

Current SEMTA activity on ICT – Short Note

NB: SEMTA sometimes use the prefix ‘E- ‘ to indicate things relating to engineering. Hence, ‘E-careers’ may refer to careers in engineering, while ‘e-careers’ refers to careers in computing and ICT.

The ICT field is frequently mentioned as important on SEMTA’s website and in various documents.

Essentially the focus of SEMTA’s interest appears to be on using IT for non-dedicated purposes rather than actually programming, maintaining or supporting ICT systems. Similarly in the occupational frameworks for ‘Technical Services’ personnel, ICT is not mentioned: they appear *not* to consider themselves as trainers of software or hardware technicians according to the roles currently specified.

Within their qualifications frameworks, IT skills are stated to be important in various jobs, e.g. management and project management roles. IT proficiency is also mentioned in the ‘Integrated Logistic Support’ section, but this theme is not developed here.

IT skills are mentioned in various sections on generic skills. In the SEMTA *Workforce Development Plan*, it is noted that:
‘Clerical and administrative staff are seen as being weak in IT and computer skills’.

Their analysis of the *Employers’ Skill Survey* notes that there is a requirement for ‘advanced IT and software skills for technician jobs’, and also that ‘there are shortages of electronics and IT skills throughout the [SET] sector’. Again, details and statistics are not given at this point.

In the *Skills Foresight 2000* document, it is noted that:
‘Electronics has been growing at a much higher rate than other engineering sectors and has a larger proportion of recently established firms’ (p.10). However, once again this theme is not extended here. Elsewhere in the same document is a more specific statement about aerospace, where it is predicted that ICT skills will become increasingly important ‘... from clerical staff through to design engineers as IT and communication technologies become increasingly linked to the running of businesses and also the products themselves’ (p.18). The qualifications frameworks for various support roles (e.g. air-ticket issuing) contain some elements of ICT *use*, but IT professional skills are not explored.

In the section of the site which reports the document ‘Skill needs in Electronics: Final Report’ (January 2001), it is noted that:
‘... the convergence of computing and telecommunications and more recently a convergence of software and hardware technologies’ will change the profile of skill needs. The ‘grey area’ between the two is mentioned elsewhere, but I could not find any indication that they are working extensively in this particular area at the present time.

This section of the SEMTA website also notes software engineering and electronic engineering as areas where ‘critical skilling’ is required (my impression is that this is ‘critical’ as in ‘very important’ rather than ‘able to provide critiques of established projects/techniques’).

The issue of the quality of applicants (all applicants, not just graduates) is dealt with at some length, and some of the comments are interesting. The most striking is the following: '[employers report that there are] inconsistent standards and an apparent variability in the quality of degrees, with a "huge range" between the best universities (normally felt to be the longer-established institutions) and the worst'.

This impression does not appear to be mirrored in findings from e-skills UK in relation to ICT and Computing.

They also note gaps in 'technical [areas] and a lack of specialist knowledge', and the 'inability (inexperience) to apply the academic knowledge acquired in a practical environment'. Like e-skills UK, they note a 'lack of important generic skills', including problem-solving, communication and business awareness. They note that problem solving is viewed as 'a difficult one to train'.

In the *Electronics Labour Market Observatory 2002* (produced when EMTA was an 'independent charity'), a high level of skills gaps in Electronics is noted. However, this is said to be declining. In 2002, a gap was reported by 13% of establishments surveyed, which is down from 21% in 1999. For all engineering establishments, the figure is 16% (p.17). In 75% of cases where a gap is reported in an electronics firm, this is in the technical engineering area, although gaps are much greater at lower employment strata: they are found among 42% of operators and assemblers, as opposed to 30% of technicians and 23% of professional engineers.

As with e-skills UK, the largest problem is a lack of required work experience (blamed in 53% of cases), followed by lack of required qualifications/skills (32%) or simple lack of applicant numbers (19%).

One interesting point is that this document lays some of the blame for skills shortages in electronics on IT firms: 'Many Electronics Engineers are lost to the sector once they have gained experience and higher qualifications and are sought by non-electronics employers' (p.23). They state that 40% of 'high flyers in the ITEC sector have engineering qualifications', and rather surprisingly, that 'only 20% of people employed in an ITEC role were from a computer science course. Many computer science graduates cannot find jobs. This may suggest that their qualifications are inappropriate'.

Very unfortunately, these generalised comments (and the accompanying statistics) are from an unreferenced 'NCC survey'. I have not been able to identify this.

In their proposal to be licensed as a Sector Skills Council, they mention IT as an important area, in general. Particular attention is drawn to its use in products and processes throughout industry, and also to its importance as a generic skill at all levels, and in different forms at those levels.

SEMTA's general vision seems to be very strongly focussed on 'grassroots' policies, e.g. working in schools to improve the basic skills for entry into SET professions, and the image of engineering jobs. The improvement of general mathematics skills is a priority, as is the development of work-based routes into training and jobs. Training is also emphasised, as is the development of modern apprenticeships, foundation degrees and graduate apprenticeships.

Skillset activity on animation and digital media

SKILLSET have produced specifications 'Route Maps' for 'Interactive Media and Production' qualifications at Levels 3 and 4. The Level 3 programme involves providing 'IT solutions' for interactive media, editing and transferring content, and combining design elements. At Level 4 design and the development of ideas are stressed alongside the basic skills elements.

In 1998 a report entitled *The Animation Industry Overview* was produced by Skillset, in which a major expansion of the sector was predicted (73% of firms expected to expand by 2000). At this point 70% of work was in computer animation, 47% drawn animation and 40% stopframe or modelling. The majority of employers surveyed at this stage felt that training in computer software skills was 'essential' for their work and its expansion. Even in 1998, three out of five entrants to this sector were formally trained in animation, 53% with a relevant degree and a further 27% with some other qualification. However, 44% of employers described the available training as 'not good', although whether they are referring to degrees, other entry-level qualifications, or opportunities for upskilling is unclear.

Only *one* short course in animation is listed on their database, although most Skillset listings are regional, and locally-based animation courses are advertised to industry professionals.

Very surprisingly, the AVITG report does not deal with animation in any detail. However, Skillset does commit in this document to working with related NTOs and Skills Councils on certain areas of their remit. e-skills UK is mentioned for collaboration over computer games, and the publishing NTO with relation to digital content (p.13, Executive summary). Later, partnerships with *any* relevant NTOs are proposed.

The games and interactive media fields are mentioned as areas where research into skill needs and employment trends is required.