THE STAFFING OF ICT/COMPUTING IN UK SCHOOLS

A STUDY FOR THE ROYAL SOCIETY

BY

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EXECUTIVE SUMMARY

This study for the Royal Society investigated the data available about the training and employment of teachers of Computing and ICT. These terms are used differently at different times and in different places, and are sometimes combined together. The study was based upon research of published and unpublished data held by governments and associated bodies such as the Teaching Councils, plus a survey of all schools in England, Wales, and Scotland that had advertised for a teacher in the subject during the 2010-11 school-year. No data has been included from Northern Ireland due to a lack of information being made available. The subject has various names that include ICT and Computing, Computer Science and just Computing. Where possible, the term used in the data collection has been used, but they essentially all refer to the same subject on the curriculum.

The teaching of Computing and ICT is a relatively new addition to the curriculum of schools across the United Kingdom. Governments do not have a secure method for ensuring that adequate trained staffing is available to teach a new subject. In England and Wales, this lack of a policy to ensure adequate numbers of qualified teachers are employed in schools is compounded by the fact that schools are their own employers and Qualified Teacher Status, although gained through training in a particular subject, permits a teacher to teach any subject required of them.

Since training places in Computing and ICT were introduced a decade or so ago, most new teachers in these subjects have trained through the one-year postgraduate training route. Smaller numbers entered the profession in England through employment-based training routes, and more recently through the Teach First programme. Numbers entering training reached a peak in 2005, and then fell until 2008 when they increased again following the onset of the recession. However, government reductions in training numbers in England, Wales and Scotland have reduced the numbers in training in the 2010 and 2011 cohorts and are likely to do so for some years to come as demand for new teachers in the market place reduces; mainly due to falling pupil numbers in the secondary sector.

In England, Computing and ICT have the lowest proportion of trainees with 'good' degrees, as measured by the percentage with First or 2:1 degrees in the 2011 Good Training Guide. This is despite the reduction in the percentage of trainees accepted in the past two years to around 50% of those applying for one-year postgraduate training courses.

A significant proportion of teachers of Computing and ICT lack either a degree in the subject or training in teaching the subject when compared with other subjects. In England, of the 18,400 teachers teaching Computing and ICT for at least a part of the week in autumn 2010, 65% were considered not to have any relevant post 'A' level qualification in the subject, as measured by the possession of degrees in Computing, Information Systems or Software Engineering and Artificial Intelligence. In Wales, 56% of those teaching in 2011 were not trained in the subject and in a further 14% of cases the subject that they were trained in was unknown. In Scotland, the situation was better, with 66% (702 of the 1048) teaching the subject being trained in Computing.

In England, data from the 2010 School Workforce Survey suggest that although many teachers unqualified in the subject only teach Computing and ICT for a small number of hours each week,

there are some schools that rely on departments staffed entirely by teachers not qualified in the subject. There are other schools where all teachers are qualified in the subject.
The survey conducted as part of the study received a ten per cent response rate despite being conducted at the end of the school-year in England and Wales, and after the holidays had commenced in parts of Scotland. Responses from schools in England revealed an average number of applications of less than 15 applications per vacancy, compared with a figure of nine per vacancy in Wales in a survey conducted by the Assembly Government. In England, our survey revealed vacancies for more senior posts drew smaller numbers of applicants, as did posts in areas where there were relatively few teacher training places locally.

Nearly half of the Department Heads who responded to the survey were concerned that newly qualified teachers lacked either the knowledge or skills at the end of their training to be properly able to teach Computing and ICT. This may reflect some anxiety amongst teachers about the subject, and its future in schools. The survey captured this anxiety, as only five schools had seen their budget increased this year compared with 39 schools where their budget had been reduced. Some 29 respondents thought that the subject would be marginalised in future years, but a significant group of 14 respondents thought that there would be more computing taught. They wanted this to be at GCSE level in the first instance, or at 'A' level. There was little enthusiasm expressed amongst these secondary teachers for more computing to be taught in primary schools.

Overall, there remains a lack of qualified Computing and ICT teachers employed in schools. It is, however, difficult to see how vacancies can be created at a time when rolls are falling, and some schools may prevent redundancies elsewhere by switching staff into teaching subjects other than those they originally undertook initial training, thereby suppressing possible vacancies. This can lead to the situation where newly trained teachers in Computing and ICT are unable to secure teaching posts as vacancies are not arising in the numbers predicted by the government when calculating training places in advance.

The risk associated with teacher unemployment is that it deters future would-be teachers from entering training, thus creating a negative cycle that will create more problems in the future for schools. However, a greater problem may revolve around uncertainty about what the Computing and ICT curriculum should contain, and the absence of Computing and ICT from programmes such as the English Baccalaureate.

Unless Computing and ICT are attractive to teach, these subjects are unlikely to attract high quality graduates into teaching, since such individuals will always have a range of career options available to them.

This survey has not explored the professional development opportunities open to those teachers without appropriate training or qualifications, but this obviously offers a strategy for improving the teaching of Computing and ICT in schools, especially if the subject is required to rely on a significant proportion of staff not originally trained to teach it.

A note about teaching qualifications

The term teacher covers a number of different groups working in schools. For the purpose of this study the following terms are used:

Unqualified –someone in a school training to be a teacher of either ICT/Computing or another subject.

Qualified in the subject or qualified in ICT/Computing – (i) a teacher who has a degree in a recognised subject that qualifies them to teach the subject and has training to teach ICT/Computing; (ii) a teacher who has a degree in a subject not recognised as qualifying them to teach the subject but has nevertheless sufficient knowledge of the subject to have undertaken and passed a training qualification to teach the subject whether through a higher education programme, such as a PGCE, or through Employment Based Training such as the Graduate Teacher Programme or Teach First in a school.

Unqualified in the subject – a trained teacher who neither has a degree in a relevant subject nor has undertaken training to teach ICT/Computing in schools but is nevertheless teaching the subject for either part of or their entire teaching timetable.

1INTRODUCTION

This study was a small part of a wider project being undertaken by The Royal Society in relation to Computing and ICT in schools.

This research in support of the wider study considered the following questions about the staffing of ICT/Computing in schools across the United Kingdom:

How many teachers of the subject are trained, and through what routes?
How many teachers there are of the subject, and what is their experience?
What qualifications do those teaching the subject currently hold?
What information is available about the deployment of teachers?
Can examples of good practice be identified?

The study was conducted using two main sources of evidence; (i) published and unpublished data collected by governments about the teaching force (specifically about those teaching ICT/Computing in schools) and (ii) a survey to all secondary schools that had been identified as advertising a post for a teacher of ICT/Computing at all levels during the 2010-2011 school year. These schools were identified using the 'Vactrack' database of teacher vacancies owned by TSL Ltd. The survey was sent to schools in the middle of July 2011, just before the end of the summer term. Details of the response rates and findings are included in the appropriate sections of the report. In addition to the questions considered above, the survey asked additional questions about the opinions of those completing the questionnaire about issues relating to the teaching of ICT/Computing in schools.

A key issue is: who is regarded as 'qualified' or 'trained' to teach ICT/Computing in a state-funded school? Privately funded schools, some academies and all 'additional' schools (the commonly called 'free' schools) are able to set their own criteria for who may teach a subject.

In Scotland, teachers registering with the General Teaching Council for Scotland to teach computing but who have not been trained in Scotland would require a degree with 80 SCQF credit points (Scottish Credit Qualifications Framework). 40 SCQF credit points at SCQF Level 8 (or above) are required from at least two of the following subjects:

- Computer Systems
- Software Development
- Databases or Information Systems.

The other 40 credits are required in any computing area relevant to the computing curriculum in Scottish schools. Those who trained on an ITT course in computing at a Scottish university would be regarded as qualified to teach computing.

In England, although any teacher with Qualified Teacher Status (QTS) may teach any subject, the DfE (Department for Education) regards as 'qualified in the subject' only those with relevant degrees and/or training (as identified in the teachers in service section of this report). Similar rules apply in Wales.

2 HOW MANY TEACHERS OF THE SUBJECT ARE TRAINED, AND THROUGH WHAT ROUTES?

Teachers in the United Kingdom may be trained through one of a number of different routes that have evolved over time. In Wales, Scotland and Northern Ireland the training route for would-be ICT teachers effectively means the one-year postgraduate training course. In England, however, there are a number of different routes available as identified in the following table.

Table 1: Routes into teaching

	UNDERGRADUATE	POSTGRADUATE	EMPLOYMENT BASED GRADUATE and REGISTERED TEACHER PROGRAMMES	OTHER (INCLUDING FAST TRACK, OVERSEAS TEACHER TRAINED SCHEMES and TEACH FIRST)
ENGLAND	X(2)	X	X	X
WALES	X(2)	X	X(1)	
SCOTLAND		X		
NORTHERN IRELAND		X		

(1) The Graduate Teacher programme exists in Wales but it is not known if any ICT/Computing teachers have been trained through this route.
(2) Three universities in England (Brighton, Edge Hill and Newman College and the University of Wales at Newport (UWIN)) offer undergraduate courses to train ICT teachers. Some courses are for KS2/3 teachers and the UWIN course is in conjunction with either Mathematics or Science.

Because primary teachers are normally trained as general class teachers, this study was unable to investigate the extent of specialist training for ICT teachers working in the primary sector. However, a search of the UCAS course list revealed only one university that mentioned a course in ICT in relation to the training of primary school teachers.

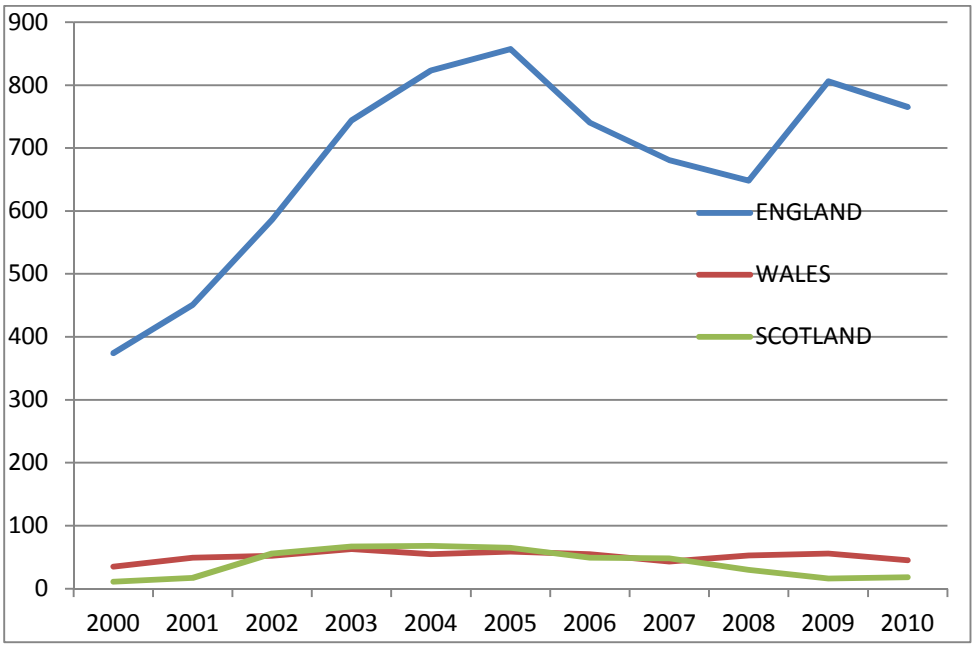
There is little central direction of the training of teachers and lecturers who work in the Further Education and Sixth Form College sector. Indeed, relatively little information is collected about the staffing of the sector. As a result, despite the importance of the sector in generating candidates for 'A' level and other examinations, no further analysis of the staffing of the further education sector is contained in this report. This has regional implications for those parts of England where a significant amount of post-16 education takes place in the further education sector.

2.1 Postgraduate courses that recruit through the Graduate Teacher Training Registry (GTTR)

The GTTR centralised admissions process handles the majority of applications to postgraduate teacher preparation courses in England, Wales and Scotland. There are separate arrangements for Northern Ireland universities. A small number of school-centred courses recruit independently, as does the Open University. Postgraduate courses are generally known as PGCE courses, although they may be PGDE or even the first stage of a Masters Degree.

Places at providers are allocated by the relevant government education department in Cardiff, Edinburgh or London. Details of the number of applications and acceptances in this report are taken either from the GTTR Annual Reports or from government publications.

Graph 1: Number of trainees accepted through GTTR for ICT courses – England, Wales and Scotland

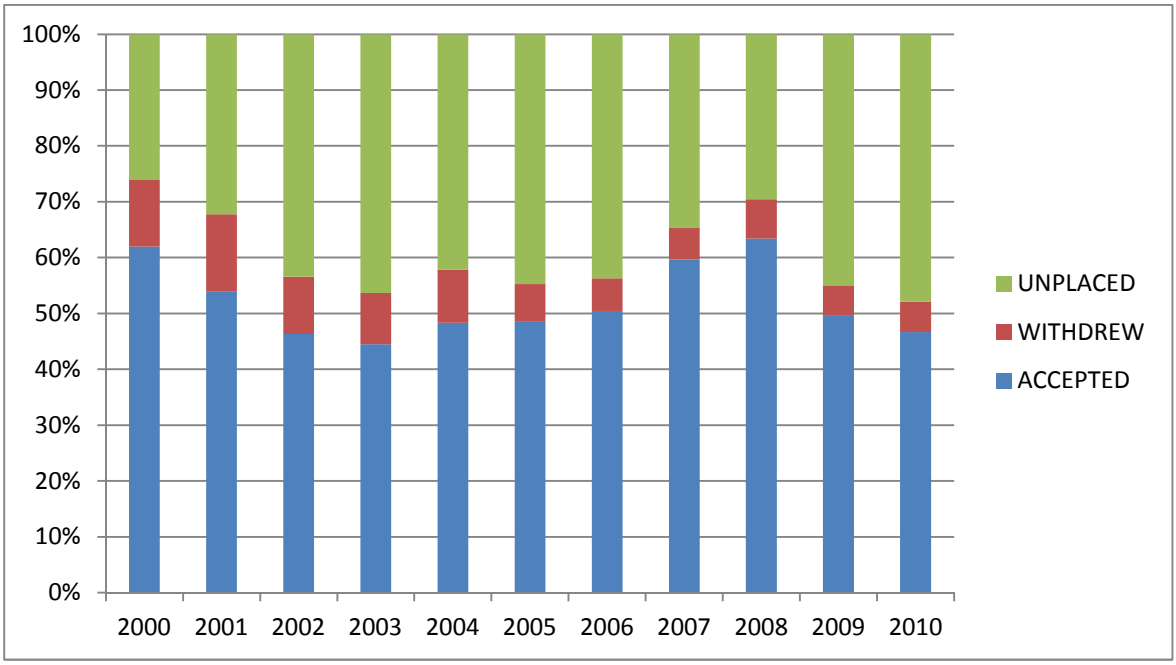


Source: GTTR Annual Reports 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ENGLAND	374	451	586	744	823	857	740	681	648	806	765
WALES	35	49	52	63	55	59	55	43	53	56	45
SCOTLAND	11	17	56	67	68	65	49	48	30	16	18

The number of trainees accepted through GTTR in England rose steadily between 2000 and 2005 to peak at 857 in 2005, before falling back to 648 in 2008. Following the onset of the recession, the numbers accepted increased in 2009 before falling back again in 2010. In Wales there was a similar pattern, although the numbers were much smaller. In Scotland, following the peak in 2004, numbers have fallen away dramatically to barely double figures by 2011 as teacher training places have been cut back significantly.

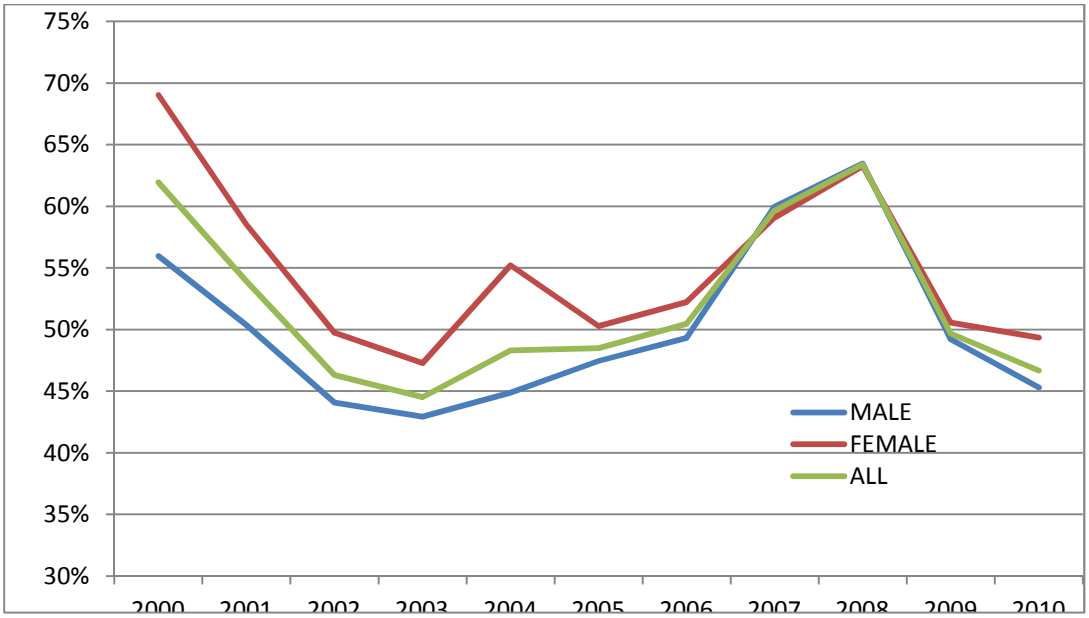
Graph 2: Percentage of Applicants to ICT teacher training accepted through GTTR in 2010 – England, Wales and Scotland



Source: GTTR Annual Reports 2000-2010

In 2000, some 60% of those who applied for a place on a PGCE were accepted. By 2003, despite more acceptances, the percentage accepted had fallen below 50% - where it remained until 2007. In 2008, more than 60% of applicants were once again accepted. With the onset of the recession, and cuts in the number of places on offer, acceptances fell below 50% again by 2010.

Graph 3: Percentage accepted onto ICT PGCE courses through GTTR (2000-2010 cohorts)



Source: GTTR Annual Reports 2000-2010

In most years a higher percentage of female applicants are accepted than male applicants. However, between 2006 and 2009 there was little difference in acceptance rates. In 2010, around 1,000 men and 500 women applied through GTTR for a place on a PGCE. By the end of august 2011, the numbers were 526 men and 340 women, a drop of nearly 600 applicants albeit for a reduced number of places.

Trainees are taught in a range of different size institutions, with the majority of courses recruiting fewer than 20 students. The median size for higher education has been a course recruiting between 11-20 students each year. The number of providers with more than 30 places increased in the early part of the decade, but subsequently declined in number.

Table 2: The Number of Higher Education and School-Based providers of ICT and Computing initial teacher training by places offered – England, Wales and Scotland

PROVIDER	0-10 places	11-20 places	21-30 places	31+ places
2000	13	16	6	4
2001	14	12	6	3
2002	13	20	5	4
2003	9	18	10	7
2004	16	17	6	9
2005	15	13	12	10
2006	16	16	9	8
2007	19	14	8	7
2008	20	15	8	5
2009	16	18	10	6
2010	18	16	9	5

Source: GTTR Annual Reports 2000-2010

Many of the small providers were School Centred Initial Teacher Training courses (commonly known as SCITT courses) in England.

Table 3: Number of SCITT courses in ICT in England 2000-10

PROVIDER	0-10 places	11-20 places
2000	8	
2001	7	
2002	8	
2003	7	
2004	12	
2005	11	2
2006	10	2
2007	12	
2008	11	1
2009	13	
2010	13	1

Source: GTTR Annual Reports 2000-2010

In England, there is likely to be a need to meet a regional balance in places available. This may affect the size and distribution of courses.

However, the GTTR figures (although accounting for the bulk of the trainees) do not provide the complete picture. To these trainees must be added those training through other routes. Until recently, data about these trainees were not published.

Table 4: Total ICT Recruitment to teacher preparation courses - England

ENGLAND	2005/06	2006/07	2007/08	2008/09	2009/10	Autumn term 2010/11 [1]	2010/11
HE COURSES					955	984	
EMPLOYMENT BASED					193	160	
TEACH FIRST						12	
EXPECTED EBITT						15	
EXPECTED RECRUITMENT					1148	1171	
GTTR Acceptances	*857*	*740*	*681*	*649*	*806*	*765*	
TARGET	1100	1040	985	1195	1115	1035	805

1. Number of places prior to 2008/09 include School Centred ITT but excludes Employment Based Routes ITT (EBITT).

Source: DfE Workforce Survey 2010

Until 2009/10 there were no targets for Employment Based courses, and Teach First numbers were not disaggregated by subject. The GTTR recruitment numbers at the date of the GTTR Annual Report are also shown in Table 4. Unless employment-based routes make up the shortfall, there was likely to have been a deficit against the target in the years up to 2009/10 and the onset of the current recession.

However, it is clear that in the two years where full figures are available, the government target in England has been exceeded in both years. This target is derived from the Staffing Model used by the DfE that is calculated for each individual subject in the secondary curriculum. Amongst the major variables currently driving the model are the size of the secondary school population and the age of the teaching profession.

Additional data provided by Teach First confirms the following:

- 53 ICT teachers hired during 2006-11, of whom:
- 24 teachers are currently completing the two year programme
- 17 teachers are currently still working in schools after completion of programme
- 7 teachers left teaching
- 5 teachers withdrew before completion of two year programme.

Source: Provided by Teach First to The Royal Society for this study

This would suggest an entry to teaching ratio of 17:12 for the early cohorts, or some 58% becoming career teachers. This would be on the low side of what would be expected from other training routes, especially as most will probably not have had to compete in the open market for a teaching post if they wanted one.

Of those recruited for 2011 entry to Teach First by summer 2011:

- 68 applicants were invited to Assessment Centres
- 31 applicants had studied ICT/ Computer Science as the main component of their degrees (the rest eligible through their A-levels)
- 22 offers were made - 21 to start in 2011,1 to start in 2012
- 9 of those offered a place had IT/Computer Science as the main component of their degree.
  Source: Provided by Teach First to The Royal Society for this study

This suggests that only nine out of 31 who applied with appropriate JACS codes were offered places, compared with 13/37 of other applicants; acceptance rates of 29% and 35% respectively.

In 2011 Employment based trainees made up a greater proportion of potential teachers of ICT/Computing than in recent years. Unfortunately, nothing is known of their degree backgrounds.

Evidence from the Smithers and Robinson Guide to ITT (published in August 2011 by the Centre for Education and Employment Research at the University of Buckingham) suggested that in England, 12% of ICT trainees did not hold at least a Lower Second Class degree. Their report also suggested that only 49% of ICT trainees in their 2011 profiles had a First or 2:1 degree, the lowest percentage of 'good' degrees for any secondary subject in their profiles. By comparison, Mathematics had 51% with 'good' degrees, and Sciences 54.6%. School-based SCITT courses had only 35.8% of their trainees with good degrees.

2.2 Wales

Table 5: Total Recruitment to teacher preparation courses – Wales

First year ICT students on ITT courses in Wales,	
2004/05	50
2005/06	60
2006/07	60
2007/08 (c)	65
2008/09	80
2009/10	90

(a) Enrolments throughout the year.
(b) Prior to 2007/08 students were grouped according to subject of main specialism, w here other subjects may be studied as additional
specialisms. From 2007/08 the w ay in which the data is presented has changed. Students may be recorded under more than one subject.

(c) From 2007/08 students who are studying at the Open University and are funded by HEFCW will be included in the figures.

Source: Higher Education Statistics Agency (HESA)

The much higher figure from HESA (Higher Education Statistical Agency) than that recorded by GTTR in Wales where the 2009 figure was 56, suggests a sizeable minority of the recorded students may not have ICT as a main subject. It appears that both main and subsidiary subjects are calculated in the total from 2007/08 onwards and this may explain the increase after 2007/08.

2.3 Scotland

The number of trainees has changed dramatically over the last decade. According to the GTTR figures, trainee numbers increased from 11 in 2000 (although not all Scottish Universities were in the GTTR Scheme at that time) to 68 in 2004, before falling to just 18 in 2010. For 2011, Computing is in a group of subjects with a target of 110 places across the subject group. The other subjects are Art, Classics, Drama, Modern Studies and Music. http://www.sfc.ac.uk/web/FILES/CircularsSFC0510/sfc0510.pdf This would seem a somewhat curious group of subjects to include Computing.

Figures provided by the General Teaching Council for Scotland shows a similar decline in the recorded number of teachers trained in Computing over recent years.

2007 – 66
2008 – 57
2009 – 38
2010 – 29
2011 – 22
Source: GTCS private communication July 2011

The GTCS figures are self reported and will differ from those from other bodies such as GTTR for that reason, and also because not all who qualify through GTTR either enter teaching in Scotland or teach in state schools where GTCS registration is required.

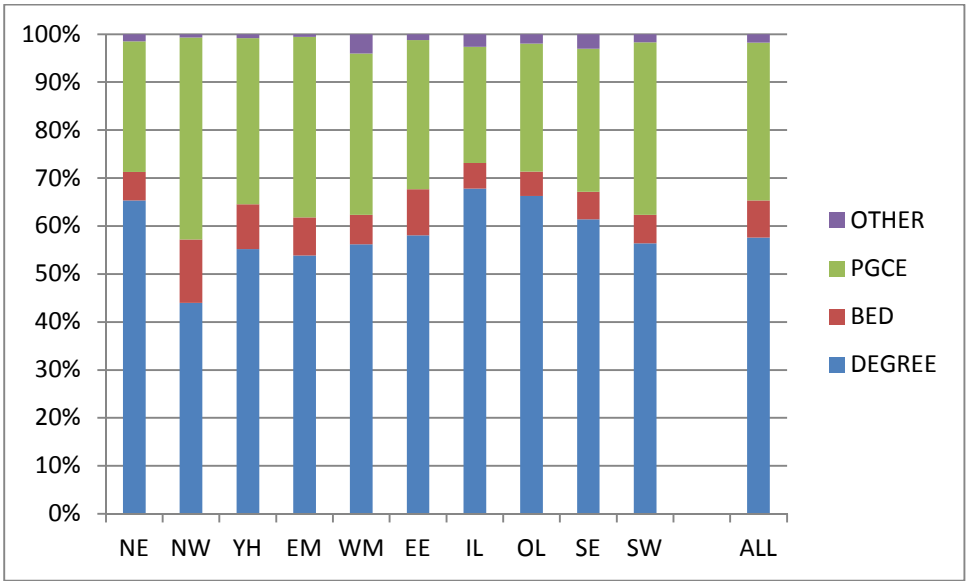
3 TEACHERS IN SERVICE

3.1 England

The Workforce Census conducted in government funded schools for the first time during November 2010 revealed that some 18,400 teachers were teaching ICT (Information and Communication Technology) in schools. Of these, 34.8% were considered to have a relevant qualification based upon the JACS Codes used (Joint Academic Coding System), and 65% were not considered to have any relevant post 'A' level qualification. The majority, of those with relevant qualifications, had both a relevant degree plus teacher training whereas a minority had a PGCE but a degree not from the JACS list used. For ICT the JACS codes used were G400-G700 series plus G900. These included degrees in Computer Science, Information Systems, Software Engineering, Artificial Intelligence and other Mathematical and Computing Sciences degrees. (Data from Tables 12 and 13 of the School Workforce in England November 2010, DfE http://www.education.gov.uk/rsgateway/DB/SFR/s000997/index.shtml accessed 2nd August 2011) Those fully qualified with a relevant JACS degree plus teacher training accounted for 25% of those teaching the subject. Those with training but a degree not from the list above accounted for another 9.1% of those teaching the subject.

This means that there were around 4,600 'fully qualified' teachers of ICT (i.e. holding both a relevant post A-level qualification and ICT teacher training), on average some 1.5 per secondary school. This compares badly with the level of qualifications in most other subjects. For instance, 74% of those teaching Mathematics, 69% of Physics teachers, 73% of Chemistry teachers, and 88% of Biology teachers had an appropriate post 'A' level qualification in the subject that they were teaching in 2010. By contrast, only six per cent of teachers of Citizenship had a relevant post 'A' level qualification. This may illustrate the quandary schools are faced with when new subjects are introduced into the curriculum. They are required to teach the subject, but trained and qualified teachers are not available. If teaching time has to be found from the existing curriculum existing teachers will be required to teach the new subject unless there are either additional funds, or vacancies for new teaching staff can be created through staff turnover or redundancy.

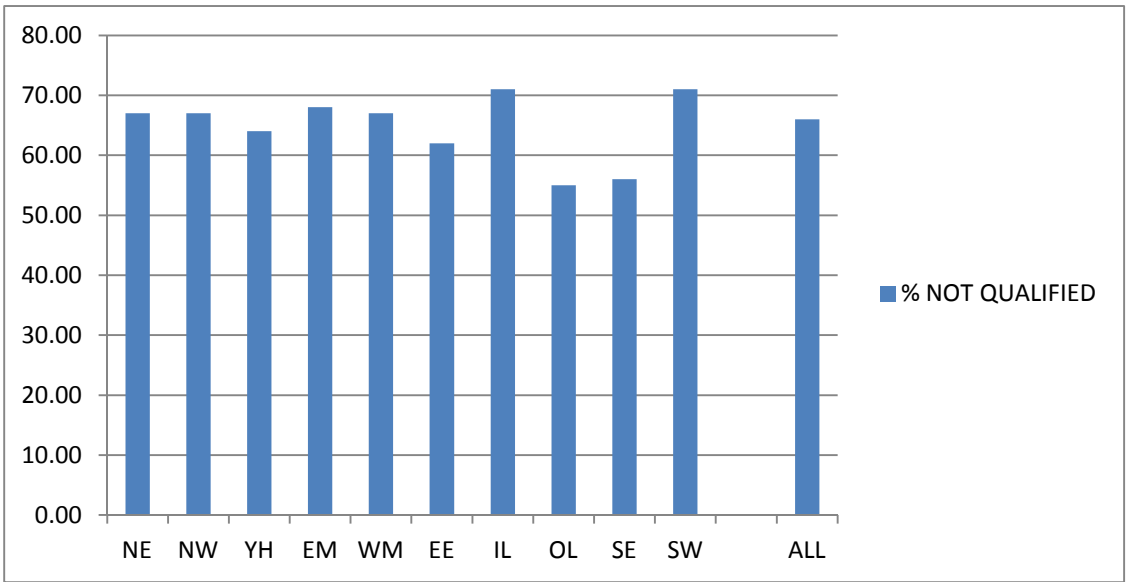
Graph 4: ICT level of qualification by Government Office Region of those regarded as qualified to teach the subject



Source: DfE School Workforce Census 2010

A more detailed analysis of the data in the Staffing Survey (DfE Workforce Survey) suggests some regional variations in teacher qualifications. The North West had the lowest percentage of teachers with both an appropriate degree and ITT qualification, with the North East and London having the highest percentages. However, Graph 5 shows that the inner London boroughs also appeared to have the highest percentage of staff not qualified in ICT. Whether this is a result of Teach First cannot be determined from the data. Outer London and the South East schools had the lowest percentage of teachers not qualified in the subject.

Graph 5: Percentage of teachers teaching ICT/Computing not classified as 'Qualified' in the subject



Source: DfE School Workforce Census 2010

Schools ranged in their degree of qualified staff in ICT/Computing. Table 6 shows the number of schools with different percentages of unqualified staff.

Table 6: The number of schools with different percentages of unqualified teachers teaching ICT/Computing based on the DfE definition of 'qualified'

Percentage Unqualified in ICT	Number of Secondary Schools
100%	522
90-99%	30
80-89%	312
70-79%	284
60-69%	376
50-59%	338
40-49%	114
30-39%	158
20-29%	109
1-19%	37
No Unqualified ICT teachers	172

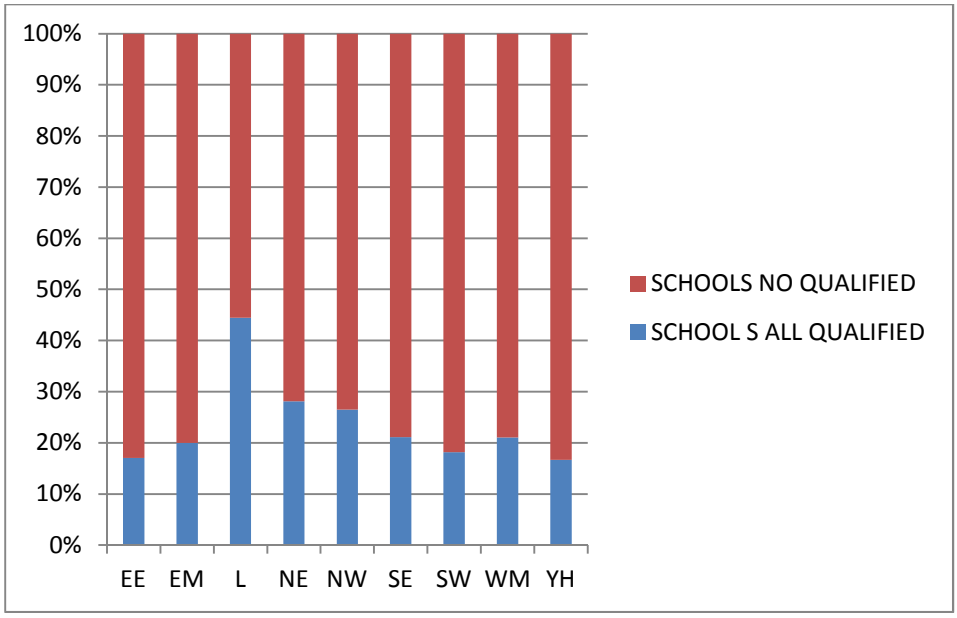
Source: School Workforce Census 2010

Over 500, or around 20% of schools, appear to have no recognised qualified staff according to the DfE definition as recorded by the 2010 Staffing survey.

An analysis of local authorities showed that 25 of the 32 London boroughs had at least one school fully staffed with qualified ICT/Computing teachers compared with only 54 authorities in the rest of England. Of the six fully staffed schools in one authority, four were selective schools, one was a new academy, and the other one was a faith school.

No information is available from the Staffing Survey about the age profile of those teaching the subject in England.

Graph 6: Percentage of state funded schools with qualified staff and unqualified teachers in ICT by Government office Region

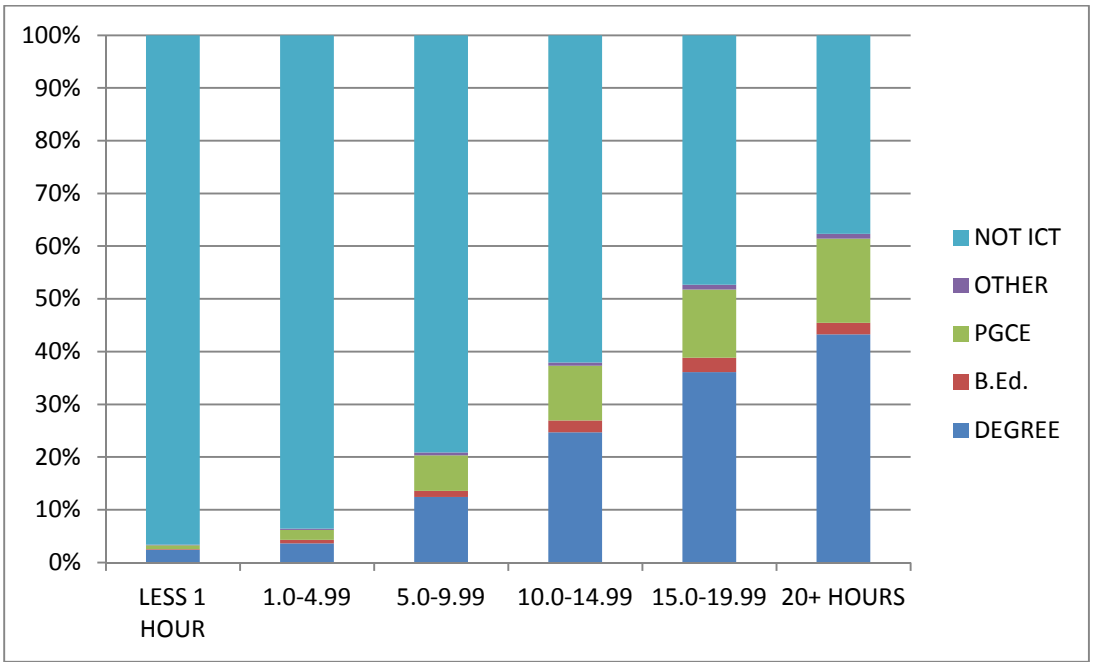


Source: School Workforce Census 2010

A limited analysis of the School Workforce Census shows that the majority of teachers teaching few hours per week in the subject are not qualified ICT teachers. Qualified ICT teachers form the majority of those teaching the subject for more than 15 hours per week. However, even though those with the highest level of qualification 'degree plus training' spend the most time teaching the subject, this group still only accounts for less than half of the number of teachers teaching the subject for 15 or more hours a week.

It is worth noting that as this was the first full year of the School Workforce Census data does not seem to have been included from every secondary school. No doubt in future years the data will become more comprehensive and cover all publically funded secondary schools in England.

Graph 7: Number of hours of ICT taught by teachers in state funded schools in England in 2010 with different levels of qualifications



TEACHING TIME	DEGREE	B.Ed.	PGCE	OTHER	NOT ICT
LESS 1 HOUR	21	1	6	1	829
1.0-4.99	122	23	64	7	3148
5.0-9.99	212	20	115	10	1351
10.0-14.99	450	41	188	11	1130
15.0-19.99	1119	84	402	27	1467
20+ HOURS	590	30	217	13	513

Source: School Workforce Census 2010

The largest group of teachers qualified in another subject yet teaching ICT/Computing, seemed to be teachers whose initial teacher training was in Business Studies. They accounted for nearly 3,200 of these teachers. Other substantial groups were qualified in Mathematics (nearly 1,500) and Physics (750+). There were nearly 100 teachers qualified in Drama recorded as teaching ICT/Computing for some part of the week. Some of those teaching for less than an hour a week are no doubt teaching either SEN groups or Key Stage 3 pupils taught as classes in middle deemed secondary schools. However, the bulk of those not qualified in ICT/Computing seem to be spending at least a day a week teaching the subject.

There are some teachers qualified in the subject teaching less than a complete week. This may be due to timetable relief for duties as a head of department or some other more senior post or in small secondary schools insufficient need for a complete timetable.

3.2 Wales

Figures for the number of teachers in service have been provided by The General Teaching Council for Wales (GTCW) from their register following a query from the author of this study. These are self reported numbers provided when teachers register with the Council and include teachers not currently working but registered with the Council.

Table 7: Number of registered teachers with GTC Wales trained to teach Computer Science and Information Technology by gender

	March 2009	%	March 2010	%	March 2011	%
Male	175	61.2	184	59.2	218	61.4
Female	111	38.8	127	40.8	137	38.6
Total	**286**	**100%**	**311**	**100%**	**355**	**100%**

Source: GTCW

The number of registered teachers trained to teach ICT/Computing increased from 286 in 2009 to 355 in 2011. During this period the gender balance remained the same with nearly two thirds of trained teachers of Computer Science being men.

Table 8: Number of registered teachers with GTC Wales trained to teach Computer Science and Information Technology by age

	March 2009	%	March 2010	%	March 2011	%
Under 25	0	0	2	0.6	10	2.8
25 to 29	51	17.8	64	20.6	73	20.6
30 to 34	78	27.3	84	27.0	90	25.4
35 to 39	50	17.5	50	16.1	58	16.3
40 to 44	45	15.7	47	15.1	54	15.2
45 to 49	37	12.9	38	12.2	38	10.7
50 to 54	18	6.3	18	5.8	24	6.8
55 to 59	6	2.1	6	1.9	6	1.7
60 to 64	1	0.3	2	0.6	2	0.6
Total	**286**	**100%**	**311**	**100%**	**355**	**100%**

Source: GTCW

As more teachers are trained, so the percentage of younger teachers has been increasing. Teachers below the age of 30 registered and trained in the subject increased from less than 18% of trained teachers in 2009 to more than 23% in 2011. The percentage of teachers in their 40s declined during the same period.

Table 9: Number of registered teachers with GTC Wales trained to teach Computer Science and Information Technology by country trained (including those not currently employed)

	March 2009	%	March 2010	%	March 2011	%
Wales	228	79.7	241	77.5	271	76.3
England	32	11.2	26	8.4	31	8.7
Graduate Teacher Programme (GTP)	26	9.1	32	10.3	41	11.5
Northern Ireland	0	0	1	0.3	1	0.3
UK	0	0	11	3.5	11	3.1
Total	**286**	**100%**	**311**	**100%**	**355**	**100%**

Source: GTCW *The GTP (Graduate Training Programme – an employment based training route) number includes those individuals awarded QTS in either Wales or England. UK is recorded when the actual establishment where the individual trained in the UK is unknown.

As might be expected, the increase in trained teachers in Wales came, in numerical terms, mostly from those trained on higher education courses in Wales. Teachers trained in England accounted for a smaller proportion of teachers in Wales in 2011 than in 2009. The percentage trained through the employment-based GTP increased between 2009 and 2011. Whether their GTP was in Wales or elsewhere is not clear from the data as presented.

Table 10: Number of registered teachers with GTC Wales trained to teach Computer Science and Information Technology by employer as at 1st March 2011

	March 2011	%
Welsh LA	275	77.5
Welsh Supply Teaching Agency	35	9.9
English Supply Teaching Agency	1	0.3
English LA	5	1.4
No Employment Held	33	9.3
Post in F/E	1	0.3
Unattached Supply	4	1.1
Retired	1	0.3
Total	**355**	**100%**

Source: GTCW
(This data is not available for 2009 & 2010)

According to the GTCW Register, approximately 20% of those trained in ICT/Computing (and registered with the GTCW in 2011) were unlikely to be holding a regular teaching post in either Wales or England. This represents a significant reserve of qualified, but not employed, teachers. There may, in addition, be other trained teachers who have not maintained their registration with the GTCW whilst out of the teacher labour market.

Table 11: Breakdown by Local Authority of those teachers employed on contracted employment as at 1st March 2011 and trained to teach Computer Studies

Local Authority	Number of Registered Teachers (Qualified in the subject)	%	Number of Registered Teachers (All teaching the subject)	%
Blaenau Gwent	9	3.3	18	2.3
Bridgend	15	5.5	45	5.8
Caerphilly	18	6.5	50	6.4
Cardiff	19	6.9	73	9.4
Carmarthenshire	9	3.3	49	6.3
Ceredigion	4	1.5	21	2.7
Conwy	17	6.2	28	3.6
Denbighshire	16	5.8	27	3.5
Flintshire	16	5.8	40	5.1
Gwynedd	8	2.9	22	2.8
Isle of Anglesey	6	2.2	18	2.3
Merthyr Tydfil	7	2.5	17	2.2
Monmouthshire	10	3.6	20	2.6
Neath Port Talbot	12	4.4	31	4.0
Newport	17	6.2	35	4.5
Pembrokeshire	9	3.3	33	4.2
Powys	8	2.9	30	3.9
Rhondda Cynon Taff	23	8.4	66	8.5
Swansea	15	5.5	47	6.0
Torfaen	13	4.7	34	4.4
Vale of Glamorgan	17	6.2	49	6.3
Wrexham	7	2.5	25	3.2
Total	**275**	**100%**	**778**	**100%**

Source: GTCW

(This data is not available for 2009 and 2010)

Table 12: Breakdown by Local Authority of those teachers employed on contracted employment as at 1st March 2011 by percentage qualified – i.e. trained in the subject on a PGCE or other training route

Local Authority	%
Blaenau Gwent	50
Bridgend	33
Caerphilly	36
Cardiff	26
Carmarthenshire	18
Ceredigion	19
Conwy	61
Denbighshire	59
Flintshire	40
Gwynedd	36
Isle of Anglesey	33
Merthyr Tydfil	41
Monmouthshire	50
Neath Port Talbot	39
Newport	49
Pembrokeshire	27
Powys	27
Rhondda Cynon Taff	35
Swansea	32
Torfaen	38
Vale of Glamorgan	35
Wrexham	28
Total	**35**

Source: GTCW
(This data is not available for 2009 and 2010)

Table 13: Number of registered teachers with GTC Wales by subject taught versus subject trained where the subject taught is Computer Science and Information Technology (Secondary sector working only) by employer as at 1st March 2011

	Trained in subject	%	Not trained in subject	%	Subject trained is unknown	%	Total teaching subject	%
Welsh LA	215	29.9	404	56.1	101	14.0	720	100

Source: GTCW
(This data is not available for 2009 and 2010)

As in England, it is clear that many of those teaching ICT/Computing for at least a part of the school week are not qualified in the subject. The extent of their teaching is not known. More rural authorities seem likely to have a lower percentage of qualified teachers. This may partly be due to

lower staff turnover in these schools offering fewer opportunities to recruit fully qualified staff since ICT/Computing was introduced.

Table 14: Breakdown by Local Authority of those teachers employed on contracted employment as at 1st March 2011

Local Authority	Trained in subject	%	Not trained in subject	%	Subject trained is unknown	%	Total teaching subject	%
Blaenau Gwent	7	3.3	8	2.0	1	1.0	16	2.2
Bridgend	14	6.5	27	6.7	3	3.0	44	6.1
Caerphilly	14	6.5	24	5.9	7	6.9	45	6.3
Cardiff	16	7.4	44	10.9	8	7.9	68	9.4
Carmarthenshire	6	2.8	32	7.9	7	6.9	45	6.3
Ceredigion	1	0.5	11	2.7	4	4.0	16	2.2
Conwy	12	5.6	14	3.5	1	1.0	27	3.8
Denbighshire	13	6.0	10	2.5	3	3.0	26	3.6
Flintshire	12	5.6	21	5.2	7	6.9	40	5.6
Gwynedd	8	3.7	6	1.5	6	5.9	20	2.8
Isle of Anglesey	5	2.3	10	2.5	2	2.0	17	2.4
Merthyr Tydfil	6	2.8	8	2.0	3	3.0	17	2.4
Monmouthshire	5	2.3	10	2.5	4	4.0	19	2.6
Neath Port Talbot	8	3.7	18	4.5	2	2.0	28	3.9
Newport	15	7.0	13	3.2	1	1.0	29	4.0
Pembrokeshire	7	3.3	21	5.2	3	3.0	31	4.3
Powys	6	2.8	17	4.2	3	3.0	26	3.6
Rhondda Cynon Taff	16	7.4	30	7.4	15	14.9	61	8.5
Swansea	15	7.0	24	5.9	6	5.9	45	6.3
Torfaen	11	5.1	15	3.7	5	5.0	31	4.3
Vale of Glamorgan	14	6.5	28	6.9	5	5.0	47	6.5
Wrexham	4	1.9	13	3.2	5	5.0	22	3.1
Total	**215**	**100%**	**215**	**100%**	**101**	**100%**	**720**	**100%**

Source: GTCW
(This data is not available for 2009 & 2010)

Table 15: Number of registered teachers with GTC Wales by subject taught versus subject trained where the subject taught is Computer Science and Information Technology (Secondary sector working only)

March 2009				March 2010				March 2011				
% Trained in subject	% Not trained in subject	% Subject trained is unknown	Total %	% Trained in subject	% Not trained in subject	% Subject trained is unknown	Total %	% Trained in subject	% Not trained in subject	% Subject trained is unknown	Total teaching subject	Total %
26.1	56.0	17.9	100	28.4	56.0	15.5	100	29.9	56.1	14.0	720	100

Source: GTCW

In Wales, the percentage trained in ICT/Computing has been increasing, from a low base of 26.1% in March 2009 to 29.9% in March 2011. In some areas, such as Newport, half those teaching the subject were trained by 2011, but in Carmarthenshire the percentage was only 13% at the same date.

The majority of teachers of ICT with training in the subject had trained in Wales, 76.3% in March 2011. Almost 50% of those trained were below the age of 35 in March 2011, with relatively few over the age of 55. However, the profile of those teaching the subject, including those not trained, is of an older workforce.

Table 16 Teachers of Information Technology March 2011 by age profile

	Trained in subject	**%**	**Not trained in subject**	**%**	**Subject trained is unknown**	**%**	**Total teaching subject**	**%**
Under 25	5	2.3	5	1.2	0	0	10	1.4
25 to 29	42	19.5	46	11.4	0	0	88	12.2
30 to 34	63	29.3	72	17.8	0	0	135	18.8
35 to 39	29	13.5	77	19.1	0	0	106	14.7
40 to 44	35	16.3	61	15.1	0	0	96	13.3
45 to 49	26	12.1	76	18.8	0	0	102	14.2
50 to 54	10	4.7	40	9.9	30	29.7	80	11.1
55 to 59	4	1.9	22	5.4	55	54.5	81	11.3
60 to 64	1	0.5	5	1.2	14	13.9	20	2.8
65 +	0	0	0	0	2	2.0	2	0.3
Total	**215**	**100%**	**404**	**100%**	**101**	**100%**	**720**	**100%**

Source: GTCW

In practice, a quarter of those teaching ICT/Computing are over 50, including all where the subject of their training is unknown. Given their age, it is unlikely that many if any of this group trained in ICT as their teacher training subject, unless they were late entrants to the profession.

3.3 Scotland

The number of teachers with Computing as a subject registered with the General Teaching Council for Scotland (GTCS) has been on the increase over the past three years, from 771 in 2008/09 to 810 in 2010/11. However, the number of provisionally registered teachers has fallen during the same period from 67 to 29 as teacher training places have been reduced. Registration with the GTCS is on a self-reporting basis.

Table 17: Teachers of Computing – General Teaching Council for Scotland Register

	Full registration	Provisional registration (not yet completed teacher training)	All registered
2008/09	704	67	771
2009/10	759	53	812
2009/11	781	29	810

Source: GTCS http://www.gtcs.org.uk/education-in-scotland/register-statistics.aspx accessed 31st July 2011

Table 18: Publically funded secondary school teachers by main subject taught – Computing

Year	Number
2007	788
2008	766
2009	728
2010	701*
	*1048 where those teaching Computing not as their main subject are included.

Source: Scottish Education Department 2010 School Census

The number of trained teachers of Computing in Scotland is in decline, according to the annual census. It fell from 788 in 2007 to 701 in 2010. However, in 2010 there were 1048 teachers teaching the subject, including, presumably, some 364 who did not have Computing as their main subject. This would seem to be a lower proportion than in either England or Wales.

Table 19: State funded secondary school teachers by main subject taught Computing - 2010

Local Authority	Number	Local Authority	Number
Aberdeen City	**20**	Inverclyde	**10**
Aberdeenshire	**30**	Midlothian	**10**
Angus	**18**	Moray	**7**
Argyll & Bute	**14**	North Ayrshire	**23**
Clackmannanshire	**7**	North Lanarkshire	**52**
Dumfries & Galloway	**19**	Orkney Islands	**2**
Dundee City	**26**	Perth & Kinross	**21**
East Ayrshire	**15**	Renfrewshire	**24**
East Dunbartonshire	**22**	Scottish Borders	**10**
East Lothian	**11**	Shetland Islands	**5**
East Renfrewshire	**24**	South Ayrshire	**17**
Edinburgh, City of	**51**	South Lanarkshire	**41**
Eilean Siar	**4**	Stirling	**13**
Falkirk	**22**	West Dunbartonshire	**16**
Fife	**47**	West Lothian	**31**
Glasgow City	**58**		
Highland	**29**	All local authorities	**701**

Source: Scottish Education Department 2010 School Census

The average age of teachers of Computing increased from 44 to 45 between 2007 and 2010, and during the same period the percentage of teachers over the age of 55 increased from 14% of the total to 20%. With the reduction in training places, the average age of teachers of Computing is unlikely to fall in the near future.

Table 20: State funded secondary school teachers by age and subject taught computing 2007-2010

	Average Age	Percentage aged 55+
2007	44	14
2008	44	16
2009	44	19
2010	45	20

Source: Scottish Education Department 2010 School Census

Teachers of Computing in Scotland have amongst the highest average age of teachers of any subject in the secondary sector. Their average age increased between 2007 and 2010 whereas in Mathematics (average age 42) and Chemistry (average age 44) it remained the same. In Physics the average age dropped from 44 to 43; in Biology it dropped from 43 to 42. The percentage aged over 55+ was also lower in these subjects than in Computing, ranging from 17% in Mathematics to 18% in Physics, Biology and General Science in 2010. Only in Chemistry was it at 22% over the age of 55 in 2010.

4 HOW EASY DO SCHOOLS FIND IT TO RECRUIT TEACHERS?

4.1 England

The survey conducted of schools who had advertised for a teacher of ICT/Computing was designed to identify how easy schools found it to recruit appropriate staff and question their views of the appropriateness of the training newly qualified teachers had received during their training. Schools were asked both whether they were able to make an appointment, and also number of applications received in response to an advert.

The survey identified some 867 posts advertised during the 2010-11 school year. Of these, 767 were advertised by schools in England, 56 by schools in Scotland and 44 by schools in Wales. At the time of the School Workforce Census conducted during November 2010 state funded schools in England recorded some 40 vacancies under the heading of ICT. (DfE Statistical First Release 06/2011 Table 16)

Some 153 of the posts were for Heads of Department (2 on the Leadership Grade, 50 TLR1, 58 TLR2 and 43 where the salary was unknown); 702 were advertisements for teachers (3 AST [Advanced Skills Teacher] posts, 34 with a TLR [Teaching and Learning Responsibility payment], and 665 main scale vacancies). Some 835 vacancies were for teachers of ICT solely. There were 73 ICT plus Business Studies vacancies, 23 for ICT with Mathematics and a further 32 with ICT and a range of other subjects, half of which were in the Design and Technology field. 107 schools advertising were in the independent sector.

These figures taken from the Vactrack database represent a sharp fall on the number of posts advertised during previous years.

Table 21: Advertisements for teaching posts in ICT/Computing – England and Wales

	2008-09	2009-10	2010-2011*
MAIN SCALE TEACHER	1090	920	665
TLR TEACHER	155	92	34
ADVANCED SKILL TEACHER	21	14	3
HEAD OF DEPARTMENT	323	267	153

*Until end of June 2011. Source: TSL Vactrack database

With the inclusion of posts in Scotland, the data from Vactrack formed the source for the distribution of the questionnaires to schools. In total, some 88 schools responded to the survey, either fully or in part. Of these, 78 were in England with four in Scotland and six in Wales; four were independent schools. 82 schools made an appointment, but six were not able to do so, including one where the advert was too recent for an appointment to have been made. The response rate to the survey was some 10% overall. However, the response rate for classroom teacher posts was around 12%. Although not as high as might have been wished, the results were from schools across the country and probably offer a representative picture of recruitment in the state funded school sector in England and Wales.

Some 62 schools provided data on applications, with the average school making an appointment receiving 14.8 applications. Five of the schools that did not make an appointment averaged 6.4 applications. The sixth school had not yet made an appointment, but reported having received 70 applications. Schools generally reported receiving fewer applications for posts of responsibility, with the Head of Department vacancies attracting, 4, 5, 8, 14 and 16 applications respectively, and the posts with TLR1s attached, 5, 6 and 19 applications. Schools in London reported the largest average number of applications (over 30 per school) helped by the 70 recorded by one school and 52 by another. Interestingly, schools in the East of England region had the lowest average of 7.6 applications were school. It is not clear whether this is due to a lack of sufficient teacher training course in the eastern part of the region.

Amongst those appointed to teaching posts, 34 were newly qualified teachers who had just completed their training, another 34 were already qualified teachers who had already taught in a school, and four were listed as others, presumably including employment-based trainees and Teach First. Of those appointed, 40 had a PGCE but only 27 were reported as holding an ICT/Computing related degree.

Most teaching staff appointed were thought to be of the same level of qualification as existing teachers, although five schools thought their NQTs appointed were better qualified. This was balanced by seven schools who considered the NQTs they appointed were less well qualified in academic terms than the department as a whole.

The survey inquired whether newly qualified teachers were provided with the correct subject knowledge and appropriate level of skills during their training. Some 38 of the 71 who answered this question thought NQTs had both the subject knowledge and appropriate skills. However, 15 respondents thought NQTs were deficient in both areas, and a further 18 thought there were shortcomings in either knowledge (6 replies) or skills (12 replies) amongst NQTs.

Evidence from the Smithers and Robinson Guide to ITT (published in August 2011 by the Centre for Education and Employment Research at the University of Buckingham) suggested that in England, only 64.8% of the ICT trainees who qualified during the year covered by their 2011 profiles were in teaching one year later. This was the lowest percentage of any secondary subject and compared with 70% for Mathematics trainees and 68.9% for Science trainees.

The picture overall in England from the survey is of schools facing little difficulty in making an appointment in ICT/Computing during 2010/11, with a mixture of newly qualified and existing teachers being appointed with qualification levels general the same as those of existing department staff in the subject.

4.2 Wales

The Welsh Assembly conducts a survey of responses to vacancies advertised each year by schools.

Table 22: Vacancies in primary and secondary schools between 1 January and 31 December 2009

Information Technology	English Medium	Welsh Medium	Total
Posts Advertised	29	3	32
Number of applications	293	6	299
Average	10	2	9
Appointment made	28/29	6/6	31/32

Source WAG Table 6.5 Statistics of Education 2010

The number of applications recorded for vacancies in Wales during 2009, the latest data currently available, was at nine, below the 13.9 recorded in our recent survey in England. However, it did seem sufficient for schools to be able to make appointments in virtually every case.

4.3 Scotland

Data on applications for posts does not seem to be held centrally in Scotland.

5 CONCLUSIONS

The introduction of a new subject into the curriculum always poses questions for government. Assuming the length of the school week remains fixed, teaching time has to be found from reductions elsewhere. Unless existing staff are made redundant or leave for other reasons, vacancies cannot be created to staff the new subject. Therefore existing staff must carry out the teaching. This is made easier in England and Wales where Qualified Teacher Status (QTS) is not all related to a particular subject, but teachers may be required to teach anything to anyone.

The numbers entering training have been subject to periods of volatility over the past decade. The present situation is one of a reduction in training numbers that has been matched during 2011 by a reduction in applicants for training. However, in line with falling rolls in the secondary sector and uncertainty about school budgets, the number of vacancies has also been reducing, at least in England and Wales. This has meant that schools have generally had no difficulty in filling their vacancies with qualified teachers of the subject whether with a degree in the subject plus a teacher training qualification or just a teacher training qualification in the subject and a degree in another subject area, although those who replied to the survey still expressed some anxiety about the skills and knowledge of those entering the profession as NQTs.

There remains a shortage of teachers of ICT/Computing qualified in the subject across England, Wales and Scotland needed to fully staff the curriculum. However, the number of teachers –not qualified in the subject was lower in Scotland than in England and Wales and a significant proportion of those who were not qualified in the subject in England taught the subject for a relatively small proportion of the week. Nevertheless, there were a sizeable number of schools with no teachers qualified in ICT/Computing. Data could not be not been obtained for Northern Ireland.

Nothing is known about the state of staffing expertise in either the primary or Further Education sectors, although the latter may be important as a source of examination candidates.

The dual nature of the subject containing both Computing and the application of ICT causes some problems, not least in potentially identifying what is a qualified teacher of the subject. The current definition links the subject firmly to Computing in terms of acceptable degrees for qualified teachers.

Appropriate training needs to be based upon a secure understanding of the place of ICT/Computing in the curriculum and what the teaching of the subject is trying to achieve with the teaching time available. The duality of ICT/Computing means the subject is less clear about its place in the curriculum in comparison with say, subjects included in the English Baccalaureate. In our survey, many respondents expressed anxiety about the future for ICT/Computing. Generally, they expressed the view that Computing was more integral to the subject than ICT, especially in a fast changing technological environment.

Professor John Howson
August 2011

Professor John Howson

Professor Howson has monitored the labour market for teachers over many years. His studies range from longitudinal surveys covering fluctuations in the numbers of students in training to reports assessing the demand for school leaders that span more than a quarter of a century of appointments to headships. He has previously worked with The Royal Society on several studies including the State of The Nation Reports where data analysis was commissioned through his former company Education Data Surveys. He also helped devise the Royal Society's Education Database. His other studies have included reports for The Gatsby Foundation, the National College, and the Training and Development Agency. He holds visiting professorships at the London Institute of education and Oxford Brookes University, and a visiting Senior Research Fellowship at Oxford University's Department of Education.

APPENDIX

Appendix 1

Methodology

This study consisted of two separate parts:

- A documentary study of published and unpublished data held by government and assembly sources, plus where possible those of General Teaching Councils in England, Wales and Scotland.
- The second part of the study was a survey of 867 advertisements for posts containing the words ICT or Computing in their title across state funded and private schools in England, Wales and Scotland. These vacancies were accessed from the Vactrack database of school vacancies held by the TSL Group Ltd.

The documentary study:

- Published data sources
  - DfE Workforce Survey 2010 published as http://www.education.gov.uk/rsgateway/DB/SFR/s000997/index.shtml and accessed at various dates during July and August 2011
  - Graduate Teacher Training Registry Annual Reports 2000 to 2010
  - Scottish Education Department
  - Welsh Assembly Government

- Unpublished data sources
  - DfE 2010 School Staffing Survey. Permission was granted to access this survey for the purpose of identifying the qualifications of teachers of ICT.
  - The General Teaching Council for Wales provided some unpublished data regarding teachers of ICT registered with the GTCW.

The Survey

The questionnaire was sent to all schools that advertised a vacancy in ICT/Computing either wholly in the subject or in combination with another subject. The survey was sent by first class post with a Freepost return address. It was also possible to complete the questionnaire online. By the time the report was compiled some 88 responses had been received, 23 of these online. The responses from schools in England and Wales form the basis of the data used in this report as the responses from Scotland were too few to be meaningful.

In addition to the data about vacancies, the survey contained some more general questions about the state of ICT/Computing in schools and the responses are contained in an Appendix.

Appendix 2

Other information from the Survey

Are qualified teachers teaching elsewhere?

Several schools reported ICT qualified staff teaching elsewhere. Mostly this was either in the Mathematics department or because they were not needed in the ICT team.

A selection of the individual and unedited responses on this point from schools:

Currently Head of Biology
Full time teaching Maths
Head Teacher - bit too busy
Hold another post - not wishing to be in classroom
It's not a main subject. Not needed in IT dept
Maths teacher
Members of SLT
No demand
Senior staff
Teaching Maths
Teaching other subjects
The Subject Leader for History has taught some
ICT
maths teacher with computer science degree
They are attached to other faculties
Timetable Issues
Trained to teach maths

How much time is allocated for ICT classes in the years below GCSE?

The majority of respondents (55) were at schools that allocated up to an hour for the subject. Fourteen schools allocated between 1-2 hours, and three schools more than two hours.

Non-staffing Budgets for 2011/12

This question elicited a response from 77 schools. In only five schools had the budget been increased, compared with 39 where it had been reduced, and 33 where it had stayed the same. Schools made a number of comments about the changes:

All been reduced
All budgets been reduced this year
All decreased
All depts are down but one is already small (as ICT technology is from another budget)
All have been reduced
All reduced

Decreased too
Will reduce in real terms as 6th form is scrapped
Higher
I don't know, but we have more than double last year's allocation.
Identical
In line with other areas
In-line
In-line with, calculated based on size of cohort
IT used to have a weighting (extra funding) for being a practical subject
Most have also decreased due to reducing budgets and falling roles
No budget has been set yet. Will expect it to be the same
ok as the ICT equipment is up-to-date and does not come out of my budget
Reduced across the curriculum
Reduction across all subjects for 2011/12
Similar - Temp staff not renewed
Some the same, some decreased
The same
The same - most (I believe) have been reduced

The future for the subject?

The Survey asked respondents to speculate where ICT/Computing might be in five years time in secondary schools.
There were a broad range of responses. The largest group, 29 responses, were from those expressing concern that the subject would either be marginalised in one way or another or integrated into other subjects. However, 14 respondents felt there would be more 'Computing' and less applications compared with five who thought the opposite might be true. Some 11 respondents felt it would still remain as it is a 'core' subject.

Comments

Computing as the way forward:

Computing springing up
Cross curricular and discreet, more Computing, portable
Higher standard & ICT teaching being delivered in a more academic way
Hopefully with more emphasis on Computing rather than office application skills
I see it becoming more technical based with less emphasis on developing presentation skills.
ICT gone. Computing on the increase (I HOPE !)
ICT marginalised, Computing more popular
More based on Computing rather than ICT
More focussed on Computing rather than ICT Skills
More rigorous for academic GCSEs
More specialised/technical as a discrete subject + basic IT skills for all
More specialist courses eg GCSE Computing

Teaching Computing / Image manipulation / Animation / Office

Applications:

Focus more on application
Hopefully with a valued emphasis on Multimedia / Web skills/Programming
I see it being a more skills based course with the content reflecting the current technological changes e.g. use of social networking sites and smart phones
I think the focus in KS3 will be on digital media and providing students with IT skills that can be used cross-curricular to support other subjects in their use of IT and encourage students to take a more holistic approach to their IT skills. At KS4,
Used as a tool (ICT). Computing profile raised (GCSE)

Core subject:

As a core discipline - for problem ????
Compulsory
Compulsory
Compulsory to 19
Core Subject
Discrete ICT should continue to be taught
Hopefully same as now!
Not really that different - maybe different slant to it as a move for office toward other media
Still taught, still important - regardless of Govt agenda
The same
There will still be a demand for ICT

Marginalised in some way:

As a full optional subject with dramatically reduced numbers of students taking it as an option as part of e-bac.
Cross curricular - option only in KS4/KS5
Gone - cross curricular GCSE ?3

I fear that ICT/Computing will disappear as a discrete subject area. I think many head teachers see ICT as something that anyone can teach that pupils are already good at and so there isn't a need for ICT lessons.
I hope as a distinct subject. I fear it will be taught across the curriculum
I hope it stays as it is, but it may get embedded into other subjects @ KS3
I think that fewer schools will make it compulsory, and more of the ICT will be embedded into other subjects. ICT/Computing will be a more advanced subject to be studied in its own right.
ICT turned into cross-curricular skills, hopefully inserted into subjects where relevant with help of ICT coordinator, computing becomes a discreet subjects at KS3
ICT will become integrated in other subjects
ICT will most probably not be an individual subject and students will not be able to choose ICT as an option. ICT will be taught within each subject instead at a very basic level.

In danger of being sidelined
Integrated with STEM subjects. Hopefully as part of technical baccalaureate
Integrated into other subjects more and less of a stand-alone subject.
It will disappear at KS3. Continue at GCSE/A Level
Marginalised
Much greater emphasis and investment is needed, the subject is simply regarded as only about basic skills and anyone can teach it!
Non curriculum - integrated across subjects
Non-compulsory at Key Stage 4; students taking GCSE level qualifications earlier or at more flexible intervals. Focus on GCSE and industry-standard qualifications.
Not a core subject but an aid to learning
Not in KS3
The EB is slowly killing the subject
On a downward spiral at present
Reduction in timetable
Relegated to a bolt-on skills module unless we change government
Sadly delivered across the curriculum in many schools; greater emphasis on non office applications,
Senior leaders are already planning for ICT to not be part of the new NC.
Who can say - officially ICT seems to have become a non-subject. We may get a move towards allowing Computing GCSE and a reducing in the "Nationals" coursework type approach.
Will disappear unless significant steps are taken to stop this happening.

Should there be more emphasis on computing skills?

The survey asked whether there should be more emphasis on computing skills and if so at what level in a pupil's school experience?
57 respondents said there should be more emphasis, compared with 19 who disagreed. The majority wanted more computing at GCSE; 42 replies compared with 36 at 'A' level and 32 in early secondary. There was support from just 14 respondents for more Computing in the primary schools.