Replies to recent DfE CPD Round table questions by ITTE and MirandaNet members

1. What are effective CPD models?
2. How do we spread this good practice?
3. What are the biggest barriers faced?
4. What should government's role be?
5. How do we make provision more joined up?
6. Should we make provision more tool agnostic?
7. Is there a role for regional digital leaders / innovation coaches?
8. Would adopting set standards for teaching help? (e.g. ISTE standards)

Below is a summary of the replies we received from our members that match well with the research into edtech CPD effectiveness that our members have undertaken over the years. The organisations have nearly 1,500 members between them and a history in edtech teacher education, professional development and research that stretches back over 30 years.

1.What are effective CPD models?

The potential for change in the classroom described by one of our respondents, a primary teacher educator who is engaged in a Ph.D on this topic:

The most effective models as recommended by schools appeared to be digital champions in schools with teams of pupils as digital leaders (with a lead teacher for digital learning co-ordinating their support) and project-based CPD often called practice-based research. The staff noted that having extended time to experiment with a device/software and trial it in multiple scenarios helped with their integration.

Face to face training is essential for some of the time with valued resources available online but the school leaders must be totally supportive of the change process. Working with a group of staff in the school can be effective if they share their experience but motivation needs to be strengthened by the setting of performance targets and other career building like awards for publishing in the networks. This can be talking heads and videos as much as written essays.

However, all our research indicates that those who need a deeper understanding of the issues as well as skills training are teacher educators who should be designing and leading regional and national programmes for the training leaders in schools, company representatives, academy chains, consultancy and advisory companies and local authorities as well as the representatives of the key subject associations, the Chartered Council for Teachers and BESA.

These people who may be directing several programmes are need to be well versed in techniques that promote change in schools. In the UK National Opportunities Fund(NOF) ICT training programme from 1999-2004, (Preston 2004) government making payments to companies to do the training did not work. One reason was that there was no formal training for the company trainers working at the management of change level. Another reason was the underestimate of how much training in skills the teachers needed before they could tackle the pedagogical issues. In addition, as always, the pressure on teachers' time was significant already. However, the schools were willing to support this programme because of the government directive.

In the 1980s, before NOF ICT training was introduced, local authority leaders were released for 20 days to pursue a specialism at a university. Although this may now not be affordable, a reasonable amount of time must be allotted to some carefully identified professionals in the system in order that they can up-skill the teacher educators, advisers and school trainers who are training teachers. Practice-based research studies means more time can be spent by the specialists in the workplace supervising the posing of questions, the analysis of data and publication as part of their own learning. However, time for sharing ideas with a tutor and a community as well as publishing the results is crucial.

The organisations and companies who select these professionals as specialists may be more willing to release these staff and to offer expenses for training if the programmes were government endorsed as part of a clear strategy for enhancing our students' preparedness for work. A clear vision needs to be articulated by government and some seed funding offered. Making the actual workshops/conferences free might work but the participants would. They would have to be selected and prepared to devote time to study and team building. The enterprise would have to be led by paid edtech programme designers and tutors.

2. How do we spread this good practice?

Our members who have joined these professional organisations all suggested that a specialist network should be set up of trusted professionals dedicated to edtech CPD in order to centre energy on this topic.

These individuals need to make the best use of an exploding canopy of online resources from all over the world: large datasets, blogs, YouTube channels and simulations, together with an understanding of the implications of fixed and mobile devices in the classroom. But these must be accredited by the professionals first and in line with an established programme.

One respondent advised on what the specialist network would provide for the training providers:

Given the time pressure that staff face from their daily workload, new information needs to be succinct, with the options for further reading where appropriate. Weekly or Monthly digests with short case studies would be an effective way to share the setting, procedure and impact of a new approach with teachers. This could then be shared on a blog and linked to via social media or email. Schools could then choose to share via email or in print form in staff rooms.

Another member said:

In our region, before all the cuts, we had a network of leading ICT teachers who met once a term to share good practice and learn together. They then supported schools locally in a range of ways - e.g. cluster support meetings. This created a real buzz and helped raise the profile of ICT. I see the CAS Master teachers as reflecting this model to some extent. I do like this model but suspect you need more teachers involved and a broader curriculum

A member who wanted to see a broader approach to edtech said:

I think digital lead teachers of some kind could make an impact but not those who are evangelists for computer science. They tend to put the generalist teacher off.

One professional with significant leadership experience nationally said:

Teachers should be encouraged to use digital technologies as much as possible. The approved 5-star resources and leadership guidance should be signposted by effective CPD professional organisations. Leaders should be encouraged to promote their own successes at trainers' conferences.

Companies should be welcome to train with other professionals but not to promote programmes that focus on their own products - programmes should be product agnostic although highlighting the overall themes and issues.

3. What are the biggest barriers faced?

The general concern was that government is not providing any guidance in this area and Ofsted do not inspect adequately. Most of them are not trained in this area and need support.

Our respondents complained that there is a massive focus on OFSTED Maths and English in schools. Other things are low priority in many schools. One primary school I went in didn't have a Science Coordinator.

Another observation was that school leaders need significant support with procurement. This is an area where professionals need to step in and provide some guidance because companies obviously have their own products in mind. The professional organisations, ITTE, MirandaNet and Naace could be offering workshops and support in this area in partnership with companies but not lead by them. Indeed, the professionals could also be working with the companies on education issues including pedagogy and e-safety. Of course, the financial cost of equipping a school properly means that procurement principles are even more important.

Another challenge is the pressure on teachers' time that is greater than ever. It is understandable that some teachers just cannot cope with learning how to use digital technologies effectively on top of all their other commitments. The Unions also have to be considered when new tasks are suggested by government. There needs to be career advantage and some form of award which does not have to be money but time made free to take on edtech seriously.

One respondent explained this well:

Teachers need time to adequately integrate a new technology into their practice. There is a lack of national support that is exacerbated by the vastness of the internet, not knowing where to find trustworthy support and generic ICT CPD. Teachers want to understand how a piece of technology can be used in their subject or specialism. Generic, decontextualised CPD doesn't appeal.

Several valuable points were made here about the need for our own clarity that have been raised in other sections:

I'd hypothesise that there are several barriers to edtech use, training, workload, the maths/English league table pressure, morale in a world where financial reward is lacking… It might also be that evidence of its value is thin on the ground. It might also be that modern ways of working are inconsistent with curricula and assessment systems.

I think we need to be clearer about what we mean and what, in different circumstances, edtech brings. Is the technology transformative? Is it replacement? This latter is not necessarily a bad thing, for instance in the way paper replaced slate.

Who are the users? There are teachers and students. Teachers' tech might be for teaching, record keeping, reporting… Students' might be for learning, there're a number of subsets here, research (I promise not to mention digital literacy), demonstrating learning…

Some differences between primary and secondary were noted:

In primary, there is still certainly an issue around staff competence and confidence. Also, within the early years there are questions around the appropriateness of technology so some teachers do not buy in because of philosophical viewpoints.

In addition, there were comments about the low level of training because none of the trainers, school leaders and teacher advisors had access to CPD at a high enough level to provide them with the concepts to lead.

4. What should government's role be?

All the respondents wanted promotion and endorsement from the government departments about the value of education technologies across the curriculum. The BETT18 speech was seen as a good focus for a new direction. At the edtech CPD Round Table an underspend was mentioned that could be accessed quickly?

Another request was for government agencies to improve on listening to a wide range of professionals in this area, not just the advocates of Computer Science. The latest Royal Society report that values Learned Societies gives a hint.

Here were some of the suggestions:

I think government should support, but not control, a national thinktank that shares best practice, engages with the latest research to support teachers in also doing so, offers guidance on specific technologies and approaches, etc. DFE and others plus companies could be learning also from their involvement.

and

More funding for teachers to attend professional development opportunities and to work together. Currently school budgets are so tight that many teachers get less professional development than they should. Ideally, I think schools should be given ring-fenced money for staff development.

One reply was very comprehensive:

- *Make Computing compulsory for all schools, i.e. No curriculum opt-out'*

- *Incentivise schools with ring-fenced infrastructure budgets;*

- *Establish an edtech monitoring service within the College of Teaching;*

- *Create career recognition for teachers with aptitude for edtech;*

- *Ensure that all school leaders are at least as competent as their best staff - for those in post, high impact retraining; for those seeking promotion a new CV requirement;*

- *Develop a specific CPD module aimed at school leaders which aims to demonstrate how the model of computational thinking can be applied to school management processes .*

A word of caution:

Too many government invitations for advice or to lead think tanks recently have been given to well-known gurus in the field who, in fact, have not researched or reported within recent times and are trading on reputation. Often, they are not networked with other professionals and tend to think they know the answers to complex questions without listening to others and collaborating. The qualities of those who are selected to be in a Government thinktank or to lead it need careful consideration as well as the balance of a group. The choice should not be left to one individual to invite their admirers.

5. How do we raise awareness for what is already out there?

Points about content:

Living with the sheer quantity of content we have available to us is not a new problem. In its modern form it has a 400 year history from the 'push' perspective a research and development web service. Promoting existing resources can be automated in interesting ways, though it will require some staffing. Becta did this the old way (some online but also significant use of postal service), and long before them so did MEP/NCET (post service).

We still rely on the idea of 'portals' and 'repositories' but the problem of gathering, filtering, collating and disseminating content has become so immense that it probably cannot be done without automated means. Moreover, portals and repositories imply a form of organisational control and authority that is out of keeping with our contemporary democratic attitudes towards public and professional participation in the sharing of knowledge.

We should stop trying to gather resources into one location or portal, or to 'join up' these things. Instead concentrate on better methods of search and retrieval. Content is out there, it takes care of itself - we just have to find it.

Several members felt very strongly about government ownership of websites that hold research findings because the next government can take down these websites wholesale:

Professionals should not allow government agencies to hold any web resources because the Coalition in the first week of their election in 2010 took down the Becta websites with the resources and research that had been assembled since 1995. This was put in the National Archive but not categorised properly. Some of the Becta research has been reassembled here http://mirandanet.ac.uk/knowledgehub/becta-reassembled*.*

Problems also occur when companies own content and run training programmes as happened in the NOF programme 1999-2004. This content although government funded was not open to all.

Many members advocated the MirandaNet approach of researching with companies and sharing case studies. Furthermore, many professional organisations do offer peer reviewed content like the case studies assembled on the MirandaNet website as well as ITTE and Naace resources that are behind a paywall. These are tool agnostic as are CAS resources about Computer Science. The TES also has good resources that are also behind a paywall.

6. How do we make provision more joined up?

Re-establish DfE communications with all the national professional organisation in this field: ITTE, MirandaNet, Naace as well as CAS and BCS. This would enable different subject experts to work together in developing the whole Computing curriculum.

Making provision more joined up is essentially a design issue in so far as it assumes there are sources/places/resources that are there to be joined up. So what is it that we need to join up? Can we make a list? In what way are these not already joined up? We need again regional digital leaders like the old LEA representatives. An interactive map of professionals developing activities that make a difference would be very helpful. How do we peer review?

7. Should we make provision more tool agnostic?

Yes, all respondents thought that having companies taking charge of training and resources is at the heart of the challenges we now have, mirroring our research. It was suggested that support should be around digital literacy and approaches to education technology and not on specific devices. Technological development is too fast to focus on specific tools. This approach would only shorten the usefulness of resources and guidance that is created.

One comment explained how being fixated on the tool prevents understanding the bigger issues:

I get fed up with people moaning about how the school up the road is using this system or that system so children are not prepared for their alternative e.g. they are using Apple computers so don't understand a Windows environment. Technology changes but those with real competence and capability change and adapt with it because they have transferable skills. I believe that in education we should always focus upon types of tools to solve problems (rather than specific software or specific languages etc) where possible giving children opportunities to explore several examples of each discussing similarities and differences so they can make informed choices about the tools and approaches that they want to use.

The government could help by focusing on this strategy as an 'opportunity' area.

8. Is there a role for regional digital leaders / innovation coaches?

The provision of this kind of leader was considered to be vital. Relevance is of great importance to teachers and this is wider than subject content alone. Teachers want advice that appreciates the needs of their learners and regional guidance would be a good way to support this.

Yes, I certainly see some kind of network of practitioners as being a good way to spread good practice.

and

Yes, certainly as long as it is practical and easy for people to access (eg Facebook page).

However, it was pointed out that in our evaluation of national training projects all over the world an assumption is made that there are trained trainers of trainers already existing. We think that three groups of professionals need different kinds of training: the CPD experts,

the regional leaders and the classroom innovators. But these programmes will depend on a clear vision to be effective across the nation.

9.Would adopting set standards for teaching help? (e.g. ISTE standards)

There were some informed comments on this point that overall a stronger support structure would need to be in place first before new standards were developed. In the meantime, it was felt that we have existing subject standards that could be developed quite easily.

It would be good to revise the old 'TDA characteristics' document that spelt out what IT ITT providers should promote without it being another set of standards to be ticked off. But we must avoid standards that are not allowed to change in quick time - "performance, feedback, revision" should be the motto.

Careful thought was advised and some very important points made about how standards should be developed:

- Who knows what such standards should be? ISTE is already dated. Needs review. The jury is out on what standards should really address (or indeed if they really help). Most are so general as to provide little guidance or clarity!

- A major reason for this uncertainty is that the digital environment changes so rapidly. The meaning of digital competence/digital literacy/computer literacy changes by the month. A vibrant network would share these ideas.

- An empirical approach to framing such standards is needed (a research project is needed here?). How do such standards manifest themselves in the course of real teaching? Do such statements represent reality about the digital fabric of effective teaching or learning? Such standards as ISTE are based less on reflected reality about what teachers do than on prescriptions about what they should do. This is backwards! The development of standards should be driven by research.

Selected research about the effectiveness of national CPD programmes

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