DfE Standard for Teachers' Professional Development

Call for Evidence
Department for Education Expert Group Request

The MirandaNet Fellowship response

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DE MONTFORT UNIVERSITY LEICESTER
Gaia GAIA TECHNOLOGIES
MIRANDANET FELLOWSHIP

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Introduction

This response is submitted by three organisations that have formed a consortium to provide professional development in Education Innovation: **the Education Futures Centre (EFC), De Montfort University (DMU), the MirandaNet Fellowship, an international professional organisation** and **Gaia**, a company that installs complete digital systems in schools and provides whole school training. Gaia are also investing in research and development of 3-D related products that are being tested by teachers and pupils.

Dr Sarah Younie, one of the authors, is Director of EFC, De Montfort University, (www.dmu.ac.uk) the most improved university in the UK in 2014-5 according to the Times. Dr Younie has worked for over 25 years on all aspects of professional development in digital technologies in teaching and learning with Dr Christina Preston who is Professor of Education Innovation at DMU. In particular, they have developed individual and whole school action research programmes for teachers that can be followed at Postgraduate Certificate, Diploma and Masters level. Both Prof Preston and Dr Younie work closely with Board members in the UK professional subject associations, ITTE (IT in Teacher Education) and Naace (National Association for Advice on Computer Education) and have submitted evidence to the Parliamentary Select Committee on CPD (2009).

Professor Preston, another lead author, founded the international MirandaNet Fellowship in 1992 when she was at the Institute of Education, University of London. (See: www.mirandanet.ac.uk) MirandaNet is now now a DMU partner, This community of practice has grown from fifteen teachers in England who saw themselves as thought leaders in education innovation to over one thousand members in eighty countries. The MirandaNet website attracts more than 64,000 visitors growing annually at 12%, who read up to 11 pages of the resources including teachers' publications about how they are approaching Education Innovation. The MirandaNet *iCatalyst* action research programme that is designed to develop systemic change based on evidence has been implemented in China, Czech Republic, Mexico and South Africa as well as the UK. It is now being considered by the Philippines government. The evidence collected in action research is an important driver in a shared vision about changing policy and practice as well as improving student engagement and performance.

The third lead author is Bernard Dady, Head of Education Transformation at Gaia Technologies PLC, a MirandaNet associate (http://www.gaia-tech.com). Gaia supplies schools, academies and colleges with effective digital systems and services, supported by whole school training. Gaia are also investing in research and development of 3-D, and other, digital products that are being evaluated by teachers and pupils all over the world (http://www.gaia3d.co.uk/).

Gaia now include 160 UK schools in their delivery of a fully managed consultancy, training and project support programme, *Gaia Innovate* (http://gaia-tech.education/innovate/), adds the opportunity for thought leaders in educational ICT to undertake professional learning through teacher action research delivered using MirandaNet's *iCatalyst* methodology. *Gaia Innovate* offers an excellent continuing professional development option for schools, academies and colleges of all sizes. Gaia's commitment is to provide planned and sustained engagement to drive change using technology enhanced pedagogy, with consequent impact upon student engagement and teacher practice. Thereafter, the sustained application of Gaia Innovate will contribute to improvements in student progress and achievement.

We would like to make some general comments about professional development in digital technologies based on our reading of the *Developing Great Teaching* review that underpins this consultation (Higgins, Cordingley, Greany and Coe 2015). Our combined experience in professional development in this specialist area over the last three decades leads us to agree with the consultations that have reported that general opportunities for teachers in England:

- are insufficiently evidence-based;
- do not focus sufficiently on specific pupil needs;
- are too inconsistent in quality.

However, in our own specialism we have not found that overall "opportunities for teachers lag behind those experienced by colleagues elsewhere internationally". The Technological Pedagogical Content Knowledge (TPACK) programme in Australia (Mishra & Koehler, 2006) and linked programmes in New Zealand are exceptionally well designed and we exchange experience with our MirandaNet colleagues there. We have been asked to run action research programmes in countries that include China, Czech Republic, Mexico and South Africa where the governments are keen to make their investment in digital technologies translate into sustainable teaching and learning gains. Our international perspective is also informed by evaluating professional development programmes in technology enhanced learning in Brazil and Argentina. Several of our international membership have been involved in the responses to the questions that follow which we hope will make this a valuable contribution to the debate.

Overall we agree with the main conclusions of the Teacher Development Trust review of reviews that can be summed up with the consistent finding that "carefully designed/aligned teacher CPDL with a strong focus on pupil outcomes has a significant impact on student achievement". In particular our findings about CPD in digital technologies confirm that adequate time must be allowed for teachers to assimilate the impact of their CPD programme is a key refrain in our research, exacerbated by the need to master new technologies. We have selected other observations from this valuable report that are pertinent to our research into the value of action research in digital technologies in CPD:

- individual starting points to be recognised and develop a collective sense of purpose;
- providing opportunities to explore existing theories, beliefs and practices as well as the chance to challenge these;
- Formative assessment is key –for modelling approaches, refining support, contextualising for subjects/ pupil groups and evaluating impact;
- Need for external input, to challenge orthodoxies supportively -sometimes complemented by internal specialists;
- Facilitators as subject, evaluation and process experts;
- Peer support -learning together with peers; reciprocal vulnerability speeds up risk taking;
- Setting out deliberately to develop meta-cognitive control eg by:
  - Analysing and evaluating CPDcontent and evidence re pupils' responses and interpreting them; and
  - Iterative opportunities to encounter, understand, respond to and reflect on new approaches as part of the day job
- School leaders must create the conditions for this -resources, modelling and challenge
- No single element or process works –crucial to combine them, align them with goals – effectively

In addition the references to what does not work were powerful.

However, we do think that there are specific opportunities and challenges in working with teachers who are introducing digital technologies that are not addressed in the *Developing Great Teaching* review. We believe that digital technologies have the potential to change teaching and learning through the learning institution but often this potential is not realised because teachers are not given the kind of support they need to include these new approaches in their vision of teaching and learning. A key challenge is that over enthusiastic evangelism can prevent trainers in this field in confronting the genuine reluctance of some teachers to embrace technology - a situation MirandaNet Fellows addressed in their last Becta research report, *The Landscape of ICT CPD* (Pachler, N, C. Preston, J. Cuthell, A. Allen and Pinheiro Torres 2011. The results are reflected in how the iCatalyst action research programme is now designed.

Another challenge is the involvement of the industry selling products that are not entirely aligned with what teachers and pupils really need - an issue that we address by encouraging companies, professionals and the pupils to learn from each other. The unique element of iCatalyst is that it is often funded by companies who are developing educational products. Company representatives work with the teachers in the action research in order to help the teachers and pupils with skills but also to understand better what tools the profession really needs. Current research developed in this method has been funded by BrainPOP, Community Playthings, IRIS Connect, GroupCall, Tablet Academy, LightSpeed and Show my Homework.

Bernard Dady is Head of Education Transformation, Gaia, who have 160 digital installations in UK schools, academies and colleges. MirandaNet and De Montfort are working closely with them to embed the iCatalyst methodology so that their investment bears fruit long term in professional ownership of change and pupil engagement and achievement.

We hope our answers to your questions will provide some specific insights into this area of professional development

1. Can you give an example of great professional development practice with which you were involved, which had significant impact on pupil outcomes?

We can understand why this question has been asked and we think that correlating CPD, use of digital technologies and pupil outcomes is a worthy aim. However in our experience teachers feel very uncomfortable if student achievement is expected as an immediate and direct consequence of initial use of digital technologies. In our action research programmes we encourage teachers to first experiment with the complex relationship between learning content, pedagogy and technology before they move onto using digital technology as a tool to improve student outcomes.

We must also be cautious about the definition of outcomes in relation to teaching with digital technologies. If we only look for direct and immediate impact on key measures such as literacy and numeracy standards or GCSE performance then we are narrowing the purpose of employing ICT as a tool for teaching and learning. A much wider range of outcomes arise for students, not least improved digital literacy, readiness to enter the modern workplace, learning more independently or development of creative skills using digital tools.

In addition, while the deployment of edtech can be tied to specific aims we cannot yet be clear about specific outcomes in this new paradigm which can be hard to define and hard to measure. Nevertheless in the specific context of schools, academies and colleges this is easier to do because outcomes can be related to particular aspects of a development plan, school targets and so on. Thus, our programmes aim to relate the process to the specific situation in which teachers are working, guided by the particular goals of the organisation in which they work. The evidence collected is theirs to analyse and apply to their own needs.

A cautionary tale comes from the National Opportunities Fund (NOF) programme that aimed to provide professional development for all UK teachers which ran from 1999-2003. This represents a good example of professional development in the Information and Communications Technology that failed to deliver. During late 2002 and 2003 a MirandaNet research team surveyed 1,000 teachers and visited 15 schools to evaluate the experience of NOF. Funded by the Teacher Training Agency MirandaNet's evaluation *Teachers' and Trainers' Perspectives: Researching the outcomes of the New Opportunities Fund (NOF) ICT Teacher Training* is still relevant and can still be found in our archive http://www.mirandanet.org.uk/tta/

OFSTED were so keen to prove pupils' progress that they started to try to measure increases in pupils national scores in the first year of the training and found no evidence of change. However not only had they failed to allow time for the teachers to learn but also in some schools they had tested the pupils where the training had only just started or had not started at all. Teachers became disgruntled by these highly publicised results that appeared to show they were incompetent. The training programme became generally unpopular.

In addition the programme planner had hoped that changes in pedagogy would be central to the training. But the trainers taken on to deliver the programme realised that teachers would need skills training and practice in the technologies before they could assess the pedagogical potential. The evaluations indicated that the trainers themselves felt safer with skills training as they had usually not had the opportunity themselves to reflect on pedagogy.

MirandaNet Fellows have seen the impact of the lack of high level trainers in evaluating similar programmes in Argentina, Brazil and South Africa. The evaluation was commissioned after the programme had been planned and started - too late to train trainers. As a result of these observations MirandaNet Fellows suggest that there is still not enough high level education in innovation and change for the teacher educators, advisers, consultants and trainers who work with the teachers. This is evidenced as well by the last Becta research that MirandaNet Fellows were involved in (Pachler, Preston, Cuthell, Allen, Pinheiro Torres, 2011). This is particularly relevant now because the new Computing curriculum will require specialist training at a high level.

The first MirandaNet report about the NOF training programme for the Teacher Training agency only looked at the statistics from the two large companies who ran training programmes. But later, Professors Niki Davis and Christina Preston looked at the statistics for the local authorities and small trainers and found that they had generally effected change in policy, practice and pupil achievement with far more success because the balance between skills and pedagogy was better managed (Davis, Preston and Sahin 20098 a&b). In particular achievement was assessed by investigating the embedding of change at three levels: student achievement, teachers practice and in school policy. These principles are based on Guskey's levels (Guskey 2002).

In terms of outcomes, on our debating channel, MirandaLink, Dr Noeline Wright, Waikato University, New Zealand posted a positive approach to outcomes that we now use in our CPD programme:

> *"One way of addressing the word 'outcomes' is to define it in terms that will be meaningful. There are dispositional behaviours that position a student for summative assessment success. Using digital technologies for learning can support those – e.g. sustained concentration, on-task behaviour, collaboration, adaptive help-seeking, motivation to persist and a desire to create good products of learning. All of these lend themselves to a greater likelihood of successful academic achievement. All of this, however, is predicated on well-designed lessons that feature pedagogical practice of the finest kind. These are likely to feature: student-centred tasks, opportunities for social interaction and knowledge creation, and problem-solving."(Wright 2015)*

Thus effective CPD programmes need to be cautious in expectation of immediate impact upon national indicators of school performance. Similarly they need to adopt a widened view of the benefits using digital technologies as tool for teaching and learning. The collective experience of MirandaNet suggests that 'teacher training' has a lower level impact when compared to a project-based professional learning model, with a layer of action research designed to capture outcomes against criteria that are defined at the outset.

To this end MirandaNet is working with Gaia Technologies to develop an approach to professional learning and student engagement that is rooted in the application of blended learning to real curriculum projects. This is being piloted in the academic year 2015-16 at Bodnant Community Primary School and Ormiston Maritime Academy. Here, teachers define the educational drivers and the CPD process explores the dynamic of introducing appropriate technology and changed pedagogy. Teacher action researchers capture evidence of impact upon defined outcomes to inform the next steps in the programme or future strategy. This approach involves a subtle blend of consultancy, training, coaching, mentoring and supported classroom delivery. The MirandaNet iCatalyst action research programme is used as a methodology to capture the impact of the CPD programme.

If you can, describe what the participants did, what the school did, and what the external expertise was.

The MirandaNet/Gaia professional learning model has the following stages in which the advisers, the senior leaders and the teachers work closely together to decide how systemic change can best be managed:

1. Engagement with senior leaders to develop a strategic whole school approach
2. Initial planning consultancy to build a year long programme of professional learning centred on two to four projects which are driven by school improvement priorities
3. Identification of teacher action researchers and consultancy support to induct these teachers into the MirandaNet iCatalyst action research approach
4. Promotional activity and briefings to engage stakeholders including staff, students and parents
5. Baseline surveys and auditing
6. Deployment of expert consultant trainers to work alongside the lead teachers to plan, deliver and evaluate implementation of the agreed technology in the defined curriculum or developmental projects
7. Parallel problem solving with the deployment and function of the technology so as to remove barriers to use
8. Programme management by a lead educational technologist from the industry partner and the school's CPD lead
9. Support for the definition of expected outcomes, capture and collation of evidence using the iCatalyst methodology.

Specifically, the external agencies who mentor the school leaders and teachers in their journey to develop education innovation in their institution:

a. Partnership with an expert business partner, in this case an ICT Services company
b. Deployment of educational technologists to provide face to face and remote support to teachers through the project
c. MirandaNet action research expertise delivered through consultancy, training and mentoring http://gaia-tech.education/innovate/
d. d. Aligning the professional development processes with action research Masters accreditation at De Montfort University so that teachers can work at Masters level in action research if they wish to do so.

The MirandaNet iCatalyst action research programme is built on the strategies that we found effective for creating innovation and change that are managed by the teachers in our extensive research over the last 25 years (exemplar contributions: Preston 2004, 2009 and 2011; Younie 2007, 2009) In particular action research helps teachers to find their own strategies and lead their own programmes that are entirely relevant to their own contexts. We show them how to use Guskey's levels to prove achievement for themselves: http://mirandanet.ac.uk/icatalyst/professional-development-approach/

2. How could the standard help to promote effective professional development practice which has a positive impact on pupils' education?

Note: in answering question 2, we have addressed the following question: How could the standard encourage an evidence-informed approach to professional development?

In MirandaNet's view project-based professional learning and action research is the best way to encourage an evidence-informed approach to professional development because this provides a method by which professionals can take ownership of education innovation. The design of our iCatalyst action programme is based on our research into effective professional development in digital technologies. In particular in our Knowledge Hub we encourage the action researchers to share their own reports where there is evidence of achievement (See: http://www.mirandanet.org.uk/casestudies/). Members also debate online and attend face to face events as a community of practice (mirandanet.ac.uk). Other members' publications are here: http://mirandanet.ac.uk/knowledgehub/publications/

In essence MirandaNet believes that for CPD to have a constructive impact upon pupils' education, teachers' professional learning must be strategic and sustained. We advise that it be based in real learning contexts, involving expert professionals working alongside teachers on real projects or problem-solving activities. These professionals should have both niche expertise and educational insight. Support capacity can be increased through engagement with relevant business sector partners who can also learn from the teachers.

We advocate an action research approach that describes the educational outcomes to be evaluated from the outset, that develops teachers as reflective practitioners, evolves thought leaders and professionalises the workforce. In addition we believe that programmes should provide opportunities for teachers to have their professional learning accredited by universities using teachers' school-based action research.

How could the standard be introduced to schools and the wider system to maximise support and minimise workload? Please consider the process of introduction, the timescale, and the support given.

First, professional development for educators should be set as both an expectation and an entitlement. This could be achieved easily by creating a digital professional learning portfolio for every teacher in which they record their experiences, learning, reflections and certification. If this is given status and rewarded by promoting career progression we would achieve a culture shift.

Second, schools, academies and colleges should have an annual CPD programme and budget in place that defines how professional learning will be used to drive the improvement agenda. The expectation should be that the CPD initiative at school level should be sustained, with each programme building sequentially on the last. The MirandaNet Fellowship believes that this needs to include an action research component and pathways for staff to have their learning badged or accredited. A summative report, based upon this research should be a key product of the annual CPD programme. Simple technology based tools, for

example video capture and sharing, evidence capture apps and data collation software will really help the process, reduce workload and facilitate access to big data.

Finally, professional development needs to recognise different learning preferences and the value of blended learning approaches. On our recent projects with Gaia Technologies' clients we have undertaken baseline surveys and asked how staff prefer to learn. Whilst face-to-face is still the most preferred option, a sizeable proportion of respondents see themselves as self-learners (primarily sourcing what they need to know from the Internet), while others learn through peer networks and some through traditional study methods. School CPD programmes should include and value these different learning modes.

3. How could the standard help shape or improve the provision of professional development (including school-based professional development activities)?

In answering question 3, we have addressed how this might vary for different types of provision or provider; for example:

- **individual, in-school, third-party (other school, higher education institution, private or any other type of provider); and**
- **programmes, workshops, coaching or mentoring, enquiry or distance / on-line learning support for professional development provision teachers may access.**

All those involved can benefit from a well-organised programme:

- **teachers and senior managers** gain a deeper and shared understanding of strategies they might adopt to introduce systemic change and improve pupil achievement. MirandaNet's action research methodology gives the school time to reflect on the use of technology and analyse its use, effectiveness and impact. Using this knowledge schools can see a positive impact on their policies and work practices collaboratively. This offers the school a rare chance to review best practice and the way they deploy innovation to enhance learning. The agenda is generated by the staff and they can use the results in their strategic planning as well as their reports to governors, Pupil Premium and OFSTED; teachers can also gain accreditation and can publish for a global audience in a range of modes;
- **leaders, trainers and advisers** are also supported in developing these action research programmes that draw on theory as well as practice. Accreditation provides evidence of their effectiveness as teacher mentors;
- **company representatives** who also join the projects as co-researchers gain professional development and valuable research and development information. A learning company uses this knowledge to improve their understanding of education, to improve their product or service, for marketing their product and for raising their brand recognition and perhaps gaining commercial awards. Gaia Technologies have been key players in the design of iCatalyst.
- **higher education institutions and researchers** provide an additional layer of expertise that can support action research based learning and facilitate accreditation and qualification based upon real learning in the education workplace.

4. What short-, medium- and long-term approaches might help to remove barriers to professional development and could be reflected in the standard?

In answering question 4, we have addressed time and structures, including timetabling and impact on workload;

iCatalyst consists of two programmes of different timescales: *Sprint* and *Insight*. Participants in *Sprint* work towards a short research report, developed in about one term, focusing on the value of one product or service, or a very specific focus on pedagogic change. The study is undertaken by key teachers as co-researchers with the support of selected advisers and researchers from professional communities. *Insight* is a longer project where school leaders collaborate over a year to look in depth at how they are using digital products and services and how they can boost achievement. Teachers can report on their projects at certificate, Diploma or Masters level.

• costs and prioritisation;

The whole school iCatalyst programme is sometimes funded by schools and also by MirandaNet associate companies whose publications are here: http://mirandanet.ac.uk/about-associates/associates-research/. Teachers can report on their projects at certificate, Diploma or Masters level. Participants gain a MirandaNet Fellowship for their own reports and pupils gain a World Ecitizens certificate for their web publications (www.worldecitizens. org.uk). Teachers can also elevate their input to a Masters 30 credit module In association with De Montfort University. This route is particularly valuable to teacher trainers, advisers and leaders who want to train teachers in the field of professional development.

• sourcing, accessing and engaging with knowledge and external expertise.

Those who follow the iCatalyst programme engage with their local group and also join the MirandaNet Fellowship community of practice that was founded in 1992 in recognition of the fact that the use of digital technologies in systemic change cannot be taught in a one day course. The community includes teachers, leaders, advisers, researchers and industry representatives. In our view teachers need to work with leaders and advisers to build a local approach based on evidence that references wider experience and knowledge. MirandaNet now has 1,000 members in 80 countries and a readership of more than 64,000 per year growing at 10%: visitors read up to eleven pages which suggests that the profession is keen to learn from each other.

5. Is there anything else you would like to contribute to help us shape the standard so that is useful in different types and phases of school?

In answering question 5, we have included specific, innovative ideas we would like you to consider.

iCatalyst is an innovative programme with supporting evidence that has been collected over the years and is used to award teachers and pupils in the same school at different levels. WE think it is innovative because company developers and trainers join educators as equal learners. We think this helps to avoid some of the difficulties schools encounter when they embark on an investment programmes without adequate evidence of what will work for them.

We also think that we have refined action research methodology in an effective way. In iCatalyst a group of staff leaders define innovation strategy, review implementation and measure the impact on learning over the long term.

Finally we have organised the awards so that all the participants in the organisation as well as the company representatives who choose to publish in the MirandaNet Knowledge Hub receive a MirandaNet Fellowship. Pupils are awarded a World Ecitizen certificate for sharing their achievements internationally.

Those who wish can use the evidence from the project to follow up with a 30 credit Masters module with De Montfort University by expanding on the evidence they have collected. Mentoring about the analysis and reporting of evidence takes place face to face and online. Members of associate companies can also elect to join the programmes and gain accreditation for effective research and development with teachers.

We also think the various funding models are innovative as well.

More information:

- More about action research: http://mirandanet.ac.uk/icatalyst/professional-development-approach/
- Examples of associate-funded iCatalyst publications: http://mirandanet.ac.uk/about-associates/associates-research/.
- Examples of iCatalyst projects are http://mirandanet.ac.uk/icatalyst/examples-of-icatalyst/
- MirandaNet publications relating to professional development can be found http://mirandanet.ac.uk/knowledgehub/publications/publications/
- Some examples of the pedagogical models that the teachers use to measure their progress in systemic change at Master's level: http://mirandanet.ac.uk/knowledgehub/pedagogical-models/

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Authors

Professor Christina Preston
MirandaNet Founder

Christina Preston advocates the application of digital technology as a catalyst for enriching teaching and learning. In 1992, when she was a senior researcher at the Institute of Education, University of London she set up the MirandaNet Fellowship (www.mirandanet.ac.uk) to provide an online community where educators could share knowledge and experience. This international professional organisation for teachers, teacher educators and researchers now has a membership of 1,000 thought leaders in education innovation in 80 countries who join for free. Their profiles are peer reviewed and they often join the research and action research projects: funders include Becta, the TDA, the DCSF and the EU, as well as international universities and governments. Associate companies who support ICT research, development, dissemination and CPD projects in schools include: BrainPOP, Groupcall, Gaia, IRIS Connect, Inspiration, Oracle, Promethean, Show my Homework and Tablet Academy. Teams of MirandaNet practitioners have worked in Bulgaria, China, Chile, Czech Republic, Friesland, Norway, Mexico and South Africa.

Christina is currently Professor of Education Innovation at the School of Future Learning, De Montfort University and her professional memberships include the Boards of the National Association of Advisers in Computers and Education (NAACE) and Information Technology Teachers in Education (ITTE). She is on the judging panel for the annual BETT exhibition and the Education Show organised by the British Education Suppliers Association (BESA).

Awards

Christina has won five international awards for her innovative continuing professional programmes designed for educators globally promoting action research and collaboration across national boundaries.

- Lifetime Achievement Award, NAACE 2013
- Digital Inclusion Associateship, University of Jujuy, Argentina 2011
- Trnkova Medal from the Czech Technical University Prague for support in building democratic strategies for ICT teacher education (2002 – Prague)
- Humanitarian Award from the World Academic Council for the enrichment of community opportunities for Bulgarian teachers and women returnees by creating Anglo-Bulgarian exchange opportunities face-to-face and online (2000 – Paris)

- European Union of Women Humanitarian Achievement Award for creating an Anglo-Czech online alliance working on democratic participation (1998 – London)

Main professional and research interests

- Building e-communities of practice
- Researching Education Innovation
- Online learning and MOOCs
- Innovative models for Continuing Professional Development
- Research and practice in the use of IWBs and interactive technologies like webcams, blogs, wikis, forums etc.
- International citizenship between schools and communities
- Evaluation of International Projects
- Industry and Education Partnership

Dr Sarah Younie
Director of the Education Futures Centre, De Montfort University

Dr Sarah Younie has been involved in international research on educational technologies and teaching for over twenty five years. She has been involved in the use of digital technologies and CPD in educational settings for UNESCO, the EU, UK Government Agencies, Local Authorities, educational charities and other funders (HEA, JISC, BBC). She has worked as a teacher and researcher in secondary schools, universities and as the UK Chair of the National Subject Association of IT in Teacher Education (ITTE), she has conducted national research, including gathering evidence for the Parliamentary Select Committee Inquiry into CPD in 2009..

Dr Younie is a Reader at De Montfort University, where she is also Programme leader for the MA in Education Practice. She has published widely on educational technologies and is the Associate Editor-in-Chief for the international Journal of 'Technology, Pedagogy and Education'. Dr Younie's latest book published by the Open University Press is entitled '*Teaching with Technology: the essential guide*'. Dr Younie is the Editor-in-Chief of the MESHGuides for ICT, which is a translational research initiative providing research summaries for teachers. .

Bernard Dady
Head of Education Transformation, Gaia

Bernard is an educational strategy, design and technology professional who leads Gaia's training and professional development service and advises the Company on matters educational.
Bernard has extensive experience of developing initiatives and maintaining strategic partnerships between private sector organisations and forward-thinking educational providers. He is a published author and editor with strong ICT skills brought to bear in the generation of a wide range of published material. He has several years of experience in client and bid side advisory work in the design of new schools and integration of their ICT systems. Bernard has worked in education for over 30 years as teacher (Sheffield), adviser/inspector (Kirklees), education action zone director (South Bradford) and local authority strategic manager (Bradford). Until early 2010 he was the BSF Programme Director for Tribal Group PLC where he worked as a consultant adviser to several major contractors on the design of new schools.In previous roles he has managed implementation of local authority key skills initiatives; acted as environmental education and humanities adviser; led Ofsted inspection of secondary schools; authored ten multi-media CDs; written six school text books and was formerly editor of Wideworld Magazine for Phillip Allan Updates.
Bernard has specialist knowledge in education, especially of: learning & teaching; curriculum development, learning space design and the application of ICT. He leads a team of educational professionals to offer quality assured support for ICT implementation and effective use in all phases. He has broad knowledge and experience of a wide range of hardware and software solutions commonly used in the education sector and is a member, and accredited tutor, of Naace.

Other MirandaNet members added their views including significant contributions from:

- Drew Buddie, Chair of Naace, and Computing teacher at Royal Masonic School, Herts.
- Dr David Longman, Independent Academic Abergavenny
- Professor Elizabeth Hartnell-Young, Director, ACER Institute, Australian Council for Educational Research
- Dr Noeline Wright, Waikato University, Hamilton, New Zealand