

“Connecting research, strategy and practice”



In conversation with Karen Carney - A Science Influencer with Science Across the City (SATC)

What is ToPD?

The Trajectory of Professional Development (ToPD) (Bianchi, 2017) is a theoretical model to describe teacher engagement in socially constructed professional learning opportunities. It is described in 5 phases: pre-engagement, participation, collaboration, cocreation and connection. Although depicted in 2D form with a linear and upward-orientated trajectory, more realistically this should be thought of as a dynamic model where the space or journeys taken between the phases lead to key learning gains for the teacher. There is no intended judgment that one phase is 'better' than another but that a teacher can benefit at any stage. The model supports professional learning for the right teacher, at the right time, on the right issue.

How did Science across the City use the ToPD model?

This primary science project is funded through the DfE opportunity area initiative against the enabling theme of upskilling the workforce.

ToPD informed the strategic plan for differentiation and a universally relevant CPD offering. Sustained, collaborative and rooted in expertise, three communities were established to meet needs: assessment in science, teaching approaches in science and leadership in science. Each theme was mapped against ToPD and the project funding used to enable learners to move between the phases. This model drives legacy with the development of well-informed practitioners in classrooms, who are also connecting beyond their school and city.

Why have you asked Dr Lynne Bianchi to interview Karen Carney?

Karen is an experienced subject leader who loves learning. She has embraced CPD from many providers for many years.

Through SATC Karen has taken on many roles that were designed to be enablers and empower practice, including Science Influencer, TDTS champion, SLP facilitator, subject coach and she also gained CSci Teach accreditation. It was of interest to know if Karen would recognise her journey against its intentions and design.

In conversation with Karen Carney

I'd been Science subject leader at my school. We just plodded along and everything was fine. Then I became involved in SATC and joined a network of science leaders who inspired me to take a look at wider opportunities. Other people in the group were doing things that I hadn't embraced yet, so I took their advice, started to **participate** and found I really enjoyed it.

My background is Science – I love it! I pursued science A' levels and a degree so I don't get why other people don't love it too. I perhaps saw myself as the lone scientist wanting everyone to love it just as much as I do. I've always tried to encourage others to **participate**.

The role I have now means I feel more of a **collaborator** and I'm definitely moving towards **co-create**. I'm finding myself taking things on. I'm creative; I enjoy working with other people and developing new ideas. Before getting involved with SATC I was less of a risk-taker than I am now. I've realised that when you take something on that you enjoy, it's worth that extra bit of work.

This early version of the ToPD model relates to Karen's trajectory as a Science Subject Leader and Science Influencer. See the current version of the model on page 6.

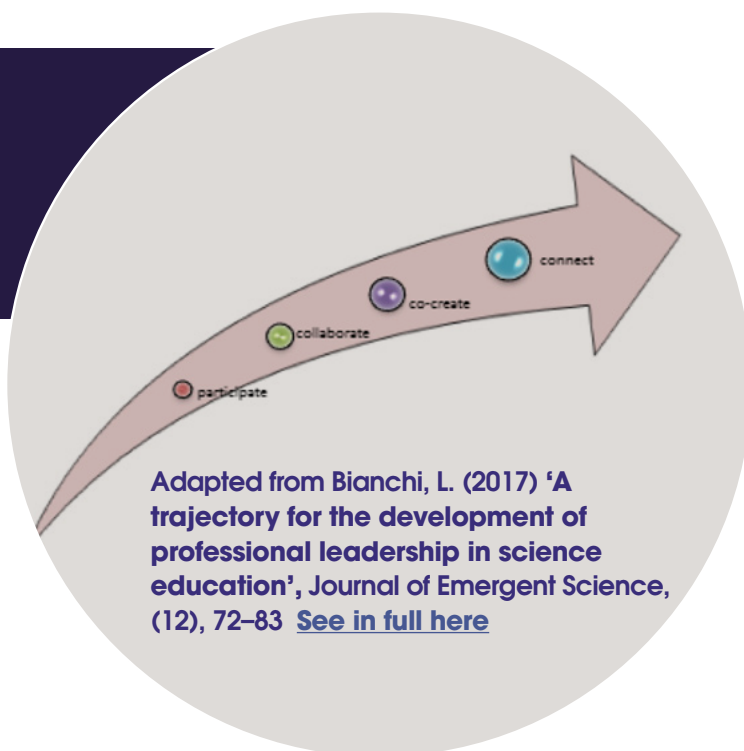
Coming together with the other SATC Science Influencers has meant that we've managed to support each other, sharing ideas and experiences. **It's the creativity and proactiveness of the group that makes it work so well** – and the fact that we all just love science. I've come across so many initiatives and had access not just to training but to thinking. It's been important to have the support of my Head teacher, and for him to see the extra support from Tina too. I now lead by example, encouraging other teachers to review practice and take ideas on. It's so brilliant to see the impact of SATC right across the whole city – everyone wants to be part of it.

My approach is to do things subtly because I think it's hard enough being a teacher, so I'm there to help, support and encourage the subject leaders. Where possible I visit schools and observe lessons with them. It's important to understand other teachers' realities and let them know I'm here. Eventually when they have the chance they approach me and I support them to think about planning across the school or approaches such as Thinking, Talking, Doing Science. I'm a big one for keeping it simple. I now see that all my schools are **participating** because of the regular signposting I provide.

The fact that I'm part of the SATC community makes me really proud and it's advanced me personally as I've been encouraged to do things like the Primary Science Quality Mark and CSciTeach. Through the **interaction and support** within the group I've thought a lot more reflectively and now I think beyond the obvious. When I'm teaching lesson, I now stop myself to think 'What's the point?' and 'What do I really want the children to get out of it?'. It's something I'm working to get across to the other schools I work with – encouraging them to think 'So what?' I suppose I'm connecting them with this type of thinking... to encourage them to reflect and be a bit more critical of what we do in primary science and why.

It's not all easy – it's definitely stretched me. The group is very open and honest which I found tough at the beginning when I was being questioned and professionally challenged. It didn't come easily but I can see how I've developed through it and become more confident in my own thinking and practice. I'm now using a similar approach with other schools.

My confidence has grown and the exciting thing is that I understand why that is. It's not just for science either, in maths and English too. I'm more willing to speak to the Head teacher about trying things out too then reflect on their impact. I know



I can back up what I do and what I'm saying. I enjoy working in a team and having a balance between teaching and doing the influencing work too. My love for teaching is really strong, and I think it is important to have your hand in the classroom when you're out there advising other teachers. In future, I'd like to keep it that way. By being here in Stoke I am in a really exciting place where so much science development has become the norm – **we're definitely leading the way!**

Reflective comment by Dr Lynne Bianchi

The opportunity to be an SATC Science influencer has undoubtedly afforded Karen ample opportunity to reflect on herself as a learner and professional. By using the ToPD model we can see how Karen has engaged at different phases. Initially, encouraged by senior colleagues to **participate** in a network with teachers from other schools. From which her intrinsic motivation for science meant she swiftly moved to **collaborate**, sharing ideas and approaches, discussing and reflecting. This then, stretched her own thinking. Her confidence grew as she found strength in deeper understanding of her practice, spurring her on to go beyond sharing to applying new understandings of science teaching and learning in **creative** ways. Her influence working outside of her school setting now means she is **co-creating** new learning opportunities with others, and gaining accreditation for it. Her passion for science has always meant that she has sought to influence, and her new role in SATC means that she has the credibility and legitimacy to **connect** with others to offer support and collegiality.

