Report summary

ICT in schools 2008–11

An evaluation of information and communication technology education in schools in England 2008–11

This report draws on evidence from the inspection of information and communication technology (ICT) in 167 primary, secondary and special schools between 2008 and 2011. The use of ICT is considered both as a specialist subject and across the wider school curriculum. References are also made to relevant findings in other recent Ofsted publications.

Part A reports on the quality of the provision of ICT in primary and secondary schools and its impact on achievement and standards. Part B explores seven issues arising from the survey evidence which focus on: the impact of the use of assessment on pupils' achievements and future success; the curriculum and qualifications in Key Stage 4; professional development of staff; e-safety; use of virtual learning environments; availability of ICT resources; and securing best value.

The teaching of ICT was good or outstanding in nearly two thirds of the primary schools visited, with many teachers and teaching assistants increasingly confident and able to support pupils effectively. There were weaknesses in the teaching of more demanding topics such as data handling or control, but in many of the schools this gap had been identified and was being addressed.

The position was less positive for ICT in secondary schools, with just under half of the schools in the survey judged good or outstanding. The proportion of secondary schools in the survey in which teaching was judged to be good or outstanding was no better than that in the previous survey.[1] Weaknesses included limited teacher capability in key topics such as programming; students repeating work from previous years; and lack of attention to the needs and interests of more able students.

Many of the primary and secondary schools visited were not tracking the progress of pupils effectively in both specialist ICT classes and across the curriculum. This led to

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[1] *The importance of ICT: information and communication technology in primary and secondary schools, 2005/2008* (070035), Ofsted, 2009; www.ofsted.gov.uk/resources/070035.

teachers and pupils lacking an understanding of current performance and what was needed to improve.

Pupils with special needs and/or disabilities were well supported in the ICT lessons observed and were able to make good use of ICT adaptations in school and at home. In most cases this enabled them to achieve in line with their school peers.

The survey reinforced concerns raised in the last ICT report about the curriculum and the qualification routes experienced by many students in Key Stage 4. These often failed to meet the needs of students. In these schools, those students who had not chosen an examination course in ICT did not follow the National Curriculum programme of study. Where vocational courses were chosen, the modules selected by the school narrowed the learning and limited the achievement of the students. Important topics such as control technology or data handling were not given sufficient attention or were missed out completely. In 30 of the 74 secondary schools visited, nearly half the students reached the age of 16 without an adequate foundation for further study or training in ICT and related subjects. There were few examples of schools engaging with local IT businesses to bring relevance and context to classroom studies.

Nationally, the numbers of students entering for GCSE and A level in ICT subjects has continued to fall since 2007. The number of students entering for vocational awards in ICT subjects has increased considerably over the same period. Despite better performance in examinations than boys, fewer girls chose to continue to study ICT in Key Stage 4 and beyond.

The majority of primary school leaders had a clear understanding of the contribution of ICT to their schools' wider improvement. There were regular audits of staff training requirements and good support for meeting the needs of teachers and teaching assistants. Although there were examples of exciting and ambitious vision for ICT in the outstanding secondary schools, the leadership and management of ICT in half of the secondary schools were found to be no better than satisfactory. In both primary and secondary schools there was often insufficient coordination of ICT learning in other curriculum areas and lack of support for staff in teaching more demanding topics. Few of the schools assessed systematically the impact of ICT on pupils' achievements although many headteachers were convinced that their investment in ICT was making a key contribution to improving outcomes.

While e-safety had been promoted effectively in all the schools visited as part of the survey, several of them had reported incidents of attempts to contact pupils inappropriately. In discussions with inspectors, the issue of under-age use of social networking sites arose frequently, underlining the importance of schools continuing to maintain e-safety as a priority for staff training and awareness-raising with parents.

The schools visited show that there have been changes in the pattern of ICT use compared with the primary and secondary schools seen in the previous survey.

Throughout many taught subjects in the schools visited for this survey, there was a move away from dedicated computer suites and a growing emphasis on laptops and handheld devices. Virtual learning environments had been installed in most of the schools visited. These changes, where deployed effectively, have enriched learning across the curriculum and studying at home. Commissioning and procuring the right ICT infrastructure, equipment and resources had become a bigger challenge for schools as their level of ambition for ICT had grown. Given the increasing emphasis on using ICT to support studying at home, many of the schools recognised the issue of equal opportunities, and were starting to devise strategies to provide for disadvantaged children whose families might not have computers and access to the internet.

Key findings

■ The overall effectiveness of ICT was good or outstanding in over two thirds of the primary schools visited. In contrast, just over a third of the secondary schools visited were considered good or outstanding for the overall effectiveness of ICT. Many of the weaknesses seen in the secondary school sample, including weak use of assessment and the degree of challenge posed by the Key Stage 4 vocational curriculum, echo findings similar to those of Ofsted's previous ICT report.

■ Pupils' achievement in ICT was good or outstanding in over half of the primary schools visited over the three years of the survey. Achievement was good or outstanding in 29 of the 74 secondary schools visited, and was inadequate in almost a fifth. Achievement in the secondary schools was adversely affected by the lack of effective challenge for higher-attaining students and poor coverage of key aspects of the ICT curriculum, especially at Key Stage 4.

■ Teaching of ICT was good or outstanding in nearly two thirds of the primary schools visited. Teachers and teaching assistants were increasingly confident in their own use of ICT and able to support pupils more effectively. Weaknesses remained, however, in the teaching of more demanding aspects of ICT such as control and data handling. In just under half of the secondary schools visited, teaching and learning were good or outstanding.

■ The use of assessment was a considerable weakness in both the primary and secondary schools visited. Pupils' use of ICT in other subjects was only occasionally tracked or recorded. For those students in Key Stage 4 who were not receiving specialist ICT teaching there was no systematic record of their learning in ICT and no means for teachers or pupils to know whether they had gaps in their knowledge.

■ The ICT curriculum and qualification routes provided by nearly half of the secondary schools surveyed were not meeting the needs of all students, especially at Key Stage 4. In these schools a single vocational examination course was taken by all students, limiting challenge to the more able, or ICT was offered as an option to some students with others not receiving the full National

Curriculum. As a result, in 30 of the 74 schools visited nearly half of the students reach the age of 16 without a sound foundation for further study or training in ICT and related subjects.

■ Very few examples were seen of secondary schools engaging with local IT businesses to bring the subject alive for their students. This was a particular issue for girls, many of whom need a fuller understanding of ICT-related career and education options to inform their subject choices at 14 and 16 years of age.

■ Leadership and management of ICT were good or outstanding in over two thirds of the primary schools. In these schools leaders had a clear and comprehensive understanding of the contribution of ICT to the school's wider development and improvement. In outstanding secondary schools ICT was seen by the headteacher as an engine for innovation and raising standards. In contrast, half of the secondary schools surveyed in which leadership and management of ICT were no better than satisfactory had common weaknesses that included insufficient attention given to progress in ICT across the curriculum and lack of support for staff in teaching more challenging topics.

■ In the majority of primary schools there were regular audits of staff's professional development needs. The approach was less systematic in secondary schools, where inspectors saw very few examples of any evaluation of the impact of training on the effectiveness of teaching or on pupils' learning.

■ Commissioning and procuring the right equipment, infrastructure and software were becoming more challenging for the schools visited as their vision for ICT developed. Schools surveyed were engaging pupils, staff, governors and parents in helping to specify needs, but only a few had evaluated the effectiveness of previous investment or developed costed plans for rolling future investment.

■ Most of the schools either had a virtual learning environment in full use or were in the process of installing one. Where schools were making regular use of a virtual learning environment, they had been able to enhance and enrich many aspects of school life, including the quality of learning resources, communications with parents, and assessment and tracking processes.

■ All the schools visited ensured that pupils were well informed about the safe use of the internet and were able to use it in a responsible and safe way in school. However, the need for continued vigilance was emphasised by the fact that in discussions with inspectors, pupils frequently raised the issue of the under-age use of social networking sites. Staff training and support for parents need to remain a high priority for schools.