Why girls need to switch on to computing

Britain faces a skills shortage in IT unless more girls can be encouraged to study the subject at school. No wonder the Government has decided to take action. Hilary Wilce reports

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The garden is coming along nicely. Flowers spring into bloom in the herbaceous borders; mature trees are imported to cast their shade across the lawn. If only real life was this simple. But for Bernadette Carvery and Jessica Allen, both 10, designing a garden takes a matter of minutes, not years. Later they might switch to designing a room, complete with plasma TV, or a bedroom, with lava lamps and pot plants.

"I like computers," says Jessica, "you can design lots of things."

"I liked it when we got to design clothes, and do interviews," says Bernadette. "It was like something you see in a magazine."

The girls are part of an after-school computer club specifically tailored to get girls interested in what can often be an all-too-macho world of computer games and web design. Once a week they come along from their west London primary school to the ICT suite of the Sacred Heart High School in Hammersmith, an 11 to 16 maintained Catholic girls' school, for an hour or so of girly fun at the keyboard.

And it clearly is fun. Every computer station in the room is taken, either by the dozen visiting pupils, or by Sacred Heart students, and screens glow with bubble gum colours as girls run a rock concert, design a magazine or plan a fashion show.

"The target is girls in years six and seven. It's nice to be able to offer them something different," says head of ICT Niall Quinn. "They find it creative, and they are learning about ICT almost subliminally."

But behind the fun lie serious problems. Girls are perfectly happy to use computers as social aids, to chat with their friends or read e-mails, but they are not acquiring the heavyweight technological skills of using spread sheets, constructing databases and designing web pages.

Pre-school girls seem to embark on life just as interested as boys in computers, but somewhere along the way the rot sets in, so that only a mere fraction of the country's computer graduates are female. Which means that an enormous number of skilled jobs are closed to girls when they leave school, and the e-skills industries, in turn, are finding it hard to get people of the right calibre.

This has serious implications for the country's long-term technological capability. "Jobs are growing in the IT sector much faster than in the economy as a whole," says Brian McBride, former managing director of T-Mobile, "but there is an overall shortage of skills, and a basic gender imbalance in the industry. Only about 20 per cent of the workforce is female, and of the women who go into it, many leave to have their families and so on. Part of the problem is the IT and telecommunications image. People tend to think of geeky, long-haired boys playing war games!"

Because of this, his former company and other corporate heavyweights, such as British Airways, IBM, the Ford Motor Company
and Cisco, have thrown their muscle behind a new initiative to make computers more accessible and girl-friendly.

The Department for Education and Skills came up with funding (£8.4m until 2007), companies donated time, advice and software, and the Computer Club for Girls, or CC4G as it is known, was launched in 2002, with a pilot programme funded by the South East England Development Agency. "We did some research among women's groups and employers and we found that girls lost interest between about nine and 13, and weren't carrying on with IT in secondary school," says Melody Hermon, project manager with e-skills UK, the national skills council for the IT sector, which is running the programme.

So CC4G developed software for an after-school computer club - mainly in a startling shade of pink - which would allow girls to do all kinds of things dear to their hearts from designing digital dance moves to planning a sports event. On the way, so the thinking went, girls would become acquainted with programmes such as Photoshop, MS PowerPoint and MX Excel, and gain confidence in all aspects of using computers. The club would work for all kinds of schools, whether in rich or poor areas, and for all kinds of pupils, from the very bright to the academically challenged. And since the materials were tailored to the national curriculum it would also underpin the ICT curriculum that pupils were following in key stages two and three and help improve their performance. Most clubs would run after school, or in the lunch-hour, but, once enrolled, club members would also be free to access the website at home. So far 1,054 schools are registered, and some of them have 80 to 90 girls signed up to their cubs. "And it's picking up all the time," says Hermon. "We help and support schools to get started and encourage girls to return to the site out-of-hours. The whole thing has a non-school, club-type feel about it, with things that we give away, like pens and bags, which is what girls want. I have two daughters, so I know!"

The club is free to schools, and teachers get induction sessions, plus online and telephone support, and those who have been running pilot clubs report good results, with a positive impact on girls' ICT achievements. Two thirds of girls in these clubs now say they are more likely to think about a career in ICT than before.

"The club has made a profound difference in school to attitudes and aptitudes of girls in the ICT area," says Deborah Forster, head of Trinity School, Newbury, a specialist performing arts and technology college. "What it has helped do is reinforce the critical link between ICT, the arts, creativity and the full range of subjects. That's the point: IT is an essential part of any career nowadays."

"The beauty of the club is the way it combines a fun, real-life structure for learning IT-related skills with the development of a whole set of wider transferable skills, from project management to teamwork and evaluation. The girls absolutely love going to the club and have been its biggest advocate within school by spreading the word," says Jenny Wilkins, head of Skinners' Company's School for Girls, in east London.

One productive aspect of the clubs is the way that it helps schools to link to their local IT industries, many of whom are sending in volunteers to help. Back in Hammersmith, Niall Quinn is well aware of the seriousness of gender issues the IT industries face. "I have never had a female ICT technician apply for a job. Women see it as a male job, and don't go into it. And certainly more boys see themselves as programmers and website designers. As a girls' school I feel we have to do something about that. I saw a flier about CC4G and heard about it at meetings, and when I played with it, I thought it could be good. It opens their eyes to how ICT is used in all sorts of different environments, like creating lighting schedules, and dealing with camera angles and music, and they seem to really enjoy it. We could have many more here, they want to come, but we are limited by space."

Clare Meehan, 11, a year seven student, can barely tear her gaze from the screen as she says, "Every week we learn something new. Like if you set up your own fashion show you learn you've got to be wise with the money. You've got to be cautious. Everybody enjoys coming here. But some people are not allowed to come by their parents, because it's after school and they don't want them to stay late, and those people are disappointed because they want to join, too."

There is no lack of interest in the programme. "The demand is good, the product is good. Our problem is now is to get it out there," says Brian McBride. But CC4G is clearly on the right track - boys are starting to ask their schools when there is going to be "a club for geezers".

**What the girls are learning**

* Celebrity projects:
  - where girls can run an interview, design a fanzine, and advertise and promote a rock concert

* Sound projects:
  - where girls can use a mixing desk, create a sound script for a drama production, and compose riffs and jingles

* Fashion projects:
  - where girls can plan and promote a fashion show, catalogue fashion, and explore accessorising

* Dance projects:
  - where girls can create digital dance moves, and plan and create disco lighting
* Writing projects:
  where girls can create stories with pictures, words and sounds, create board and computer games, and build a game

* Sports projects:
  where girls can create videos and animations, promote sports teams, monitor training and fitness levels, and plan a school sports event

* Digital projects:
  where girls can create and manipulate digital video, develop codes, and create a mobile phone

* Design projects:
  where girls can design a teenage girl's bedroom, design a garden for a partially-sighted person, and market an energy-efficient office

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