Dear Mr Gove,

**RE: The training of teachers of Computer Science and ICT**

In the light of recent announcements, we are writing on behalf of the membership of the three professional bodies above, to raise some concerns and offer some constructive solutions to improve the training of new teachers of ICT/Computer Science.

**The Association for IT in Teacher Education** (ITTE) is the professional association for IT/CS/Computing teacher training across the UK. Its members are involved in initial teacher training of primary teachers, subject specialist ICT and computer science teachers in secondary and post-16 schools and colleges, Technology Enhanced Learning (TEL) across all subjects and research into ICT/Computer Science/TEL pedagogy

**Naace** is the professional membership association for those enthusiastic for the role that appropriate use of technology can have in advancing education and improving outcomes for young people. Naace is broadly recognised as the ICT Subject Association by teachers and schools.

**The MirandaNet Fellowship** is an international professional organisation of policy makers, educators, developers and researchers who collaborate in publishing research studies, case studies and reports aimed at improving the use of innovative digital technologies in classrooms and in professional learning communities

As discussed in the **Joint Statement by NAACE, CAS and ITTE on ICT and Computer Science in UK schools, 25 June 2012,** we welcome the inclusion of more explicit Computer Science in the proposed new curriculum and the development of a new Programme of Study for ICT made up of the three strands of Digital Literacy (DL), Computer Science (CS) and Information Technology (IT).

However, we have deep concerns about the recent announcements regarding the ending of teacher training courses in ICT for 2013/14. We have consulted within the teacher training community and with school colleagues. A number of key themes and questions are being raised that we felt we should draw to your attention. We have suggested possible solutions to these issues.

1. The draft document for the new ICT PoS suggests all pupils need to be taught the three areas of CS, IT and Digital Literacy (DL). We agree with this approach. However, there is an apparent inconsistency in then removing all teacher training courses in ICT and only having teacher training courses in Computer Science. Will CS courses be required to train new teachers in all three strands? If not, how will the IT and DL strands be taught effectively in schools? If new courses include all three strands, they will not be strictly CS specialist courses; they will be in the light of the currently developing Programme of Study, ICT courses.

A solution would be to have 'Computing/ICT' courses covering all 3 strands, to indicate the shift away from 'old' ICT. Alternatively, keep a number of ICT courses, to be revised, as well as introducing specialist CS courses.

2. Schools are very concerned because they will still need new teachers to teach KS3 (which does not have to have any explicit CS under the recently disapplied PoS) and KS4 ICT exam courses, before the new Curriculum and examination specifications are introduced. Schools are asking us where these new teachers are to come from if ICT teacher training courses are discontinued.

   Keeping some current ICT courses in place for 2013/14 and complimenting these with some 'Computing/ICT' courses, which are all then revised and perhaps renamed to meet the new Programme of Study and associated curriculum as it is published would address this issue.

3. Discussions have mentioned a figure of 500 Computing Specialist new teachers being trained. This is a significantly lower figure than the number of ICT trainees currently on training courses. Given that one of the problems highlighted repeatedly by Ofsted and others has been a lack of specialist teachers in the subject area, this can only exacerbate the problems that ICT has had, undermining the good work that has gone into the currently developing ICT Programme of Study. Lack of suitably qualified, specialist teachers is likely to result in poor delivery of the new Curriculum, which is something everyone wants to avoid.

   Keeping some current ICT courses in place for 2013/14, which are then revised to meet the new curriculum as ICT or 'Computing' courses, alongside specialised CS courses, would address this issue. However, fundamental to solving this is raising the number of training places on qualifying courses, perhaps named 'Computing/ICT', to 1000.

4. The time frame to develop new teacher training courses is very challenging. The selection of appropriate providers is critical and this must happen very quickly if courses are to be ready for delivery in 2013/14. The two areas of IT and CS are distinct and effective specialist teaching requires different pedagogical approaches applied to particular domains of subject knowledge. For some providers, this will involve much more than simply adapting an existing ICT course. A number of current successful ITT courses, although called 'ICT', already train teachers of CS. The policy of removing all ICT ITT courses does not recognise the distinction between different courses.

   An audit of existing provision may help identify which providers can best offer (new) ICT/Computing and which can best offer Computer Science courses.

5. Recruitment to ITT has already started but providers don't know if and what they can market for ICT/Computer Studies. Uncertainty may lead to the loss of high quality potential applicants if they don't know that new courses are going to exist or where to apply for them.

   Decisions on allocations need to be communicated to providers and potential applicants as the earliest possible opportunity.

6. Given the lack of schools currently teaching CS at KS4 and Post 16, how can 11-18 (or even 11-16) CS training courses be justified in the current inspection framework? The CAS network of CS teaching excellence will be a useful body for providers to work with (through School Direct or PGCE), but there are too few of these and they are not necessarily in the appropriate geographical locations to meet recruitment requirements. Are Ofsted going to be

told to be 'lenient' in the inspection of the new CS training courses until more schools teach CS at KS4 and Post 16?

A two year period of time where there is support in place to ensure high quality new teacher training courses (School Direct and PGCE), where significantly more schools can develop KS4 and Post 16 CS courses and new ICT KS3 programmes and where links between schools and providers can be facilitated, before inspections begin of new courses, would seem a positive way to raise the quality of teaching in the subject area.

7. Historically, even with bursaries, the number of graduates with good degrees in CS who applied to teaching was very small. There are many attractive alternatives, given the shortage of CS graduates at present. This strategy will make teaching more attractive to some, but, as has been recognised, there is a need for Subject Knowledge Enhancement (SKE) courses in CS. The timescale to put these in place for 2013 is very tight.

   Selection of appropriate SKE providers soon is crucial to get these SKE courses in place and to market them. It may also be worth considering whether CS trainees should be awarded the highest priority bursary rates along with other specialised science colleagues.

8. Not surprisingly, those involved in delivering current courses are concerned about their futures. Clarity is needed on which providers will receive allocations for teacher training, for how many places and in what areas. If providers lose ICT courses and consider staff redundancies, there is a significant risk of the permanent loss of expertise in the use of technology to support teaching and learning, not only as a specialist area but also across all subjects. This would be detrimental to education in general and to the standing of England as a world leader in educational technology.

   Decisions on allocations need to be communicated to providers and potential applicants as the earliest possible opportunity.

We hope you will consider our concerns and suggestions and re-examine the recent decision to immediately remove all ICT teacher training courses for 2013/14. We welcome the move to include more CS in the school curriculum, but CS is only one of three important strands that our future leaders should study. We need teachers who can teach all three strands effectively. We do need specialist CS teachers for KS4 and post 16 courses, but we also need specialist teachers who can teach IT at KS3 and KS4 and beyond.

Your response to the concerns we have raised and a clear statement at the earliest opportunity about what will happen next with allocations will be very welcome.

Yours sincerely,

Chair, the Association for IT in Teacher Education

Founder, MirandaNet Fellowship

CEO, Naace