



Innovation for Education Futures



Can adult learning be effective when delivered digitally?

Evidence based on international examples managed by MirandaNet 5.0 members where online learning has been successful

Collated by Professor Christina Preston 210218

The context of the debate

MirandaNet 5.0 were pleased to debate this question in reply to a question for information from the DfE. This concentration on adult learning and online learning adds to the evidence we collated from our debate on the questions the DfE asked in 2017 (Appendix one)

Although most of our experience of professional learning is with teachers we think that some of our evidence is transferable to adult learning in general. We have run many programmes across the world with an online element largely about using edtech to make

teaching and learning more effective or about using digital tools to enhance subject teaching. Some of those programmes have included adults who are not teachers because we maintain that change is most effective if it is owned by the whole community. In school that includes teacher assistants and, sometimes, parents.

Although we have significant shared experience of online learning our major contention is that adult learning will always be most effective face-to-face although remote training, online learning or a pre-recorded talk can be very effective in the mix. There are many reasons for the need for face to face contact including the quality of feedback and engagement, and the opportunity to better understand local needs and requirements. However, we do find that face to face on a conferencing system can be nearly as effective - the human exchange is the key.

However, well used, there are many advantages in online elements of adult training, not least because adults with home responsibilities or disabilities can be significantly involved and geographical distance is not an issue. The economics of online learning are also very appealing to the funders - but this kind of adult training is not cheaper than face to face if it does not work. If adult learners are not motivated by their tutors and a community of partners in learning many of them will not complete the course.

Our experience of online learning

We first began working in this field with Oracle in 1999. Since then we have helped to develop many platforms and courses. The drop out rate was very high at the beginning because adults who were not technically minded found the environments confusing. They were afraid to experiment and had little inbuilt understanding of how online platforms work. In addition those guiding them had had no training themselves.

Finding evidence of successful online learning is problematic. In our view, this is because developing appropriate platforms has been expensive and complex. So much energy has been focused on this design activity that the principles of good teaching have often been overlooked.

Another issue is that too often it is the technically savvy who do the developing, designing and the testing. They are then surprised when other adults feel alienated and lost in what seems to them to be a technical maze. This is particularly true of older learners although we have success stories with senior citizens in the Czech Republic and through our EU project SEN-NET where we built a platform with the elderly students' advice (Preston, Mannova and Lengel 2004) .

Here the key to success was building up a community where they all felt empowered to help each other to negotiate the platform or use the tool. One of our members came up

with the phrase, 'One day courses in digital technologies are not enough'. The point is that learning to use these tools is not achieved quickly. A lot of repetition is required in a relaxed setting. Ownership of a computer or other device is also an important element in the learning. Going to a network room is not ideal in terms of mastery.

In fact, we have created our own platforms for communities in the UK, South Africa and India using Moodle but this does require designers in-house. In our EU project, HandsOn ICT, through our extensive research of packages with our Dutch, Greek, Slovenian and Barcelonian partners we decided on Canvas in 2014, but, of course, technology changes quickly. A sensible choice for a UK government project would seem to be FutureLearn which has a good reputation for adult learning.

Now there are many serviceable platforms and we think designing a new one is a costly enterprise that is probably unnecessary. Wherever possible, we think it is best that the tutors who are going to use the platform are engaged in adapting what exists already.

CPD for e-mentors

Effective pedagogy was a casualty of the first American platforms like Blackboard. As they were very influential across the world, they set the agenda for teaching that was merely information transmission: no social areas and discussion areas, and no sense of membership of a community of practice. This kind of platform is a useful repository for papers and resources in digital form and, of course, reading and rote learning can be useful in skills training and it is easy to test the results. In essence the e-mentors need very little training to oversee this kind of learning and testing.

But successful online learning requires more of the e-mentors and, just as we complain that globally the cost of CPD for face to face teacher educators, advisors and company providers is rarely in the funding package, so is the funding for professional development for e-mentors not considered. Perhaps this is because there is not yet enough knowledge amongst those who set up programmes about the complexity of a good e-mentors role as well as the exceptional people skills they need. Real success depends on their skills.

Our training for e-mentors assumes that these adults who are retraining may need to be encouraged to solve problems, negotiate and develop thinking skills in a social context. We have developed a number of techniques for promoting these processes online that make the most of collaboration. We have compared comparisons in teaching techniques between physical and virtual learning spaces (Preston, C., Allen, A. and Allen, R. 2017) as well as developing the use of Twitter walls, Padlet and collaborative digital concept mapping in developing analysis of information (Cuthell and C. Preston 2009; Cuthell and Preston, C. 2012). We are recognised for a form of remote unconferencing, called a MirandaMod, a techniques that can be used by students to make comment on each others

contribution when they are not in the same physical space. We have established the term, 'Braided Learning' to encompass the results of these techniques in which students can build new knowledge together based on what they have each learnt individually (Haythornthwaite 2007: Preston 2007 and 2008).

We have already documented some of our knowledge about e-mentoring as a community (Preston and Younie 2014). Sarah Younie is now editing a book for Routledge on the topic and Alison Hramiak and Christina Preston are collecting data for a chapter about student and tutors' responses to online learning with the support of Cengage. We hope to gain more insights into what is a very new and complex area of learning - but with great opportunities for adult learners.

Online learning in the context of a learning community

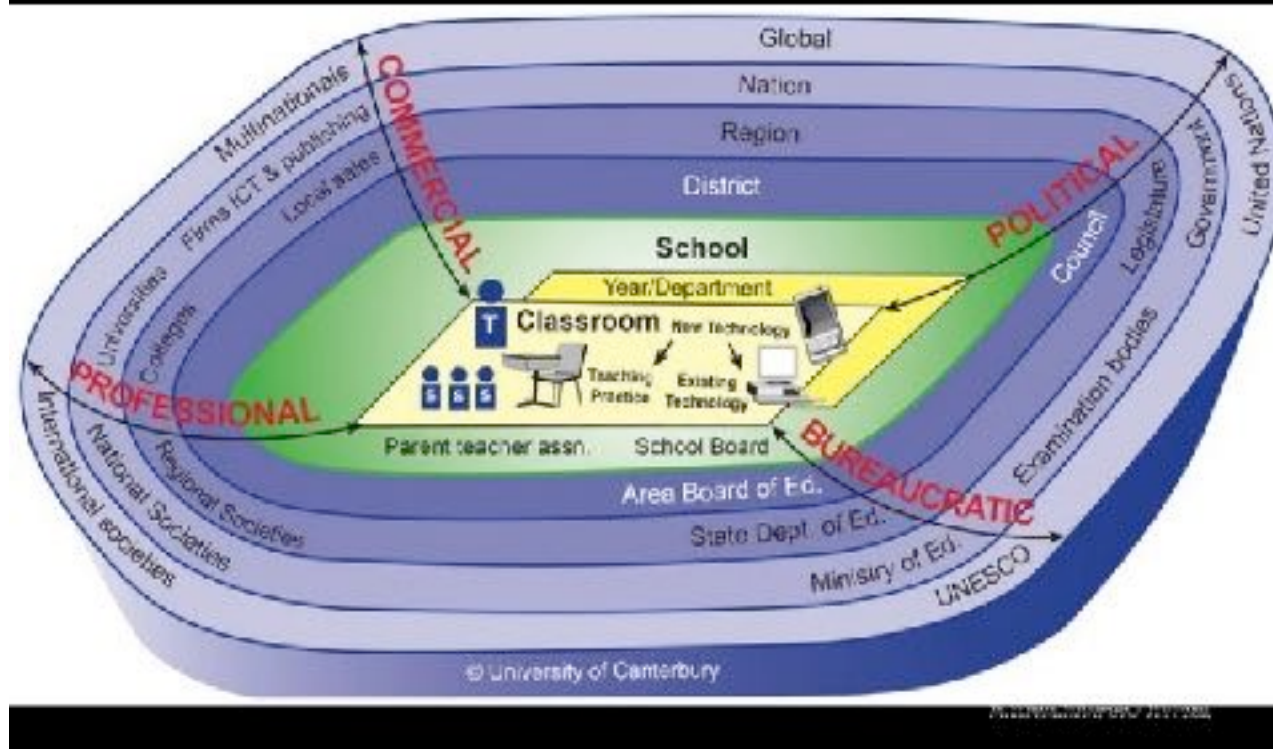
Since MirandaNet 5.0 was founded in 1992 members have been refining a practice-based research model, iCatalyst, that we have deployed in schools and regions in the Czech Republic, China, India, Mexico, South Africa and the UK. These projects have been funded by governments, charities and MirandaNet associate companies who want to develop their product or service to enhance teaching and learning. Different members of the group can elect to undertake the programme at certificate, diploma or at 30 point Masters level. The success rests on the fact that the leaders and teachers decide what what questions they want to ask and take charge of the classroom experiments and data collection. Any changes the school adopts as a result of the programme are based on the evidence that leaders, teachers and the pupils have agreed.

This model is also valuable for adult learners as it is an investigative process that is being embedded in the learning of the student. This method can be applied to any context or subject.

We have gradually added online learning to the mix but overall our evidence indicates that well-run local models designed and managed by educators with the support of companies are more effective than national programmes run by companies with the support of educators (Preston 2004: Davis, Preston, Sahin 2009 a and b: Pachler, Preston, Cuthell, Allen and Torres 2011).

The professional development programmes that we have evaluated both in the UK and abroad have not been entirely successful. In particular this was because one element was missing - the need for current professional development first for the teacher educators, tutors, e-mentors or advisers who are going to work with school trainers and classroom teachers.

Davis' Arena of Education (2009)



Another common factor is the lack of time provided for the learners to embed new learning into their professional practice. Companies as training providers have tended to focus on skills training and product training rather than more general factors required by the profession.

Where there has been success the group of international, national or regional leaders have often benefitted from a strong professional community of practice that can supply 'just in time' advice as required. Professor Niki Davis, a member of the MirandaNet Council, now at Canterbury University in New Zealand has documented our progress as an element in the international Arena model she has developed. This complex model shows how many different layers of community have to be considered in an edtech in schools campaign in any country (Davis 2017). We presented this work at the World Conference in Dublin in 2017.

Agencies planning adult learning and re-skilling would be advised to consider whether the designers of the courses that are planned have taken account of the environments in which these new entrants to their chosen professionals will fit and whether other members of that professional landscape are aware of the training and supportive of these early career learners. Our evidence indicates that effective career training should not be conducted in a vacuum.

Authors

Those who contributed to this paper were the MirandaNet 5.0 directors and the MirandaNet Council as well as John Wastenev and Malcolm Payton, MirandaNet 5.0 Fellows.

References

- Cuthell, J. P. and C. Preston (2009)** The Use of Concept Maps for Collaborative Knowledge Construction <http://www.mirandanet.org.uk/mirandamods/archive/the-use-of-concept-maps-for-collaborative-knowledge-construction/>
- Cuthell, J.P., and C. Preston (2012).** Tracking the stages of learning: concept maps as representations of liminal space. *Themes in Science and Technology Education*, 5(1/2), 79-94. earthlab.uoi.gr/theiste/index.php/theiste/article/download/108/75
- Pachler, N, Preston, C., Cuthell, J.P., Allen, A. and Torres, P. (2011)** The ICT CPD Landscape in England Becta (download here <http://dera.ioe.ac.uk/1769/>). This report contains a section about teachers who are reluctant to use learning technologies in classrooms that you can download here (39lu337z5111zjr1i1ntpio4-wpengine.netdna-ssl.com/wp-content/uploads/2015/02/Paper-reluctant-teachers-copy.pdf)
- Preston, C (2008)** Braided learning: an emerging process observed in e-communities of practice. *International Journal of Web Based Communities*, 2008 – Vol. 4, No.2 pp. 220 – 243
- Preston, C. (2007)** Braided Learning: promoting active professionals in education. *New International Theories and Models Of and For Online Learning*. C. Haythornthwaite. Chicago IL, USA, First Monday.
- Preston, C. (2005)** Social Networking between professionals: what is the point? A chapter in *Self-regulated Learning in Technology*. Edited Stephans, K, R. Carneiro and Underwood, J. Enhanced Learning Environments TACONET Lisbon, Portugal, Shaker Verlag.
- Preston, C. (2004)** Learning to use ICT in classrooms: teachers' and trainers' perspectives: an evaluation of the English NOF ICT teacher training programme 1999–2003. London: MirandaNet and the Teacher Training Agency www.mirandanet.org.uk
- Preston, C., Allen, A. and Allen, R. (2017)** Learning Spaces: The impact on learning of social and information environments in both physical and virtual settings. In *Teaching and Learning with ICT in the Secondary School*. Eds S. Younie and P. Bradshaw. Routledge

Preston, C. and S. Younie (2014) Mentoring in a Digital World: what are the issues? Key Competencies in Informatics and ICT (KEYCIT 2014) July 1-4 conference July 1st-5th. Conference Proceedings available at: <https://publishup.uni-potsdam.de/opus4-ubp/frontdoor/index/index/docId/7032>. [Retrieved: 22/10/16]

Preston, C, B. Mannova and Lengel, L. (2004) Building communities of practice in “New” Europe a chapter in A Brown, and N Davis (eds): Digital Technology, Communities and Education: World Year Book of Education – 2004 Routledge Falmer

Bibliography about Edtech CPD by members

Selected research about the effectiveness of national CPD programmes

Boulton, H. and Hramiak, A., (2014) Cascading the use of Web 2.0 technology in secondary schools in the United Kingdom: identifying the barriers beyond pre-service training. *Journal of Technology, Pedagogy and Education* 23(2) 151-166

Davis, N., C. Preston, and I. Sahin (2009a). ICT teacher training: evidence for multilevel evaluation from a national initiative. *British Journal of Education Technology (BJET)*. Volume 40. Issue 1 (January 2009) (Published Online: Feb 5 2008 12:00AM): 135–148. DOI: 10.1111/j.1467-8535.2007.00808.x

Davis, N. E., C. Preston and I. Sahin (2009b). Training teachers to use new technologies impacts multiple ecologies: Evidence from a national initiative. *British Educational Research Journal (BJET)*. Volume 40. Issue 5 (September 2009).

Davis, N. (2017) Digital Technologies and Change in Education: The Arena Framework. Routledge. Review here <https://mirandanet.ac.uk/review-digital-technologies-change-education/>

Guskey, T. R. (2002). Does it make a difference? Evaluating professional development. *Educational Leadership*, 59(6), 45–51

Leask, M. and Younie, S. (2013) ‘National Models for Continuing Professional Development: The Challenges of Twenty-First-Century Knowledge Management’ *Journal of Professional Development in Education*, Vol. 39, No. 2, pp 273–287.

Sentance, S. and Csizmadia, A. (2016) ‘Computing in the curriculum: Challenges and strategies from a teachers’ perspective’. In: Brodnik, A. and Lewin, C. (eds.) *Education and Information Technologies*. Springer: New York, NY, pp. 1-27.

Sentance, S. and Csizmadia, A. (2015) Teachers’ perspectives on successful strategies for teaching Computing in school. In: Brodnik, A. and Lewin, C. (eds.) *IFIP TC3 Working Conference “A New Culture of Learning: Computing and next Generations”*. Vilnius, Vilnius University, pp. 201 – 2010

A longer list of relevant research and comment on Edtech CPD can be found here: <http://mirandanet.ac.uk/specialist-cpd-research/>

Appendix

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

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. Training for the leaders and time for them to absorb the new information first was vital.

One successful example was an early major government initiative in ICT CPD related to the Functional Skills in core subjects Maths, English, Science and ICT. Whilst the FS programme was launched nationally, a national programme of FS in curriculum subjects was being developed.

“Each LEAD spent about a year working with nationally recognised curriculum subject leaders, reps from subject associations and innovators in subject areas. We worked with hardware and subject specialists to gather intelligence on messages they were picking up from schools as well contemporary research. The outcome demonstrated how ICT not only could enhance the teaching of the subject but facilitate effectively elements of subject teaching that traditionally teachers identified were difficult for students to grasp. A similar approach was taken by English Maths and Science and there were areas in which several of the strands might be drawn together eg effective use of ICT modelling using mathematically derived data to solve a geographical problem eg river flow rates in differing climatic conditions”.

This face to face training is essential in edtech for at least some of the time with valued resources available online and 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.

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.

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.

ESTABLISHED 1992

MIRANDA NET 5.0

FELLOWSHIP



Innovation for Education Futures

