making challenge help promote that?'

So that's a good example of how a group, originally one school, now 30 schools, have worked together to refine the questions in the light of the evidence.


DANIELLE TOON: That's a great example of a journey that they went through collectively to really refine and refine and refine and get more specific on the research question they were looking into.

So let's talk a little more about what good evidence use looks like in a classroom. So, we talked a little bit then about what it might look like in a school; why don't we talk a little bit more about what does good evidence look like in a classroom?


PHILIPPA CORDINGLEY: Well, one of the things that I think is really important to recognise is that teaching and learning is an evidence rich activity. There is a lot of intuitive reading of classes by teachers, a lot of activities that they plan in order to get a window into their students learning - that's going on all the time. What we're talking about when we talk about teaching as an evidence- informed profession - and supporting and developing that - is being more systematic and more deliberate about that. So, when I talk about use of evidence in the classroom, I'm thinking about tools that help teachers to not only collect and use evidence, but record it so they can use it for reflection subsequently and they can interrogate it with more depth.

So I'm thinking of, for example, a very simple one we did quite recently with a group at primary schools who were wanting to engage learners who they thought were talking much more freely and completely outside school but somehow or other, were shutting up when they got into school. They gave them disposable cameras and asked the children to take photos of things that happened in their morning, in school, that made them want to say something to someone. And then they have conversations with the students in small groups, saying why did that make you want to talk and who did you want to talk to and what did you want to say, as a way of understanding how talk happens and they were using the photos as a tool to both trigger the talk because we'd given them some research about the importance of visual cues.

And one of the really interesting things that came out of that, was how much the children were taking photos of and using quiet spaces as the things they wanted to talk about subsequently, and how much they valued the quiet spaces. And that the teachers were making the classrooms visually very appealing and very noisy visually but actually somehow or another, some of the stiller, quieter, less visually noisy spaces were the places where the children were noticing, it made them want to talk more.

That's just an interesting example but the point about that is, first of all, there were tools to make the learning more visible and to make it possible to record it.

The next thing that was clear in that example, is when we're talking about use of evidence systematically, you can't do that for a class of 30 students. I don't know how big class sizes are in Australia, but here 30 students would be pretty normal in a primary school. So, you're nearly always talking about working with a sub-group or a sample of students so that you can collect more and richer evidence, more systematically than you might normally have the chance to do for everyone in the lesson.

And then the third thing is that use of evidence in the classroom always involves what happens before, it always involves prior planning about what's the aspect of the learning you want to think about and what's the aspect of the teaching you want to think about, and thinking ahead about what's the evidence that will tell you whether what you're trying to do is really connecting with your aspirations for students.

So prior planning is a key part of it.


DANIELLE TOON: That's such a great description Philippa. I love how specific the examples are and you can tell you've worked extensively with teachers, in schools, in classrooms for many, many years - that you really understand some of the specifics of doing this and what works.

I'd like to ask you some questions about what do you think the challenges are from other schools doing this? You've given an example of some of the research schools in the UK doing this, but what are the challenges or barriers that teachers face in using evidence in the classroom?


PHILIPPA CORDINGLEY: Well, busyness. Time, pace. There are so many things going on.

Accountability systems, if they're working well, can make it easier to work like this, and they can definitely push against it. A lot of what the power and point of working with research and evidence is about is helping us explore the assumptions we're making, and review and refine our thinking and our beliefs and our knowledge. One of the key things about teaching and learning is that we dial things in. We internalise knowledge so that when we're in the classroom, we can be thinking about the young people we're working with. One of the challenges is making the familiar strange enough to think about it hard, and one of the best ways of doing that is through collaboration, but that makes the time challenge even harder.

So, what I think is absolutely crucial in the schools that are making this part of how we do things, rather than just a kind of add-on project, is creating a rhythm for it so that it's happening little, it's happening often, that when there are subject meetings, phase meetings, departmental meetings, any kind of meeting, that at every meeting there is a space for surfacing the use of research and evidence.

The challenge is in making it part of a busy school life and finding a way of doing that, and things have to happen fast in schools, children are fast, they are dynamic places.

So, the amount of time matters, but as important as the amount of time is the kind of time and having it little, and often, and regular and built into the rhythm of the school day, is very hard to do. But once you achieve it, it makes this kind of work have really critical mass and lift off. Time, I suppose, good enough, and giving it a shape that's meaningful.

DANIELLE TOON: Fantastic. I think that leads me to the next question I was going to ask you. You started to describe a few features there of what good evidence use looks like across a school. Is there anything else you want to add about schools that do this really well?

PHILIPPA CORDINGLEY: Well, I think one of the things you find in those schools is that the school leaders have got their sleeves rolled up and they're doing it too. They're modelling this. That they are, carrying out micro-inquiries in classrooms. That this isn't something they do and organise due to other people or organise for them. They are a bit excited about this. One of my jobs for later today, is to write an introduction to a school research journal. This is a school that we've been working with for a long time.

I don't know how it works in Australia, but in England, performance review and appraisal is a legal requirement. It's a very big deal. It happens often and frequently is in one of the main things that drives things in school. And this school has made it a policy that everybody, including the head teacher, and the principal, has one of their performance review goals, they have to have three goals, and that makes one of their performance review goals a research question about teaching and learning. So that the school leaders are modelling this, and they are modelling finding the right questions. They're modelling finding the right evidence. They're modelling using it to enhance, not only their practice as teachers, but the way they set up the school.

I think school leadership, taking this seriously, making explicit their own use of research and evidence so if they're developing a new policy, that they're developing that policy as an inquiry process, in public. They're modelling the use of the wider knowledge base. They're modelling the use of the evidence that their colleagues are bringing forward, and they're showing their workings – like a good maths solution. They don't develop policies in private, they develop them in public by inquiring, by using the public knowledge base.

And that's infectious, on a whole, human beings pay more attention to the things other human beings do than the things they say. I think that practicing what you preach is absolutely essential to this. And governing bodies are very powerful in this country. When governing bodies are doing this as well, when they're not just treating their role as auditing what the school is doing, when they're doing but treating their role as inquiring into how learning is and isn't happening in the school and how it can be better - then the power structures are reflecting this.

So that example of turning an accountability system of a performance review into a disciplined and systematic inquiry, feels to me to be really important and I think if you have standards that reflect this, then that's helpful. In our country the standards used to emphasise research and evidence and then the change of government changed the standards and it doesn't emphasise that anymore. That's a problem. You've got some assets in Australia we are rather envious of.

DANIELLE TOON: Thank you very much and we're rather envious of some of the work that you've done and some of the assets you have in the UK too, including your research schools. I just wanted to point out three things about what you just said which I thought was really interesting. The one, the walking the talk and the modelling, and I liked how that was at the three different levels, the school level, and then starting to move up.

So, first of all the teaching level, the principal level and the school leader modelling that, and the third level in terms of the governing bodies and organisations. I think it's really important to have organisations that are continually learning and inquiring. At Evidence for Learning we use an Impact Evaluation Cycle with some of the schools that we work with and a lot of them have really embraced that in terms of planning out a research question, and how they're going to gather data about that particular research question or interventions that they want to do.

I think that's important to continually learn as a school and share data, and I think the example you first gave of how the school had continually refined their research question based on what they had learned and the experiences they had was really interesting: to start from, we want to make sure all students are learning, to go all the way through to resiliency and meta cognition. It's quite interesting that you can build on that base of knowledge that you gather. I think recording some of that knowledge is an interesting thing and capturing it and building-

That professional capital in a school is interesting, so I was just wondering, I know you've got a few tools and resources that you use to help support schools do this and record and capture and build on their knowledge. Are you able to talk a little about that, and I guess it's in the context of how do you support that more rigorous and consistent use of evidence in schools?


PHILIPPA CORDINGLEY: We draw here on Vivian Robinson's best evidence synthesis and that great chapter in there about the role of tools and she talks about the importance of tools for helping teachers in schools manage complexity. But the power of tools is their ability to operationalise important ideas, so we're taking important ideas that have been well researched in the public knowledge - based and we're trying to make it easy and possible to operationalise them in ways that enable the teachers to manage the complexities.

We're trying to make the tools simple so that the teachers and the schools can learn complexity. I think about this as what we learned in Japan - was called a sand clock. In England, we call them egg timers, or perhaps sometimes hourglasses, but those things where sand moves from one end to the other to tell you that five minutes or six minutes or whatever has passed. The point is that if you want to get rigor into this, evidence has to move through a very narrow waist. The bulb at one end that's full of sand and you want that sand to move into the other end, it has to go through a narrow waist, so we create online tools and resources that make research manageable and make it possible to pass through the narrow waist.

They look like a London underground map. They're online interactive tools, so we work with the school to identify the questions and priorities that really matter to them. And then we organise the research on the route map so teachers can go on a journey along the tube line or they can go to the station that excites them in terms of their aspirations for their own students.

But what we're putting on there, are different layers of summaries of research, so the simplest station on the route map, is a Powerpoint. We time it will take a teacher two and a half minutes to read the Powerpoint. It will take two and half weeks, minimum, to work through what that might mean to their

class, because there are questions at the end to help them think about that and to work with other teachers.

So that's the smallest thing. And then we make longer, what we call digests which is a sort of page, text-based summary so that you looked at that two and half minute Powerpoint. You've gone, "Whew, that's exciting!" Next, I'm going to go into that in a bit more depth. You work through a digest and then there might be an idea in that, that you want to explore and connect it with some other ideas so there'll be research for teachers which will be a longer summary telling the story of the findings. Not the story of the project, but the story of the findings of maybe big philosophers Dewey, Bruner, or very large-scale review, systematic reviews but they tell the story of the findings and every finding is hot linked to case studies, past classroom case studies ideally once written by teachers.

And then other stations are teacher's own inquiries. I think it's incredibly important that high quality, peer-reviewed by teachers, and reviewed by academics for rigor, account the teachers own inquiry are well written up. Again, they're only four-page summaries, these things, so that teachers can really get to grips with the core ingredients of the teaching and learning being studied as well as the findings, but in manageable bite-sized pieces.

And then we've got videos of researchers talking about things where we can We've got videos of practice, to try it out in the classroom. Above all, threaded through the underground lines are micro-inquiries tools. So this is a one side of paper, fifty word nugget, of really intriguing, perhaps, counterintuitive evidence and then a micro-inquiry tool so that teachers can collect, immerse themselves, in evidence about how their students experience that phenomena and then reflective questions so that they'll work through it in pairs and ask each other questions so that before they plan to try out something new, they're starting with really deep evidence about how their children and students that experience that now, and then, another micro-inquiry cycle experimenting with whatever that micro-nugget of evidence is about. Then a repeat of the evidence collection process so they can see the progress going.

And from working through those micro-inquiry tools, we're then asking the teachers to create their own account. We give them writing frames. We run writing workshops in the schools. We go out and we train people in the schools to run those. Then they write up their accounts and we coach them through that process. Teachers in England do not like writing so we coach them through that process, and then they peer review and they get others to peer review their accounts of their studies and then slowly these underground maps have their teachers' own accounts, their own published accounts of what that looks like in their school attached to stations so that slowly the school's own learning through evidence is part of the public visible account the school makes of how they tackle whatever the challenges that they've chosen to tackle. It starts out with evidence from the wider world and then it slowly builds the school's own local accounts and draws those two things together into a whole bigger than the sum of the parts.


DANIELLE TOON: I love that. Everyone needs to check out the CUREE website. I love that the thought that's gone into making those tools practical and relevant. And I love that you've made the tools to help facilitate teacher inquiry. I love that you're encouraging teachers to create their own accounts and publish and add to the body of knowledge that others can then use and then build on and extend. It's a fantastic amount of work and a great framework to learn from, for us to learn from in Australia, in particular.

PHILIPPA CORDINGLEY:  All of that is always organised on the evidence from the systematic review. So the starting point is the question from the school. What we then do is we go to the systematic review of research evidence. So we're starting with the most rigorous evidence we can find to identify strategies. But that's always very abstract when it comes to systematic reviews, so that the research we're choosing might be individual studies. Some of it might be small-scale, some of it might be large-scale. The strategies come from large-scale evidence, but the studies that bring them alive will have texture and exist at different scales and levels of rigor. The rigor lies in the strategy and the selection of the research resource to bring the strategy alive. I forgot to do the rigor bit in there.

DANIELLE TOON: No, that's an important clarification and I think it's important too that you've pointed out that we started this conversation by talking about the different types of evidence, and you've really illustrated there how there's different types of evidence and how they may be used for different things. So, what a systematic review is useful for and what a strategy is useful for, and I think that's really important because I think, sometimes there's a bit of confusion or miscommunication about that in terms of how you use some of the more systematic reviews and then how you use individual studies. And then what's the place for teacher inquiry and adaptation and adoption of that information, so that's a really great example of that.

I wanted now to turn to, because we talked about this in Japan a lot, given we were talking about initial teacher preparation ... We talked a lot about how teacher educators, and I'm going to clarify here that when I say teacher educators, I'm talking about anyone who helps train and develop a teacher, and that person could be employed by a university, or that person could be employed by a school and mentor beginning teachers. Now, I wanted to talk specifically about the role that teacher educators, mentor teachers play in helping teachers use evidence in their day-to-day practice. So, what does that coaching and modelling role look like, if you're a lead teacher in a school?

PHILIPPA CORDINGLEY: Well, the thing that comes into my head is that you're moving backwards and forth, back and forth, back and forth, between evidence of one kind in the abstract or from systematic reviews or the wider world or from resources like your own work to the evidence from classrooms, is the kind I've been talking about. And you're spotting the connection. It's kind of organized listening. You're listening really hard to the students and the evidence that your colleagues are bringing to you about the students from within the school, and then you're listening to what's out there, and you're spotting the connection between them. So that's one of the things, it's listening hard to both and connecting it up.

I think another of the roles is definitely ... It's like creating a curriculum, almost. It's what's the curriculum for organizing when and how evidence is brought into play? Because it can be like a game of pinball, here's an exciting study, here's an exciting study, and what excites me today might not excite you today, but might excite you in three weeks. So priming and rhythm really matter, and phasing, so does sequencing. So one of the things that great mentors always do is listen really hard to the person they're supporting about where they're at and what their starting points are, and bring the thing in the form that's digestible and usable now and mention, "Oh, and there's another thing we might come back to later."

So, they're working in today, but they're also working further ahead and sequencing and working out how to create iterative ways that enable people to work in depth, cumulatively, without trying to do it all

at once. And one of the things that goes wrong so often in this stuff, is people try and make everyone understand all of something at once. When I am supporting teachers or my own staff in writing up research - the trouble is everybody wants the reader to know everything at the beginning, and you know, the thing about writing a paper is that you realize there has to be a beginning, a middle and an end. You can't have the whole study on page one, so it's the same for a mentor. If you've got 20 years of learning about teaching under your belt, and you are supporting a new teacher.

You can't make available to them the whole of your 20 years. You have to work out what's the bit that's right for them now, and how to move forwards. And that's a skill. Understanding the bit that you'll do today, and flagging up what the rest of the journey will be like, and remembering to come back to the deeper things. So, it's about seeing the whole of the journey, but being able to make the next step. I think part of mentoring is mapping the journey and mapping the connections between, and the role of evidence within that, but some of it's also letting people know that you're learning too.

Mentors ... We have a brochure on our website called "Sauce for the Goose", which is about professional learning, and one of the things we point out then is that mentors - even though being a mentor is fabulous and one of the most powerful forms of professional learning there can be - people who get to learn to be a mentor learn even more than the people who they are supporting. I work with groups of teachers and leaders and I say to them, "Why do you think that might be?" Because everyone's always upset about it: "Oh no, we are helping teachers even more than we are helping ourselves." You are, but in doing that, you are learning so much, and 42 reasons why that might be true is the most any group's come up with.

You are learning all the time as a mentor, because it's one to one, you get quick feedback, you are learning from mistakes very often. If we have been learning through teaching for 20 years, we've learned how to have things not go wrong in classrooms, and you get to see learning afresh when you see people making new experiments, but also bringing new energy and new ideas, the freshness factor in youth, and so signaling that you are learning too, is I think another part of what mentors do, and so again, it's about metacognition. It's about explaining your thinking to the people you are supporting, and the way in which you're using evidence to enrich your own mentoring for them.

So, I think mentoring is incredibly powerful. It's a real privilege, and when schools get mentoring right, they're making pedagogy visible, and that's a really powerful driver for school improvement. In our country, many schools don't understand that yet, and the people who get to be mentors is often just whoever's got a bit of time in the timetable, and I think that's a shame. The mentoring role, whether you are doing it from within the school, or beyond the school, of from a university, it's a hugely powerful role, and so I think inquiring into that and modelling it and making accounts of mentoring, that's something we lack. We've got lots and lots of good studies of teachers. I don't think we've got enough studies of what it looks like, when mentors are working, and we certainly haven't got enough studies of what it looks like when colleges and universities doing teacher training support from outside are working.

I think it's an unsung part of the education world, and we need to be recording it and researching it, and making it visible, because I just think that will help the system as a whole.


DANIELLE TOON: Absolutely. There's some incredibly important points just there, Philippa, that you made, and of all the visits that we did on the OECD study, it was definitely the more powerful ones were starting to think about, I guess, those three things: the sequencing of teacher learning;

recognizing that as a mentor you are learning too and modelling that, and explaining how you are learning and being explicit about it; and then the importance of doing more research on that mentor role, and what is effective in teacher learning and mentoring.

I want to ask you one final question, and this is a very easy question. If a system only does one to two things, what should they do to help build evidence-enriched practice?

PHILIPPA CORDINGLEY: Okay. I'm going to cheat, because my first answer will be something you have done already, that would be embed evidence in the standards, and research inquiry in the standards. So, I don't have to say that, because you've got that, so my other thing would be modelling through champions. We need champions. We need people to tell the story, that we've got some great champions in this country, who have done extraordinary things. Teacher research, that's changed how we teach math around the world. We've got that. You need champions. Humans respond to stories of other humans. We should be telling the stories of the teacher champions, and we had a National Teacher Research Panel to organise and systematise that, and they have been hugely influential and powerful, so that for example, no academic researcher could ever say they couldn't find a teacher willing and with the expertise to sit on a research advisory group, because we just made the panel to make sure that wasn't true. The modelling champions: giving them a role, giving them authority, giving them status, but getting them to model use of that, to make it visible, that would be one of the things. Then, the other thing would be: understanding and embedding all this in continuing professional development and learning. Not everybody makes the connection. Not everybody understands that use of evidence is work-based, professional learning for educators, and when you get those two things joined up, you can operationalize and systematize it at scale. So, champions and operationalising it through CPDL (continuing professional development and learning.) Those would be my two.

DANIELLE TOON: And definitely, that National Teacher Research Panel model from the UK is a really interesting one that we're interested in exploring more in Australia as well.