

# An Assessment of Generic Skills Needs

## Skills Dialogue

A comprehensive summary of generic skills requirements

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## Skills Dialogues – General Introduction

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Skills Dialogues constitute a series of consultations with all major industrial and business sectors, leading to the production of high quality authoritative skills assessments for each of these broad sectors. Dialogues developed from recommendations in the 2nd Report of the Skills Task Force, *Delivering skills for all*, as a means of providing better quality information on changes in skills supply and demand at a sectoral level.

They draw on research undertaken by Sector Skills Councils (SSCs) through Skills Foresight and other projects as well as a wide range of national research on current and future skills needs.

The Skills Dialogues operate as a rolling biennial programme with the first full series of reports launched between Autumn 2000 and the end of 2001.

The purpose of the dialogues is to improve the quality of skills information available at a sector level, and to provide an effective voice for SSCs and employers in their sectors in the planning and implementation of education and training provision and in informing careers advice and guidance. They will ensure that industry sector views are well articulated and represented to major stakeholders, such as the Learning and Skills Council (LSC) and its local arms, Regional Development Agencies (RDAs) and careers services. The dialogues are designed to draw on the work of individual SSCs but to cover broader industrial groupings, so as to aid strategic planning and make the information base more manageable.

This generic skills report results from an analysis of national research including, the Employer's Skills Survey (ESS 2001), Skills in England 2001 and Work Skills in Britain 1986-2001. This national research was then brought together to inform a review of the generic skill requirements identified in the existing Sector Skills Dialogue reports.

## Foreword

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As the representative National Cross Sector Organisation for the Administration occupational sector, we welcomed the recommendations from the National Skills Taskforce to set up a programme of skills dialogues across the major industrial and business sectors. We feel that skills dialogues will continue to bring valuable information and new insights on sector and generic skills to those responsible for planning education and training provision.

This report has brought together a wide range of information from the National Skills Taskforce and Sector Skills Dialogue Reports to present a comprehensive assessment of generic skills demand, supply and imbalance.

From this research it is evident that a co-ordinated and national approach to generic skills is needed to address the generic skill agenda. This will be achieved with continued focus and investment.

It is important that the Sector Skills Development Agency and emerging SSCs work closely and effectively with both the LSC, its local arms and RDAs to address generic skills needs at a national, sector and regional level.

We hope that this generic skills assessment will provide a valuable tool for all those involved in the strategic planning of education and training provision.



**Imogen Lemon**  
Chief Executive

**Council for Administration**

## Key Findings

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### The nature of generic skills

- ◉ The difficulties associated with measuring generic skills are creating a significant barrier to their development.
- ◉ Developments in the UK economy over recent decades and the consequent changes in organisational structures have increased the demand for generic skills.
- ◉ There is a significant departure from many of the traditional skill sets hitherto deployed in establishments; generic skills are increasingly being sought in combination with technical skills as a means of developing a labour force that can cope with changing skill requirements. Generic skills are closely allied to high-involvement work practices, and an increasingly complex, communication-focused and customer-driven work environment.
- ◉ In terms of remuneration premiums, generic skills which most affect earnings are IT, communication, planning and numeracy.

### The occurrence of generic skills

- ◉ The ability to multi-task, show initiative and flexibility, effectively organise workloads and take responsibility for personal development are central skills for today's employee.
- ◉ Generic skills are strongly associated with skills gaps, in particular with Communication, Team working and Customer handling.
- ◉ It is generic skills that employers say they most need when seeking to move into new product markets or improve service quality.
- ◉ Individuals with qualifications at least as high as NVQ level 3 tend to show greater generic skill abilities than those with below NVQ level 3 qualifications.
- ◉ Requirement for generic skills is particularly noted in the higher level occupational groups: managerial, professional and associate professional levels.
- ◉ Those in 'Elementary' occupations are undergoing significant upskilling in generic skills.
- ◉ The gap between levels of generic skills in England (particularly in the South East) and Scotland and Wales needs to be closed.
- ◉ There exist gender-related differences in the acquisition and deployment of generic skills.
- ◉ There is a reported lack of generic skills (in regards to work-readiness) specifically amongst school-leavers and graduates.
- ◉ IT skills continue to rise in importance, and relate to abilities that are much broader than just the use of computers. A high proportion of employees are now expected to be able to operate within a work environment which is fundamentally technologically-orientated.

### The development of generic skills

- ◉ Government directives have put significant resource into the development of three Key Skills in particular: communication, application of number and IT. This emphasis is reflected in the National Qualifications Framework.
- ◉ Momentum is growing in the supply of generic skills training, with significant uptake in related qualifications. A significant number of sector bodies are actively promoting the development of generic skills, chiefly through apprenticeship frameworks and by tailoring NVQ modules.
- ◉ Small businesses and the self-employed face particular issues related to generic skills. These centre around management, resource control and strategic thinking skills. Employees in smaller companies are less likely to receive training in generic skills.

## Executive Summary

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### Introduction

- ▶ The purpose of the report *An Assessment of Generic Skill Needs* is to bring together generic skills findings from sector and national research and provide an overview of generic skills issues currently facing the UK workforce. It highlights the main factors influencing generic skill trends, examining the demand for such skills, their supply and the associated shortfalls in provision. Also addressed are the key challenges being encountered by employees, employers and Government in developing the generic skills necessary to maintain productivity levels in the modern workplace. The report thereby offers an important resource for all those involved in the strategic planning of generic skills.
- ▶ The report builds on existing research and skills information, rather than undertaking any new research. The structure of the report reflects a review of the generic skill issues across the Sector Skills Dialogues, using desk research and qualitative techniques including interviews with major stakeholders. Outlined below are the principal observations made in the report, as well as the resulting conclusions and recommendations.
- ▶ Generic skills are 'transferable' skills and are seen as part of a suite of skills which in combination optimise an individual's productivity. They underpin other technical skills, as well as drawing on personal attributes, which affect how effectively skills can be learnt. Generic skills are also sometimes referred to in this report as cognitive skills i.e. those skills which are generic, but not of a manual nature.
- ▶ Generic skills are independent of the sector or occupational grouping in which an individual may operate, and relate to work processes and the way a task is carried out. As such, all generic skills are required by all workers, although to what extent varies significantly. At all levels however, generic skills contribute to an individual's overall 'employability', enhancing the capacity to adapt, learn, think independently, make sound decisions and cope with technological advancements and are seen to bring added value to the delivery of other, more job-specific skills.
- ▶ The coverage of generic skills within this report has been based on the definition provided by the National Skills Task Force (2000):

*"those skills which can be used across large numbers of different occupations. They include what are defined as key skills – communication, problem solving, team working, IT skills, application of number and an ability to improve personal learning and performance. They also include reasoning skills, scheduling work and diagnosing work problems, work process management skills, visualising output, working backwards for forward planning purposes and sequencing operations".*
- ▶ The following list outlines the generic skills addressed in this report:

  - ▶ Communication
  - ▶ Improving own Learning and Performance
  - ▶ Information Technology
  - ▶ Management
  - ▶ Numeracy
  - ▶ Organisation of Work
  - ▶ Problem Solving
  - ▶ Team-working

## Growing Demand for Generic Skills

### Drivers behind the rise in generic skills

- ◉ Key changes in the economy which have impacted the demand for generic skills include increased global competition, drive for productivity growth, a steep increase in the use of technology and the growing sophistication of consumers. There have also been significant changes in the composition of the economy, with a shift from an industrial to a service and communications (IT) orientated economy. This has altered the types and intensity of skills required, with increased emphasis on skill rich occupations, such as managers, professionals and associate professionals.
- ◉ As a result of these developments, businesses have been forced to review their organisational structure and introduce less rigid work practices. An individual's ability to multi-task, work flexibly, take initiative and demonstrate commercial awareness is of increasing advantage to the employer. This has brought a significant departure from many of the traditional skill sets hitherto deployed in establishments; generic skills are increasingly being sought in combination with technical skills as a means of developing a labour force that can cope with a rapidly changing work environment. Key organisational developments relating to generic skill needs include:
  - ▶ Flatter organisational structures.
  - ▶ Increased emphasis on autonomy and individual responsibility.
  - ▶ Sophistication of products, services and systems.
  - ▶ More job flexibility and job rotation.
  - ▶ Team-orientated environments.
  - ▶ Increased interface with customers.

### Value of generic skills

- ◉ Focus is now on upgrading the workforce and equipping employees with relevant qualifications. It is likely that over the next decade, around 8 in 10 of all new jobs may well be at NVQ levels 3 or 4 and above.<sup>1</sup> Value is increasingly being placed on skills which can enable an organisation to meet the growing pressures on productivity and profit margins.
- ◉ The criteria for employability and remuneration levels are changing. The possession of generic skills attracts a pay premium, and although the interdependence between many of the cognitive skills can make associated wage returns difficult to measure, nevertheless, the demand for such skills is reflected in earnings. Those most likely to command higher pay levels are IT skills (at both basic and intermediate standards), high-level communication skills and planning skills.

### Generic skill requirements

- ◉ As a result of the shift from manual-based skills to cognitive-based skills, demand for skills such as communication, problem-solving, IT and management has risen e.g. most notable increases are in technology usage, business awareness, document writing, numerical calculations, customer handling and listening to colleagues. In contrast, skills associated with physical aptitude have substantially reduced in importance.
- ◉ Although the demand for generic skills can be seen across all the occupational groupings, requirement for such skills is especially evident amongst higher skilled workers such as managerial, professionals, and associate professionals.

- ▶ In terms of sector needs, there exists a clear correlation between certain industries and the distribution of generic skills. For example:
  - ▶ Numeracy: Finance, Manufacturing and Construction.
  - ▶ Communication: Education, Finance and Business Services.
  - ▶ Organisation of Work: Education.
  - ▶ Problem-solving: Manufacturing and Construction.
- ▶ Looking at the national picture Scotland is more likely to suffer from generic skills deficiencies than England or Wales.
- ▶ Patterns can also be observed in the possession of generic skills amongst men and women. Overall, female workers show a higher predilection towards generic skills, and are particularly strong in communication and organisation of work. By contrast, men are strongest in numeracy and problem solving.

## Generic skill profiles

- ▶ **Communication:** Growing tendencies towards team-working, reduced supervision and progressively more complex work practices require a commensurate increase in communication abilities. Closer interaction with customers puts particular demands on communication skills, and the ability to sell, improve customer care and negotiate.
- ▶ The need for communication skills can be seen at all levels, with noticeable growth in the lower skilled occupations where interpersonal skills have traditionally been of less importance. High level communication and horizontal communication are most required amongst managers, professionals and associate professionals, and as would be expected, client communication is critical to those in sales.
- ▶ In terms of sector distribution, the Education and Finance sectors show the strongest correlation with communication skills.
- ▶ **Improving own Learning and Development:** The ongoing acquisition and broadening of skills is now an important element of employability and most employers require an attitude of life-long learning from staff. Job remits and responsibilities have lost many of the traditional demarcations and individuals need to be prepared to undertake a variable spectrum of responsibilities. The large majority of men and women alike consider that improving their level of learning and development is an important aspect of their job.
- ▶ In terms of occupational splits, the need for continued learning and performance improvement is seen to lie largely with those in more skilled occupations. From associate professionals upwards, 80% or more of employees see such requirements as relevant to them.
- ▶ **Information Technology:** Computing skills continue to be of central importance in the workplace. In comparison to other countries, UK organisations are generally more advanced in their use of ICT; over 70% of people in employment now make use of some type of automated or computerised equipment, and 40% see it as essential to their work.<sup>2</sup>
- ▶ Computers are most important in administrative and secretarial occupations, and significant usage is also seen in the professional, managerial, and associate professional occupations.

- The role of IT is of particular importance in the 'Finance' sector and 'Business Services' sector. Over time the growth of importance of IT capabilities has been most visible in 'Construction', 'Transport and Storage' and 'Health and Social Work'.
- **Management:** Management skills are no longer restricted to those in 'Manager' occupations. This has led to an increasingly widespread need for management-type skills at more junior levels previously exempt of such responsibilities. In the 2001 Skills Survey, only half (52%) of those claiming managerial duties were 'managers'.<sup>3</sup>
- This de-layering process within many organisations has reduced the need for 'middle management' and increased the need for generalist managers who can demonstrate the necessary problem solving, communication and planning skills. Over 70% of those with managerial duties now consider the ability to coach and motivate colleagues as an important element of their responsibilities<sup>4</sup>, which confirms the growing significance of continuous human resource development in today's business culture.
- **Numeracy:** Here numeracy refers to numerical skills beyond basic level. A grasp of mathematical principles is considered by some employers as an indication that an individual can approach business problems with a numerate and statistical understanding. Individuals leaving the education system with A level Mathematics can earn approximately 10% more than those with GCSE Mathematics. This reflects the value placed on individuals who can demonstrate more than basic numeracy and can apply the discipline of logic, analytical thinking and problem solving in the workplace.
- **Organisation of Work:** The ability to multi-task and plan and prioritise work loads effectively has become essential in safeguarding productivity levels. Increasingly significant numbers of employees are now being allocated a more diverse range of tasks and the organisation of work has become so central that it has become an identifiable skill category comprising of several distinct aptitudes.
- In terms of occupational groupings, planning skills are most in demand amongst those working at manager or professional levels and are particularly strong amongst full-time female workers. Planning is especially important to the Education sector, with an increase expected in the Hotel and Restaurants and Transport and Storage industries.
- **Problem Solving:** The ability to resolve business or operational problems, reduce 'downtime' and increase system efficiency is all part of the pressures now faced by employees at almost all occupation levels. On one hand this requires an individual to focus on the whole production and delivery process in order to understand the significance of a task; on the other hand it requires independence of thought and action, and a sense of resourcefulness to pre-empt, identify or remedy problems.
- **Team Working:** Many UK businesses are turning to team-working as a means of increasing responsiveness to global competition and pooling resources to save costs. The 1998 Workplace Employers Relations Survey found that 83% of managers stated that at least some employees in their largest occupational group worked in formal designated teams (Cully, 1999).<sup>5</sup>
- This growth in cell-working and new organisational frameworks draws on other generic skills, such as higher levels of task discretion, communication, initiative and higher overall involvement in work processes.

3 Work Skills in Britain 1986-2001 Felstead.A., University of Leicester, et al., [DfES] 2002

4 Work Skills in Britain 1986-2001 Felstead.A., University of Leicester, et al., [DfES] 2002

5 Skills for all. Research Report from the National Skills Task Force [DfEE] 2000

## Creating a Supply of Generic Skills

### Developing the provision framework

- ▶ As the demand for generic skills has risen over recent years, the next step has naturally been to turn our attention to their supply. As is to be expected, there occurs a lag time between identifying a need and finding a way to meet it. There is therefore still some way to go in understanding the most effective way to address generic skill issues, and in establishing a structured approach to deliver the generic skills as required across sectors and occupational groupings. What is clear is that technical and generic skills need to be more closely allied and need to be developed, and often applied, in tandem. The demand for this mix of skills is evident throughout the Sector Skills Dialogues and National Skills Task Force Reports.
- ▶ Progress in generic skill provision is gaining momentum and awareness to the importance of their supply is increasing. This report reviews the following routes to generic skills learning:
  - ▶ Key Skills.
  - ▶ Vocational A levels.
  - ▶ Cross sector NVOs.
  - ▶ Cross sector MA frameworks.
  - ▶ Sector NVOs and MA frameworks.
  - ▶ Training – workplace and off-the-job training.

### Key Skills

- ▶ Of the six key skills (application of number, communication, information technology, problem solving, working with others and improving own learning and performance), Government policies have placed most emphasis and resources on communication, application of number and IT. The Government has undertaken a commitment to include these key skill units in all post-16 qualification pathways.
- ▶ The remaining key skills are separate qualifications in their own right and are treated outside the National Qualifications Framework. While the wider key skills are not built into the skills qualifications, research has indicated that employers and higher education institutions value evidence of the wider skills.

### Vocational A levels

- ▶ The vocational A level, or Advanced Vocational Certificate of Education (AVCE), is available in three, six and twelve units and is available in a number of generic areas including business, information and communication technology (ICT) and management.
- ▶ Vocational A levels aim to provide individuals with a platform of generic skills on which to build a range of more technical and job specific skills.

## Cross Sector National Vocational Qualifications (NVQs)

- The highest numbers of NVQs are awarded in cross sector areas. Administration, IT, accounting and customer service NVQs represent approximately 95% of all take up of cross sector NVQs. The total take up of cross sector NVQs accounts for approximately 35% of all NVQ take up.

## Cross Sector Modern Apprenticeship (MA) Frameworks

- These programmes show significant take up in cross sector areas, particularly business administration, customer service and IT. 34% of all FMA trainees and 21% of all AMA trainees are working towards a cross sector framework.

## Sector NVQs and MA Frameworks

- A significant number of sector bodies have already taken action to promote key skills. This is primarily being achieved through apprenticeship frameworks and by tailoring units from within cross sector NVQs.

## Training

- Whilst the growth of formal education has created a more highly qualified workforce, it is important that those who are reluctant to participate in such learning routes are not marginalised. A class-room, or an academically-based assessment scheme is not always suited to all individuals. A combined approach, therefore, is needed where opportunities for continued learning and upskilling can be accessed through both workplace and off-the-job training.
- Overall, employees are more likely to receive training in the work environment rather than off-the-job training. Training relating to IT (43%), managing your own development (41%), working with others (38%), communication (34%) and problem solving (32%) were amongst those most commonly provided by employers in 2000.<sup>6</sup>
- Work-based training is often a critical component in developing commercial awareness, sound business skills and task management – all key areas which employers are flagging up as skill concerns.
- In relation to off-the-job training, the following patterns can be seen:
  - Supervisory and management training is most prevalent in the finance, public administration, education, health and social care sectors.
  - The development of IT skills is most likely in the finance, public administration, education and business services industries.
  - Other generic skills training is particularly visible in public administration, but is also strong in hotels/restaurants, finance and health and social care.

## Generic Skills Deficiencies

- ▶ The imbalance between the demand and supply of generic skills is widespread. Since there is more research required to fully explore the identification, distribution and development of this skill set, the shortfall in their provision may be underestimated.

## Recruitment issues

- ▶ The process of upskilling a workforce brings with it a raising of expectations in terms of ability and performance levels. This is always likely to expose areas of weakness and employers cite problems specifically in regards to client management skills, the ability to work flexibly and a willingness to learn.
- ▶ There also exist problems specific at school-leaving and graduate levels. Many are perceived to fall short in cognitive skills, especially in interpersonal skills, commercial awareness and work readiness.
- ▶ Overall, the most significant generic skill requirements in regards to skill shortage vacancies are communication and team working skills.
- ▶ Just over a fifth of establishments with skill shortages require technical and generic skills in combination, but generally the greatest need is for generic skills only (35%).

## Skills gaps

- ▶ When trying to meet the needs of internal skill gaps, employers are most likely to look to generic skills development. As organisations endeavour to meet changes in the occupational and sectoral composition of the economy, some employees are unable to demonstrate the multi-functional skills that are needed, nor are they able to effectively adapt to new working practices. This is often compounded by failings in the organisation to provide the necessary training to equip staff to meet new job requirements.
- ▶ In particular, communication and team working are highlighted as areas of concern. Management and problem solving are also shown to be significantly lacking. In general terms, the occupations most likely to be affected are managerial occupations and production and process operatives.
- ▶ Over the next 2-3 years, the generic skills that are most likely to be needed are information technology and communication.
- ▶ Generic skill gaps can be masked as latent skill gaps and as such might be contributing to a 'low skill equilibrium' in the workplace. These skill deficiencies are often only recognised when problems arise in trying to improve production levels or expand the scope of business activity. Over 70% of firms seeking to move into higher quality products or services said they would need additional team working skills and customer handling skills to do this, with 60% or more saying they would need additional communication and problem solving skills.<sup>7</sup>

## Conclusions and Recommendations

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### Establishing a common approach to generic skills

- ▶ The effectiveness with which generic skills needs are addressed in the future will be dependent on reaching a consensus between employers, academics and Government as to the scope and conceptualisation of these skills. Without an explicit, and importantly a consistent, framework by which to investigate generic skill demand and supply, it will prove almost impossible to effectively monitor their usage in the workplace. Progress is being made in this area as the importance of generic skills continues to be more fully understood, but a universal approach of systematic measurement, both quantitative and qualitative, needs to be established.
- ▶ Much ground has been gained in bringing generic skills to the workplace, especially in regards to communication, numeracy and IT. However, in many sectors the other generic skills are not always addressed independently, nor are they always certified, but rather embedded in industry standards. Whilst contextualisation is a vital part of making skills development relevant to a sector, it can hinder their visibility to employers and makes overall progress difficult to chart.
- ▶ There is strong interdependence between the generic skills, and wherever possible they need to be developed simultaneously to equip employees with a broader skills base. Training for generic skills needs to dovetail into a comprehensive set of learning units which make best use of company resources and equip the employee with the appropriate skill base. The alternative, which is to address the skills in isolation from one another, risks the prioritisation of one skill set over others, thereby potentially limiting the pool of multi-functional workers which are critical to today's businesses.
- ▶ Meeting the demand for generic skills might be facilitated more effectively through a centralised body working in partnership with sector organisations. If an integration of sector and cross-sector approaches could be established, then all would profit from shared-learning, consolidated resources and a comprehensive understanding of the issues at hand.
- ▶ Further assessment of the impact of generic skills in the workplace, their contribution to productivity and how they affect technical skills delivery will give a clearer understanding of their role in the economy.

### Optimising generic skills training

- ▶ Likely changes in the economic environment need to be closely monitored in regards to identifying potential triggers that will affect future generic skills demand.
- ▶ The growth in uptake for generic skills training signals the need for continued, if not increased, resources to be made available for development programmes.
- ▶ Generic skills deficiencies are often characterised by low commercial awareness, inability to adapt to increasingly complex work processes and generally poor performance levels. Maximum opportunities need to be provided to prepare young people for the business environment and to encourage experienced workers to develop a willingness for life-long learning.

- ▶ The lack of generic skills is generally agreed to be the cause of many skills gaps, and prevents not only mobility of the workforce and career progression, but also the growth of business. For most sectors and organisations, the need is for dual action: to develop technical skills, whilst optimising their application through improved generic skills.
- ▶ To ensure maximum investment from employers, and uptake from employees, generic skills development needs to accommodate both formal and informal approaches to learning. Programmes need to be highly practical and demonstrate direct relevance to the workplace scenario. Whilst the fundamental constituents (at all ability levels) of generic skills need to be unequivocally agreed upon and explicitly laid out, the way in which they are learnt and processed needs to remain as flexible and creative as possible.

### Driving forward generic skills development

- ▶ Most of the data concerning generic skills is broad quantitative information. There is a need for research to further explore the perception of generic skills amongst employees and employers.
- ▶ Employer needs should be at the heart of identifying and defining transferable skills, with the skills agenda being employer-driven, but Government co-ordinated. Two-way dialogue between the market place and policy-makers is critical to ensure employer support. Convergence between government and business stakeholder understanding of transferable skills will be an important aspect in creating a momentum for their development. Initiatives aimed at encouraging the development of generic skills amongst the workforce will be that much more successful if they are seen to directly correlate to workplace agendas.
- ▶ The types of skills encompassed by the 'generic' label do not relate to the work place alone. Many of them also impact self-governance, social behaviour and integration, day-to-day life skills etc. An assessment of these broader benefits to society, employers and the economy would offer a more comprehensive insight into the true value of generic skills.

## 1. Introduction

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- 1.1 This report, prepared by the Council for Administration (CfA), provides a comprehensive analysis of generic skills demand and supply and factors influencing generic skill trends. The report is based on an assessment of the first series of Sector Skills Dialogues and a review of existing national research conducted on behalf of the National Skills Task Force.
- 1.2 The purpose of the report is to improve the quality of generic skills information and provide an effective voice for employers and major stakeholders, such as Sector Skills Councils (SSCs), Learning and Skills Councils (LSCs) and Regional Development Agencies (RDAs) in the planning and implementation of generic skills provision. This report can be used to aid strategic planning and contribute to Sector Workforce Development Plans underpinning future actions and influencing the nature of relationships with National Cross Sector Organisations such as the CfA.
- 1.3 In order to extend the original Sector Skills Dialogue findings this report brings together research and evidence from the dialogue reports with national research including, the new Skills Task Force Employer's Skills Survey (ESS 2001), Skills in England 2001 and Work Skills in Britain 1986-2001.
- 1.4 Given the extensive consultations already carried out through the dialogue process and the conclusions reached about the demand and supply of sector skills this report builds on this existing research and skills information, rather than undertaking any new research. The structure of the report reflects a review of the generic skill issues across the Sector Skills Dialogues, using desk research and qualitative techniques including interviews with major stakeholders.
- 1.5 Comments on this assessment of generic skills were invited from each of the Sector Skills Dialogues and principal bodies with responsibility for the development of cross sector skills.
- 1.6 The introductory chapter sets out the coverage and context of generic skills. Discussion of the evidence on trends in generic skills demand is presented in Chapter 2, the supply and availability of generic skills in Chapter 3, and on the main demand-supply imbalances in Chapter 4.

### Scope and main focus

- 1.7 Generic skills are represented in all sectors of the economy and are used in many and diverse ways. All individuals need a platform of generic skills (i.e. transferable skills that can be used across occupational groups) on which to build a range of more technical and job specific skills.

- 1.8 The National Curriculum and National Occupational Standards draw on a number of various definitions and terminologies to characterise generic skills. Generic skills are seen to encompass the following:

Key skills	Tacit skills	Coping skills
Innate skills	Softer skills	Behavioural skills
Personal qualities	Foundation learning	Non-vocational skills
Core skills	Interpersonal skills	Cognitive skills
New skills	Social skills	Conceptual skills
Citizenship skills	Life skills	

These terms all reflect the numerous dimensions inherent in generic skills and reflect the broad nature of non-technical skills needs. With regards to this paper, the definition for generic skills is based on that provided by the National Skills Task Force (2000), which focuses on generic skills in terms of key skills (equivalent to core skills in Scotland):

*“those skills which can be used across large numbers of different occupations. They include what are defined as key skills – communication, problem solving, team working, IT skills, application of number and an ability to improve personal learning and performance. They also include reasoning skills, scheduling work and diagnosing work problems, work process management skills, visualising output, working backwards for forward planning purposes and sequencing operations”.*

- 1.9 These skill needs are currently met by a range of generic (key skills) and cross sector qualifications (e.g. cross sector national occupational qualifications) that are developed and managed by a number of principal bodies.
- 1.10 Key skills are a range of essential generic skills that underpin success in education, employment, lifelong learning and personal development. The key skills of communication, application of number, information technology, team working, improving own learning and performance and problem solving were established by the Qualifications and Curriculum Authority (QCA) and have been designed for use in a wide range of settings - schools, colleges, training, higher education and employment.
- 1.11 A range of cross sector National Occupational Standards (NOS) and NVQs also cover generic skills. These cross sector qualifications relate to occupations (e.g. administrator, manager) that are present across most sectors of the economy. Within these cross sector qualifications, generic skills are covered by particular units (e.g. administration, finance, management) which can be used across a wide range of occupations. The following table outlines the principal bodies with responsibility for the development of cross sector NOS and NVQs.

**Table 1.1 Principal bodies with responsibility for cross sector NOS and NVQs**

Principal body	Scope
Accountancy NTO	Accountancy
Council for Administration	Administration
Employment NTO	Training and Development, Personnel, Health and Safety
E-Skills NTO	Information Technology (IT)
Institute of Customer Service	Customer Services
Institute of Management	Management
Languages NTO	Languages
Small Firms Enterprise Development Initiative	Small Firms

- 1.12 In addition, there are a large number of sector bodies, all of which have an interest and responsibility for generic skills in their sector. In addressing the generic skill needs of a sector many of these bodies implement and promote key skills (for example, through apprenticeship frameworks) and import and tailor units from cross sector NOS (through sector specific NVQs).
- 1.13 This approach to the development and supply of generic qualifications aims to encourage transferability promoting mobility in a changing labour market.
- 1.14 Before we start to discuss the demand and supply of generic skills, we need a working definition of what they are and what distinguishes them from other skills. Employer survey evidence confirms that employers continue to seek the skills represented by the six key skills (i.e. communication, problem solving, team working, IT, applications of number and an ability to improve personal learning and performance). Other additional skills and attitudes sought by employers include planning and management skills. Therefore, in assessing generic skills needs, organisation of work and management have been included beside the original six key skills.
- 1.15 Table 1.2 draws together the wide range of generic skills discussed in the Sector Skills Dialogues and national reports into eight categories. The description of each generic skill reflects the different skill sets described across the range of research reviewed to compile this report.

**Table 1.2 Generic skills derived from existing research**

Generic skills	Description
Communication	verbal, written, languages, client communication e.g. selling, marketing, customer handling relations, relationship building, professional communication e.g. influencing/negotiation skills
Improving own Learning and Performance	independent thinking, self-reliance, self-development, personal effectiveness, willingness to learn, professionalism
Information Technology	Keyboarding, computing, information technology skills e.g. word processing, spreadsheets, data handling, email, internet
Management	people, performance, resource, change, project, contract and risk management
Numeracy	application of number, calculating
Organisation of Work	administrating, planning, forward thinking, scheduling, work process e.g. work allocation, organisation, target setting, time management, efficiency
Problem Solving	innovation, taking responsibility, flexibility, adaptability, ability to handle change/pressure, analytical thinking, judgement /critical thinking, decision making
Team-working	ability to work with others, horizontal communication e.g. people co-ordination, working collaboratively, motivational working

- 1.16 Although not all explicitly listed in the table above, other skills which are often considered to be related to the generic skills set include: entrepreneurial ability; organisational understanding, commercial awareness, social aptitude, as well as personal attributes (or softer skills as they are sometimes also termed). There exists some ambiguity concerning the line dividing generic skills and personal attributes; there exists overlap in regards to areas such as leadership, initiative, judgement, flexibility etc. - qualities which can usually be enhanced in some way through training. However, other criteria such as personality 'fit', propensity to learning, dedication or motivation are more innate and fall out of the 'generic' bracket.

*'Personal attributes are more difficult to define and many have argued they are not skills at all (Keep & Mayhew, 1999). They relate to the characteristics that employers say they most often look for in an applicant when recruiting. They are frequently defined in terms of motivation, judgement, leadership and initiative. Some can be taught or learned (e.g. leadership) while others are more immutable, though not to the extent that they cannot be improved through some form of learning. Personal attributes encapsulate the desire of employers for employees who are flexible, adaptable, and able to cope with change and uncertainty. Employers' greater use of aptitude testing and assessment centres testify to the increasing importance of these attributes in developing a workforce that is well suited to the needs of a high growth economy.'*

- 1.17 In addition, there exist a range of skills that, rather than being skills in their own right, actually result from the culmination of applying a number of generic skills in combination. These are manifested in, and measured by, an individual's ability to cope with task discretion, task variety and with the complexity and autonomy of a given work environment. They essentially draw on a competence to operate in more than one dimension at any given time, commonly referred to as multi-skilling or multi-functioning.
- 1.18 Lastly, it is important to note that generic skills are particularly characterised by life-long learning, since many of them can only be developed through personal development and maturity. Generic skills relate to attitudinal and behavioural competences, the mastery of which, by their very nature, is an endless process.
- 1.19 Together, all the above skills determine an individual's overall employability. They demand on-going learning and the ability to access a combination of skills for any one task or job function. The required skills development focuses on building a pool of inter-related and inter-dependent abilities such as responsiveness, creativity, independence of thought, flexibility and multi-tasking. Employability is increasingly being used to describe the ease with which an individual is able to obtain and keep a job within an active labour market. For the National Skills Taskforce, an individual's employability relates to the breadth and depth of their generic and vocational skills, but not their job-specific skills. Hillage and Pollard<sup>2</sup> classify employability skills or assets in the following way:
- a) baseline assets: such as basic skills and essential personal attributes (for example, reliability and integrity);
  - b) intermediate assets: such as occupation-specific skills (at all levels), generic or key skills (such as communication or problem solving) and key personal attributes (such as motivation and initiative);
  - c) high-level assets: involving skills that help contribute to organisational performance (such as team working and self-management).
- 1.20 It should be emphasised that the breadth and diversity of generic skills coupled with the number of principal bodies with responsibility for their development requires a co-ordinated approach for generic skills advancement across different sectors.

## Economic and Business Trends

### Historical perspective

- 1.21 The contrast between the newer technology based industries, and older traditional industries is an important one. Over the past two to three decades there has been major change in the structure of employment across all developed economies.
- ◉ The demise of many major areas of employment in primary and secondary industries, including agriculture, coal mining and substantial parts of manufacturing.
  - ◉ Major increases in employment in tertiary industries, especially those sectors involved in processing and handling information, and those providing services to both consumers and businesses. Personal services, associated with tourism, leisure & the media, and health & education services have been especially important for consumers, while for businesses, financial and accountancy services as well as research design and development activities have been key areas of growth.<sup>3</sup>

2 (J.Hillage & E.Pollard) 'Employability: Developing a framework for policy analysis' - Labour Market Trends, [DfEE] 1999

3 Management Skills, Research Paper 3 Johnson.S., Middlesex University Business School and Winterton.J. [DfEE] 1999

- 1.22 It is important to point out that although some industries are declining, there is still a replacement demand that needs to be met to compensate for losses to the work force, through retirement etc. New recruits, especially in less skilled occupations, to some of the more traditional industries (such as manufacturing and construction) will however, be faced with a greater demand for generic skills than previously required. The ability to combine technical skills with effective interpersonal skills to work with others, plan, self-manage and problem-solve is seen as significant.

### Shifts in occupational employment

- 1.23 Expected changes in occupational structure suggest that, between 1999 and 2010, there will be modest but significant increases in most skill requirements, apart from manual skills. Moreover, an analysis of changing skill needs within occupations suggests a strong increase in the need for many generic skills. As a consequence, the demand for most generic skills is expected to intensify over the next decade.
- 1.24 The shift from industrial and manufacturing occupations to a service and communications orientated economy changes the emphasis on types of skill needs. A rising employment level and share for higher skilled white collar occupations such as managers, professionals and associate professionals is precipitating an upward drift in skills levels with emphasis on opportunities for the 'skill-rich'. Conversely, a declining employment level and share for most blue collar/manual occupations has brought with it a general marginalisation of the unskilled.
- 1.25 The evolution to service based industries has the following implications:
- ▶ Shift from manual to cognitive skills.
  - ▶ Changing profile of intermediate level occupations.
  - ▶ Growth in professional jobs.
  - ▶ Employment opportunities remain for low skilled workers but are declining for unskilled workers.

### Principal drivers of change

- 1.26 Major changes in external conditions that are driving change in employment and increasing the need for generic skill requirements include:
- ▶ **Globalisation of markets and the pressures of international competition:** The streamlining of organisations to remain competitive has tended to lead to the demise of traditional hierarchies and in many sectors management is now devolved downwards. This in turn requires increased management skills across the occupational groupings.
  - ▶ **Drive for productivity growth:** Working in an increasing autonomous environment, emphasis is on an individual's ability to work effectively and maximise output. This requires higher levels of problem solving abilities and the willingness to take responsibility for improving one's own learning and performance.

- ▶ **Specialisation and sub-contracting:** Several industries are now dominated by large companies outsourcing to small or manager-owned enterprises. Self-employment and the use of contractors and consultants puts pressure on effective organisation of work and team working skills.
- ▶ **Steep increase in the use of technology across all occupations:** The widespread use of IT now means that at the very least, basic computer skills and an adaptability to technologically based tasks is a criteria for employability in most occupations.
- ▶ **Trends in consumer demand on a UK and global scale:** Communication skills are becoming a priority for most employers, particularly in relation to improving customer service and trying to meet the pressures of competition and increasingly sophisticated consumers.

## Organisational restructuring

1.27 With the increase in competition and technological advances, businesses are significantly changing the way they operate in order to optimise productivity with a 'leaner' workforce. Traditional forms of organisational structure are being replaced with more flexible work practices. Key observable developments include:

- ▶ Flatter organisational structures.
- ▶ Increased emphasis on autonomy and individual responsibility.
- ▶ Sophistication of products, services and systems.
- ▶ More job flexibility and job rotation.
- ▶ Team-orientated environments.
- ▶ Increased interface with customers.

1.28 Workers need to be more adaptable to change, able to work independently, manage a range of tasks, be responsible for their own performance levels and work effectively in teams. HR professionals are said to now regard social skills as being as important as more easily quantifiable skills.<sup>4</sup>

1.29 The widespread introduction of IT has precipitated many of the organisational changes taking place in the UK labour force. Formal and informal team working, just-in-time production, total quality management, and other flexible working practices are just some of these, which typically devolve greater responsibility for decision making to shop floor and customer facing workers.<sup>5</sup>

<sup>4</sup> Market Value of Generic Skills, Research Paper 8, Green. F, University of Kent, [DfEE] 1999

<sup>5</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

## Need for flexibility and multi-tasking

- 1.30 The ability to adapt to changing labour market needs is proving to be a crucial element of employability. Those with the broadest range of generic and technical skills will be best placed to respond to employment requirements and enjoy economic mobility.
- 1.31 Skill levels can affect productivity both directly and indirectly. Direct effects include enabling employees to meet higher standards of accuracy, quality and customer care. They also include enabling employees to participate effectively in more efficient forms of work organisation requiring greater initiative, communication, self-reliance and problem-solving abilities. The indirect effects of skills include encouraging and enabling more effective capital investment and more rapid technological progress.<sup>6</sup> Multi-functional skills sets allow the most effective use of labour.<sup>7</sup>

*Example 1.1 'Urgent action is needed in cross-functional skilling. In part to ensure that employees have a broader picture of the business, and in part to ensure that the efficiencies and changes introduced by new technologies are implemented consistently and completely.' [Skills foresight: Road Haulage and Distribution Industry 2000]*

- 1.32 New working practices have dispersed responsibility for business decisions down the organisational structure greatly increasing the number of employees expected to demonstrate managerial abilities. Skills such as delegation, resource planning, production supervision and problem solving are now required across many occupations, hitherto untouched by such responsibilities.
- 1.33 As individuals are given broader work remits and expected to handle a range of duties simultaneously, skills associated with effectively managing 'task variety' also becoming increasingly critical. This is reflected in the popularity of "multi-skilling" as a major objective of training and other human resource practices.<sup>8</sup>

## Commercial awareness

- 1.34 In several sectors employers cite a sound grasp of the commercial environment and an understanding as to the impact of individual actions on overall business performance as being in high demand. Although not 'generic' as such, it does incorporate elements such as the ability to work with others, decision making, analytical thinking and effective planning. Therefore, commercial awareness is one of the drivers effecting the need for cognitive capabilities and heightens the need for employees to be able to look at issues beyond the narrow scope of their own job-specific tasks.

*Example 1.2 'In the telecommunications sector, a move away from 'pure' manufacturing to supply chain management and systems integration, increased software and services content is raising the need for greater business and commercial awareness and knowledge.' [Hendry et al, 2000]*

- 1.35 The need for commercial awareness and general business knowledge is particularly apparent amongst young workers, with many employers complaining specifically about their lack of work readiness and ability to adjust effectively to a changing working environment.

<sup>6</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

<sup>7</sup> Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

<sup>8</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

## 2. Demand for Generic Skills

### Importance of generic skills

- 2.1 Across the sectors, attention has been drawn in recent years to a set of generic skills that are rising in importance in the modern working environment. Changes in the new way businesses are structured and function put greater demands on productivity levels. Many jobs are more technical and complex than in the past, and demand greater knowledge and abilities. Not only are the types of skills required changing, but so too is skill intensity and the need for a combination of skills to meet broadening job scopes. Although employers, or employees for that matter, may not always refer to the term 'generic skills', there is general agreement that the ability to demonstrate transferable skills is of increasing importance. They may regard this skill set as generic skills, key or core skills, or even just as 'business issues' but there remains a consensus that the need for cognitive ability in most jobs exists at some level.

*Example 2.1 'Technology and changes in methods and organisation also result in a need for new skills. Operating in a performance-driven culture and a climate of uncertainty requires a broader range of skills than simply technical skills. These include team working, flexibility, communication skills and problem solving. The industry is thus similar to others where jobs have broadened and more is now expected of staff.' [Employers Skill Survey: Case Study Banking, Finance and Insurance Sector 2000]*

- 2.2 The impact of re-structuring in global business has affected all sectors, bringing about major changes at all levels: financial, industrial, institutional, technological and organisational.<sup>1</sup> With new types of work practices being introduced across most occupational groupings, the nature of employment has changed in many organisations and generic skills are becoming increasingly vital to enable employees to adapt to new responsibilities and tasks. With management now being dispersed through flatter organisational structures, many workers are being required to take ownership for job performance, work planning and skill development. Job roles are now seen in the context of a team function and the ability to work effectively with others and in closer proximity to the customer means that for many, technical ability has been subsumed into a portfolio of broader skill needs.
- 2.3 It is important that skill development addresses the need for a balance of vocational, technical and generic skills. Employees who can most effectively dovetail a range of skill types will be best positioned to meet changing labour conditions.
- 2.4 To remain competitively viable, many companies are now forced to continuously review the management of product development, work processes and people resources. This may involve a number of strategies, including operating in multiple markets, improving service delivery, responding more rapidly to consumer trends, streamlining the management chain and adopting more flexible work practices. In order to minimise cost and delays in the introduction of such changes, employers recognise the necessity of upskilling, or re-skilling the workforce. Those employees that are unable to demonstrate the generic skills needed to adapt and apply technical skills in a new and changing context are likely to hinder profitability.

- 2.5 There exists a distinct relationship between generic skills demand and small businesses and the self-employed. Many such enterprises are not in a position to operate according to some of the more advanced resource practices of their larger counterparts. Job roles, skill sets and career progression are not always as clearly defined; whilst there may be less of a tendency to specialise, by contrast the need to multi-skill can be of particular importance. Often the need to meet statutory requirements takes priority, with a focus on developing skills which are directly related to the immediate, and often technical, needs of the company.
- 2.6 The demand for skills needs, including those of generic skills, can be difficult to ascertain, since the competitiveness between, and vulnerability of, small businesses can mean they are reluctant to make company information available or share best practice. There is often a short term view taken on skills assessment. It is the larger companies, with more sophisticated HR systems in place, which are more likely to identify and measure generic skills and see them as a business need in their own right.
- 2.7 While more firms are adopting today's 'new' working practices, as is so often the case, small firms are either less likely or less able to take them up. Yet their potential to benefit from such approaches is as great or greater than for larger firms. The 'win-win' of small businesses adopting practices which both enhance their competitiveness and increase workforce learning is an opportunity which should be seized by the new Small Business Service.<sup>2</sup>
- 2.8 The importance of skills across the whole occupational spectrum is increasing, and occupations which require higher skill levels are growing faster than those which require lower skill levels. The need for sector-specific technical skills is growing in tandem with the increasing need for more transferable, generic skills. Robinson (1997), using data from the Skill Needs in Britain surveys, points out that gaps in a range of generic and IT skills are even more significant than basic skills gaps within the current workforce.<sup>3</sup>

*Example 2.2 'Just wanting a job is no longer enough. Many of the vocational and generic skills needed by these employers require people to think and use their brain. The often used quote about it being no longer appropriate for employees to leave their brain at the factory gate was referred to by a number of our respondents.'*  
*[Employers Skill Survey: Case Study Food Manufacturing Sector 2000]*

2.9 There has been a significant rise in employers' requirements for qualifications. The proportion of degree-level jobs rose from 10 percent in 1986 to 17 percent in 2001 and it is likely that over the next decade, around 8 in 10 of all new jobs may well be at NVQ levels 3 or 4 and above<sup>4</sup>. To safeguard employment levels, emphasis is now on upgrading the workforce, to develop 'well-rounded individuals' with generic skills on which to build. This will be necessary in order to facilitate the following aspects of the work force:

- ▶ overall employability;
- ▶ mobility between sectors;
- ▶ transferability and flexibility;
- ▶ increased autonomy;
- ▶ optimising productivity;
- ▶ lifelong learning;
- ▶ cultural change in the work place.

2.10 The Government and employers are acutely aware of the need for up-skilling and re-skilling employees with more transferable generic skills to adapt to the evolving workplace. As an increasing proportion of employees are expected to contribute to business decisions, there is a requirement to demonstrate skills that would previously have been the domain of management e.g. goal setting, delegation, problem solving, negotiation, team practices, conflict resolution, excellence of customer service and production judgements.<sup>5</sup>

*Example 2.3 "The devolution of responsibility in organisations, especially when combined with a business strategy of enhanced quality, has also increased the need for generic skills in point of service staff." [Employers Skill Survey: Case Study Hospitality Sector 2000]*

2.11 Studies comparing UK firms with similar firms in Continental Europe have found that the superior productivity of Continental firms was related to higher skill levels among their workforces. These greater levels of skill-enabled shop floor workers perform a wider range of tasks, allowing faster introduction of new technologies and resulting in less downtime - all factors which contributed directly to the productivity gap.

2.12 The Government views attention to the improvement of generic skills as one of the principal means by which to upskill the workforce and achieve the following<sup>6</sup>:

- ▶ Bringing the low skilled and unskilled unemployed back into the active labour market on a sustainable basis.
- ▶ Adding value to employees who already have strong technical skills by ensuring they also have the transferable skills essential for the creativity, initiative and adaptability of broader work remits.
- ▶ Underpinning all other skills by developing the ability to apply sector specific expertise and mechanical skills to address real workplace challenges i.e. to increase productivity by optimising what (task-orientated) is done by addressing how (process-orientated) things are done.

4 Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

5 Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

6 Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000 and Skills and Performance: An econometric analysis of employers skill survey 1999 Bosworth. D. et al., IER, [DfES] 2001

## Value of generic skills

2.13 Generic skills which contribute to an individual's ability to adapt, learn, think independently, make sound decisions and cope with technological advancements are increasingly recognized, even if not always formally, in the workplace. For the most part generic skills are seen as part of a suite of skills which in combination optimise an individual's productivity. This draws together technical and generic skills with personal attributes which affect how those skills are applied. There is a view that the use of technical skills in isolation is of increasingly limited value; whereas generic skills are seen to bring added value to the delivery of technical skills.

*Example 2.4 "In telecom services many employers confronted with high levels of uncertainty about future market trends see a need to develop 'hybrid' skills that combine technical expertise, market knowledge, business management skills and the ability to 'get to know' and understand business customers' telecommunications needs." [Skills For All: Research Report From The National Skills Taskforce 2000]*

2.14 The possession of a range of generic skills attracts a pay premium, although earnings linked with generic skills have not shown significant change between 1997 and 2001. Whilst there exist inherent difficulties in measuring the value of generic skills because so many of them are strongly interlinked, the following generic skills are most likely to show a pay premium:

- ▶ The ability to use computers continues to be highly valued. Wage returns to simple IT skills - for example, using a computer to input data and print out invoices – can merit an estimated 6.5% pay premium for women and 4% for men who possess this skill compared to those who do not (Green, 1999). Computer usage at a 'moderate' level, for example to analyse spreadsheets, typically demands an average wage premium of around 21% for women and 13% for men (in addition to any differences in education requirements and other factors).<sup>7</sup>
- ▶ It is also clear that Numerical Skills do not hold much value in the market unless they are linked to computer usage; jobs that use numerical skills but do not involve computers are not especially highly rewarded.<sup>8</sup>
- ▶ Other well rewarded skills include high-level communication skills (such as making presentations or writing long reports), and planning skills.

2.15 By contrast, neither horizontal communication skills or problem-solving skills, are found to have a separate association with pay, after controlling for other skills. This finding suggests that, although these skills may be important aspects of jobs, the rewards associated with them are fully captured by the other indicators of skill.<sup>9</sup> Or possibly, this is because these are less visible skills which fail to be measured by employers.

2.16 Many generic skills will be interdependent, with highly skilled individuals being good in several areas. Hence, it is impossible to draw any sound conclusions about the market for each of these skills.<sup>10</sup>

7 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

8 Market Value of Generic Skills, Research Paper 8, Green.F, University of Kent, [DfEE] 1999

9 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

10 Market Value of Generic Skills, Research Paper 8, Green.F, University of Kent, [DfEE] 1999

## Current demand for generic skills

2.17 This section examines the demand for each of the key categories of generic skills: IT; communication; numeracy; team working; improving own learning and performance; problem solving; organisation of work and management. Whilst nearly all the National and Sector Dialogue Reports refer to these skills to some degree, the information available on each varies widely. This is reflected below, with most information relating to IT, Communication, Management and Improving own Learning and Performance. Also looked at in this section are the implications of industry, occupation, region, gender and employment status on generic skill demand.

### IT skills

- 2.18. The introduction of IT is now so widespread across sectors and occupations that the ability to manage IT is now regarded as a generic skill and a prerequisite for the majority of occupations. Currently usage has been expanding at a rate of approximately 2% points every year. Even more workers are affected by computers if we include those who work in workplaces that use computers extensively but do not actually use one directly. Although there are regional, occupational and industrial differences, the diffusion of new technology is pervasive throughout the economy.<sup>11</sup>
- 2.19 Compared to other countries, UK companies are generally more advanced in their use of ICT, especially networking and communications technologies (DTI, 2000). 35% of UK businesses have more than 75% of their employees using PCs; over 70% of businesses use external e-mail; and over 86% use mobile phones. The whole process of trade is being changed radically by the use of the Internet; by 1999, 50% of all UK companies had an Internet presence and 10% offered products online.<sup>12</sup>
- 2.20 The level of IT skills needed varies, and it is important to make the distinction between levels of usage. Although IT skills can often be associated with PC usage and office software packages, IT can relate to a significantly broader range of tasks which incorporate a looser definition of technology. For example, many ticket inspectors are now expected not only to check tickets, but also to be able to operate equipment to issue tickets and process payment on board trains. At the most elementary level, IT skills relate to tasks such as using a keyboard, data inputting, responding to a sequence of on-screen instructions or using a till.

*Example 2.5 'Computers are becoming increasingly significant in cargo operations as ports seek to reduce the time to load and unload ships. Some container terminals now operate entirely without labour and in many other ports hand-held computers record cargo quantity and quality. New IT skills are needed by employees across the industry.' [Skills Dialogues 3: An Assessment of Skill Needs in Transport 2001]*

<sup>11</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

<sup>12</sup> (Tackey et al., (2000) based on Spectrum Strategy Consultants, 1999) Skills Dialogues 5: An Assessment of Skill Needs in Information and Communication Technology The Institute for Employment Studies, [DfES] 2001

2.21 At an intermediate level, there is a requirement for using email and the internet, word-processing, the ability to use spreadsheets and familiarity with software packages. For many employees in the media industry for instance, this type of IT capability is assumed as essential. Both these levels, basic and intermediate, of IT usage are considered as generic skills. Beyond this, more sophisticated uses of IT are usually occupation specific and are not addressed in this report as they are not regarded as generic.

*Example 2.6 'The recent 'Skill Check' programme run by Lantra confirms the demand for better ICT skills. To date 67% of respondents have stated that their ICT skills require improvement. Learning e-mail and e-business skills was considered necessary by 46% of respondents, followed closely by using the internet (44%), using a computer for business accounts (43%) and the use of spreadsheets and databases in the business (43%) and (42%) respectively.'* [Skills Dialogues 4: An Assessment of Skill Needs in the Land-based Industries 2001]

2.22 The role of IT is of particular importance in the 'Finance' sector and 'Real Estate and Business Services' sector. Growth over time for the importance of IT capabilities has been most visible in 'Construction', 'Transport and Storage' and 'Health and Social Work'.

**Table 2.1 Percentage reporting use of PC or other types of computerised equipment 'essential' in their job by industry, 1997-2001<sup>13</sup>**

Industry*	1997	2001
Manufacturing	33.1	35.5
Construction	11.4	19.0
Wholesale & Retail	33.4	32.3
Hotels & Restaurants	13.8	16.6
Transport & Storage	25.6	44.5
Finance	70.1	76.3
Real Estate & Business Services	47.5	64.0
Public Administration	42.5	54.4
Education	25.0	37.4
Health & Social Work	18.1	34.4
Personal Services	22.8	31.8

\*Note: Industries are classified by SIC92; only those with sample size above 100 are shown. Figures are employee based

2.23 Over the last four years, computing has become an increasingly important element in the workplace. Over 70% of people in employment now make use of some type of automated or computerised equipment and 40% see it as essential to their work.<sup>14</sup>

2.24 As seen in Table 2.2 below, the use of computerised equipment across the occupational groupings varies substantially. Computers are most important in 'Administrative and Secretarial' occupations, and also significant usage is seen in the 'Professional', 'Managerial', and 'Associate Professional' occupations. However, levels of IT use are of considerably less significance in 'Plant and Machine Operative', 'Skilled Trades', 'Personal Service' and 'Elementary' occupations.

**Table 2.2 Percentage reporting use of PC or other types of computerised equipment 'essential' in their job by occupation, 1997-2001<sup>15</sup>**

Occupation*	1997	2001
Managers	37.8	52.6
Professionals	39.1	53.3
Associate Professionals	41.9	49.1
Administrative & Secretarial	57.0	75.1
Skilled Trades	12.5	14.3
Personal Services	7.3	10.8
Sales	43.7	39.6
Plant & Machine Operatives	14.8	15.0
Elementary	11.1	10.5

\*Note: Occupations are classified by SOC2000 Major Groups.

2.25 For those individuals who consider computerised equipment as essential or very important to their jobs, 24% are of the opinion that learning further computing skills would improve job performance.<sup>16</sup> It would seem that the need for developing IT skills is continuing to grow in order to meet workplace demands.

2.26 The application of IT in the workplace brings with it organisational change, new work practices, and subsequently, the need for a range of skills which facilitate the optimisation of such technology. Such skills that need to accompany an increasingly IT-orientated workplace include problem-solving, the ability to interpret information and a greater overall awareness of machinery, production processes and systems management. Employers report that individuals with good IT skills coupled with high levels of business awareness and generic skills are at a premium.

*Example 2.7 'Where before emphasis would have been on technical driving skills, now there are additional requirements, and pressures, to be able to operate in a significantly more IT operated environment. Drivers will need to be proficient and confident in the use of new on-board systems: "more IT aware", "more technically competent".' [Skills Foresight for the Road Haulage and Distribution Industry 2000]*

14 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002  
 15 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002  
 16 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

## Communication Skills

2.27 The changes in work practices that have brought about a greater need for team working, de-layering of management and increased customer service, have meant that there is a strong focus on interpersonal and communication skills at all levels. This is particularly noticeable in occupations where up until recently these skills have been of low priority, e.g. at craft level in manufacturing. There is growing need for these skills on the shop floor, as workers are organised more into cells or teams and with a greater range of workers coming into contact with clients.<sup>17</sup>

*Example 2.8 'The most pressing skills needs for carers often relate to communication skills such as: listening to clients; reflecting back clients thoughts, feelings etc.; understanding of emotions as underlying what we do and think and the need to cultivate the practical stance of 'being reasonable' in particular working contexts.'* [Employers Skill Survey: Case Study Health and Social Care 2000]

2.28 Increased competition on a global scale has also highlighted the strong need for communication skills in the arena of sales and marketing. Understanding of, and interaction with, the consumer is critical in building the brand and market presence for many organisations. Communication is increasingly two-way, with feed-back from the end-user increasingly sought for product development and marketing strategies.

2.29 The need for communication skills is perhaps most associated in many employers' minds with the ability to develop an improved level of customer relations. Consumer expectations of service and care are ever-increasing and many organisations are beginning to realise the competitive advantage in having a workforce that provides superior customer care and building customer focus into the company structure. For a growing proportion of employees, understanding the customer's needs and business requirements is as important as understanding their own. In order to win and keep customers, there is distinct gain in equipping employees with the ability to effectively sell, relationship build, influence and negotiate. This also brings with it the need for enhanced problem-solving and management skills.

*Example 2.9 'For many retail banks, call centres are now the only point of contact with customers. With the recent tide of mergers, fierce competition from on-line banking and the increasing ease in switching providers, the level of service offered over the telephone is becoming critical.'* [Skills for all: Research Report from the National Skills Task Force 2000]

## Management skills

2.30 As an increasing number of UK companies look for increased productivity through re-organisation of the workplace, those with management responsibilities come under increasing pressures and scrutiny. The nature and extent of management skills now required at work is impacting a wide range of job roles. Although much commentary on management skills focuses on those working within a 'Manager' occupation, this can omit the importance of occupations which despite not being classified as 'Manager', all the same often require the ability to manage as part of the job scope. In the 2001 ESS, only half (52%) of those claiming managerial duties were 'managers'.<sup>18</sup> Therefore, the discussion below aims to incorporate all those that are expected to demonstrate managerial abilities but may not be classed as managers.

<sup>17</sup> Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

<sup>18</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

*Example 2.10 'Changes in work practices have radically altered the mix of skills needed by first-line managers and supervisors. In manufacturing industries, production supervisors now need the ability to plan and communicate with customers as their responsibilities widen and they also need higher levels of technical understanding to liaise with maintenance staff (Steedman Mason and Wagner, 1991).*

2.31 Many of the challenges that have given rise to management skill needs stem from the rate and extent of changes occurring across the sectors. External developments that managers now face include:

- ▶ competitive pressures resulting from liberalisation, deregulation and privatisation;
- ▶ product markets which have become both more fragmented and global;
- ▶ technological transformations;
- ▶ restructuring of world markets and the growth of the small and medium size enterprise (SME) sector;
- ▶ organisational restructuring;
- ▶ changing patterns of work and the rise of female participation in the workforce.<sup>19</sup>

*Example 2.11 'The role of team leader has become of paramount importance, and now includes traditional management skills, such as project management, budgets, down time and people management. They are now required to show a range of skills considerably broader than simply having the technological knowledge and expertise to do the job.' [Skills Dialogues 2: An Assessment of Skill Needs in Engineering 2000]*

2.32 Demand for leadership qualities to cope with change management, strategic decisions and the uncertainties of modern business, combined with technical know-how and a willingness for continuous learning are now expected from those who manage at most levels. In workplaces with higher levels of employee involvement in decision-making, the ability to persuade colleagues is now much more important than the ability to organise and direct them.<sup>20</sup>

*Example 2.12 'Ongoing change in the industry will further increase the importance of management skills but it is also clear that supervisory and leadership skills are increasingly being recognised as pivotal in future competitive success.' [Skills Dialogues 7: An Assessment of Skill Needs in Food and Drink Manufacturing 2001]*

2.33 The management skill set is becoming increasingly broad and demanding, relying less on traditional hierarchies and more on an ability to adapt to rapidly developing environments and growing commercial pressures. Such skills include:

- ▶ flexibility;
- ▶ decisiveness;
- ▶ initiative/innovation;
- ▶ self-reliance;
- ▶ tenacity;
- ▶ entrepreneurship;
- ▶ forecasting and analysis;

<sup>19</sup> Management Skills, Research Paper 3 Johnson. S., Middlesex University Business School and Winterton. J. [DFEE] 1999 and (Johnson and Winterton 1999, Bosworth 1999 and Winterton et al 2000), Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DFES] 2001

<sup>20</sup> Skills for all: Research Report from the National Skills Task Force [DFEE] 2000

- ▶ cultural/international awareness;
- ▶ management of change;
- ▶ strategic management;
- ▶ facilitation skills.

2.34 Table 2.3 examines various management skills required by employees who have managerial or supervisory functions, and amongst self-employed respondents who employ others. The need to motivate staff is of key importance for over three quarters of those managing, especially for female management roles. Coaching and resource control is a skill needed by almost three quarters of managers/supervisors, a fact which demonstrates the broader range of skills now associated with management. However, strategic thinking is for the most part, the domain of managers, not supervisors, and is certainly not a focus for part-time female workers.

**Table 2.3 Generic management skills, 2001<sup>21</sup>**

	Coach Staff	Develop Staff Careers	Motivate Staff	Resource Control	Strategic Thinking
<b>Percentage for Whom Each Activity is 'Very Important' or 'Essential'</b>					
All*	71.9	55.3	84.3	71.3	37.8
<i>Male Employees</i>					
Managers	75.4	64.5	88.3	81.6	50.5
Supervisors	64.2	49.2	78.2	63.0	24.3
<i>Female Employees</i>					
Managers	80.4	66.3	90.1	76.5	42.8
Supervisors	73.3	51.5	87.6	63.7	23.0
<i>Female Full-time Employees</i>					
Managers	82.0	70.7	90.4	80.3	45.8
Supervisors	76.1	53.4	90.1	66.5	24.3
<i>Female Part-time Employees</i>					
Managers	71.2	40.7	88.1	54.2	25.4
Supervisors	65.9	46.5	81.1	56.2	19.8
Employees	71.8	56.4	85.1	70.3	33.9
Self-Employed	72.6	44.7	76.9	82.3	76.9

\*Note: The base for whom these questions were asked comprised 1,708 employees, of whom 700 were managers and 1008 supervisors, and 160 self-employed.

2.35 There also exists an interesting split between management requirements amongst those who are self-employed and those who are not. The development and motivation of employees is more often required for those in larger organisations, whereas strategic thinking and resource control is more important to the self-employed.

2.36 There also exists mounting pressure on senior management skills, which now often incorporate a wider ranging set of multi-skill abilities. They have broader spans of command and need to be better all-rounders imparting a strategic direction to their business units in order to cope with rapidly changing market places. The skills needed of senior managers have been defined by Kettley and Strebler (1997) as:

- ▶ Organisational skills and technical know-how required to manage operations, monitor performance and develop the business.
- ▶ Conceptual and cognitive skills needed to think strategically, analyse information, solve problems and make decisions.
- ▶ People skills, including those necessary to manage relationships with staff, colleagues and customers.
- ▶ Personal effectiveness skills required to self-manage in the role.<sup>22</sup>

2.37 Furthermore, there are significant management needs required by the numbers involved in either self-employment or small business management, which account for an estimated 4.5 million of the total managerial labour pool of near 6.75 million.<sup>23</sup> Industries dominated by small businesses include the land-based industries, media and new media (e.g. dot coms, web design etc), the motor industry and those areas with a high proportion of freelance consultants such as engineering or construction. As discussed above, skills such as strategic thinking, resource control as well as the ability to project and contract manage are of particular significance to smaller enterprises.

2.38 A small business is not simply a scaled down version of a large enterprise. There are a number of key distinctions between small and large organisations that have significant implications for management skills and management development issues:

- ▶ Only a very small minority of SMEs can be said to be 'team-managed' - the scope for specialisation within the SME management 'team' is very limited. The corollary of this is that SME owner/managers are likely to need to deal with a range of managerial issues, and cannot be expected to be specialists.
- ▶ Most SME owner/managers are heavily involved with the day-to-day activities of the business, as well as having overall managerial responsibility.
- ▶ By the very nature of their size, SMEs cannot offer a highly structured internal labour market, with the consequence that the prospects for the movement of supervisory or 'lower managerial' staff into senior management are limited in most cases.
- ▶ There exists no clear, structured or active external labour market for SME managers, to the extent that SMEs that wish to grow may find it difficult to recruit managerial staff (Wynarczyk et al, 1993).
- ▶ Until very recently, there existed no clear occupational standards and no national qualification framework for SME management.<sup>24</sup>

22 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

23 Management Skills, Research Paper 3 Johnson Middlesex University Business School and Winterton. J. [DfEE] 1999

24 Management Skills, Research Paper 3 Johnson Middlesex University Business School and Winterton. J. [DfEE] 1999

- 2.39 To increase flexibility and responsiveness, some organisations are devolving the management process downwards, placing greater responsibility on the individual and team leaders. This 'empowerment' process within organisations has in many cases reduced the need for 'middle management' and increased the need for generalist managers who understand the overall picture of business operations, 'aware of the totality of operations conducted by the organisation'.<sup>25</sup> Management roles are therefore no longer confined to just the 'Manager' occupational grouping, leading to an increasingly widespread need for conventional management-type skills at more junior levels previously exempt from such responsibilities.
- 2.40 There is a need for additional 'management capabilities' amongst all staff of companies moving into new product markets or looking to improve service quality, as for other generic skills. Many respondents of the ESS 1999 suggested that 'management' should become a seventh key skill, perhaps starting at Level 3, to recognise the extent to which management competencies are expected of a growing proportion of the workforce, even amongst those not directly supervising staff.<sup>26</sup>

*Example 2.13 'Similarly increased decentralisation in management practices in the hotel and catering sector, now mean there is a growing demand for chefs to have team leadership, communication, financial and other management skills (Rowley et al, 2000). [Skills for all: Research Report from the National Skills Task Force 2000]*

## Organisation of Work

- 2.41. The skills associated with the organisation of work, including such skills as administration, planning, multi-tasking, forward thinking, scheduling, task variety and work processes, underpin so many of the other generic skill areas that often it is not given adequate attention as an independent skill set. Consequently, there is limited data available to assess the demand for such skills. Although quantitative analysis is lacking on the subject, it would be reasonable to surmise that an individual's ability to effectively structure a given work load particularly impacts areas such as management, problem solving, and team working, as well as self-directed working. The inter-relationship between management and administration is particularly strong.
- 2.42 The need for planning and multi-skilling are the two areas most likely to be addressed in research to date.

*Example 2.14 'There will be a continued trend towards multi-skilling and workers will be required to work flexibly, as a result of technical and organisational changes, and reduced demarcation.... Overall, a range of such skills are likely to become increasingly important – verbal skills, numerical skills, planning skills and communication skills.'" [Skills in England 2001: Research Report 2001]*

- 2.43 As is demonstrated by data tables in sections below, planning skills are particularly strong amongst full-time female workers. Planning is especially important to the Education sector, with an increase expected in the Hotel and Restaurants and Transport and Storage industries. In terms of occupational groupings, Planning skills are most in demand amongst those working at Manager or Professional levels.

25 (Taylor et al., 1994) Management Skills, Research Paper 3 Johnson. S., Middlesex University Business School and Winterton. J. [DfEE] 1999

26 Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

2.44 A key component of work organisation is the ability to multi-skill, and reference is often made to the value of combining skills. However, when terms such as multi-skilling, multi-tasking, multi-functioning and hybrid skills are used interchangeably, it is not always clear as to whether these refer to:

- ▶ a combination of industry-specific skills e.g. combining traditional craft work with maintenance tasks previously undertaken by technicians;
- ▶ a combination of industry-specific skills with generic skills e.g. technical expertise and problem solving ability;
- ▶ a combination of different generic skills e.g. the need to be able to schedule work, to liaise with customers and work within a team environment.

It is worth noting that, regardless of whether reference is being made to technical, practical and/or generic skills, the ability to manage a range of tasks concurrently will draw on the skills associated with the organisation of work.

2.45 The ability to multi-task and organise work flexibly around changing work practices is one of the key drivers in the rise of generic skills needs in the labour force. The personal effectiveness with which an employee carries out allocated responsibilities is sure to affect not only their own productivity levels, but that of surrounding colleagues as well. Organisation of work is an important element in meeting the challenges of improving output by improving work processes.

*Example 2.15 'Occupational standards are intended to cover not just the ability to perform specific tasks, but wider skills such as managing unexpected contingencies or being effective within the job environment. There is a worry though, that training pays insufficient attention to the growing demand for a multi-skilled workforce.'* [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]

2.46 Multi-tasking is increasingly seen as a key emerging requirement; employees will need to be flexible and multi-skilled in order to deal with their employers' increasing demands. This will be true at both junior and senior levels. There exists a need for young and adaptable employees who can take rapid change in their stride.

### Improving own Learning and Development

2.47 'Today, the requirement is not for people to be very expert in one particular skill. Being an expert in learning is more important.' [Employers Skill Survey: Case Study Telecommunications Sector 2000]

2.48 Table 2.4 presents estimates of the prevalence of the requirement to learn and improve job performance, as perceived by jobholder. The large majority of men and women alike consider that improving their level of learning and development is a requirement of their job, based on both a personal opinion and employer expectation.

2.49 Again, the effect of part-time employment for females is seen as a differential in skill requirements, with over 10% more men and women in full time work expected to take responsibility for improving learning and performance compared to women in part time posts.

*Example 2.16 'All companies were providing training and were expecting employees to improve their existing skills as well as learn about new processes, ways of working and products as the need arose. Indeed, in continuous production operations... employees who were not prepared to learn were at a disadvantage.'* [Employers Skill Survey: Case Study Food Manufacturing Sector 2000]

**Table 2.4 Improving learning and performance by gender and by full-time/part-time status, 2001<sup>27</sup>**

	% whose employer expects them to take responsibility to find better ways of doing their job	% who agree or strongly agree that their job requires them to keep learning new things
All	75.8	81.3
Males	78.9	83.7
Females	72.3	78.4
Females Full-time Jobs	79.0	83.7
Females Part-time Jobs	62.1	70.6

2.50 In terms of occupational splits, the table below demonstrates a clear imbalance, with the demand for continued learning and performance improvement to lie largely with those in more skilled occupations. From 'Associate Professionals' upwards, 80% or more of employees see such requirements as relevant to them. However, in sharp contrast, only just over half of those in 'Elementary' levels view these skills as necessary.

38

**Table 2.5 Improving learning and performance by occupation, 2001<sup>28</sup>**

Occupation*	% whose employer expects them to take responsibility to find better ways of doing their job	% who agree or strongly agree that their job requires them to keep learning new things
Managers	93.5	90.6
Professionals	87.6	96.8
Associate Professionals	84.2	94.6
Administrative & Secretarial	67.0	78.4
Skilled Trades	79.7	81.3
Personal Service	70.0	83.8
Sales	63.8	73.8
Plant & Machine Operatives	68.1	64.8
Elementary	56.5	51.2

\* Note: Occupations are classified by SOC2000 Major Group.

27 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

28 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

## Team working skills

- 2.51 Underlying many of the new work practices in the UK is the need for effective team working, cutting across many of the more conventional organisational frameworks used in the past. A flexibly structured work force is seen as a key means to keeping costs to a minimum while increasing productivity, pooling resources and increasing responsiveness. The 1998 Workplace Employers Relations Survey found that 83% of managers stated that at least some employees in their largest occupational group worked in formal designated teams, and in 65% of workplaces most employees in the group worked in teams (Cully, 1999).<sup>29</sup>
- 2.52 In many industries, such as engineering, the growth in cell-working and team-working has led to higher levels of task discretion and individual responsibility from all categories of employee except for the very lowest-skilled (Mason, 1999a). The spread of 'high-involvement' work practices such as team-working also helps to explain why engineering employers who identify skill gaps in their workforce put so much emphasis on deficiencies in personal, communication and problem-solving skills alongside the practical skills which are needed (EMTA, 1999).<sup>30</sup>

*Example 2.17 'Team working is essential to increased efficiency and cost reductions. When operating properly, team working helps to ensure task flexibility and a flow of information so that production operates as smoothly as possible. [Employers Skill Survey: Case Study Food Manufacturing Sector 2000]*

## Numeracy skills

- 2.53 Numeracy skills relate to the application of number significantly above basic numeracy level. The ability to work with figures and approach business problems with a numerate and statistical understanding is a foundational skill now required across many occupation levels.
- 2.54 Furthermore, many employers consider that the learning and practice of mathematics develops more general problem solving and systems thinking skills that are extremely valuable in the labour market. It is for this reason that people with mathematics based qualifications are so attractive to other sectors like finance and banking. Research shows that, other things being equal, young adults with A level mathematics earn a significantly higher wage (some 10% higher) than those with GCSE mathematics.<sup>31</sup>

## Problem solving skills

- 2.55 The ability to identify and resolve problems is supported by a range of generic skills including initiative, decision making, analytical thinking, flexibility and an understanding of the commercial environment in which an individual works. It also draws upon key skills such as communication, team working and management. It combines the ability to work independently and demonstrate resourcefulness, whilst also operating within a team context and understanding the overall process by which a product or service is delivered.

*Example 2.18 'Employees are expected to be able to demonstrate problem solving and diagnosis, and at professional levels, greater abilities for forward thinking and 'whole system' thinking;' [Skills Dialogues 2: An Assessment of Skill Needs in Engineering 2000]*

29 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

30 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

31 Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

- 2.56 As the working environment for many of today's employees is increasingly autonomous and complex, the need for an ability to identify and resolve problems is one of the skills most valued by employers.

*Example 2.19 "The emphasis on skills related to monitoring and troubleshooting to keep the work process flowing is demonstrated in the Public Utilities sector. Steedman (1999) notes that in the water industry the introduction of more advanced control technologies mean that; "the operator must react immediately to unpredictable physical changes monitored and represented in abstract form and take appropriate remedial action". [Skills for all: Research Report from the National Skills Task Force 2000]*

### Generic skills requirements by industry

- 2.57 As is to be expected, the levels and types of generic skills needed in different sectors vary considerably. This is indicative of the range of current difficulties, developments and challenges that face any given sector. What is demonstrated, is that demand for generic skills per se is strong, although for a number of industries, the exact nature of such needs is not, as yet, entirely understood. As can be inferred from the industry case study reports, the list (which is by no means exhaustive) of generic skills which are required encompasses a broad spectrum:

- ▶ **Financial Services:** sales and marketing, risk management, judgement, change management, leadership, business awareness.
- ▶ **Telecommunications:** common sense, ability to handle pressure and change, mentoring.
- ▶ **Local and Central Government:** influencing skills, working collaboratively, professionalism, resource and performance management, self-development, creative thinking, analytical ability, relationship building.
- ▶ **Engineering:** data handling, target setting, forward thinking, people co-ordination, customer liaison, efficiency.
- ▶ **Food Manufacturing:** taking responsibility, staff development, disciplining.
- ▶ **Health and Social Care:** critical thinking, professional judgement, 'coping skills'.

- 2.58 The table below quantifies the distribution of generic skills across the industries. Numerical skills are required most in the 'finance' sector, and also in the 'manufacturing' and 'construction' industries, but not to such an extent. High-level communication is particularly important in the area of 'education' and also in 'finance' and 'real estate and business services'. Planning and horizontal communication are again of key significance to those in 'education', whilst client communication is of most importance to the 'finance' and 'health and social work' sectors. Problem-solving skills are most prominent in the 'manufacturing' and 'construction' industries.

**Table 2.6 The industrial distribution of generic skills, 2001<sup>32</sup>**

Industry*	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
Manufacturing	-0.19	0.16	0.18	0.29	-0.12	-0.20	-0.38	-0.12	0.15	0.24
Construction	-0.14	0.54	0.20	0.42	-0.13	0.09	-0.14	-0.16	0.20	0.14
Wholesale & Retail	-0.25	0.18	0.07	0.00	-0.24	-0.21	0.23	-0.17	-0.19	-0.07
Hotels/Restaurants	-0.49	0.43	-0.14	-0.12	-0.34	-0.26	0.00	-0.14	-0.23	-0.22
Transport/Storage	-0.16	0.07	-0.21	-0.13	-0.33	-0.23	-0.07	-0.21	-0.23	-0.12
Finance	0.35	-0.86	0.50	-0.01	0.25	0.17	0.33	0.08	0.12	0.23
Real Estate/ Bus. Services	0.21	-0.55	0.17	-0.03	0.28	0.17	0.08	-0.05	0.09	0.09
Public Administration	0.40	-0.34	-0.13	-0.12	0.16	0.20	0.08	0.25	0.05	0.08
Education	0.32	-0.13	0.06	-0.33	0.51	0.38	0.13	0.39	0.04	-0.21
Health/Social Work	0.29	0.10	-0.41	-0.13	0.01	0.13	0.18	0.32	-0.01	-0.12
Personal Services	-0.29	0.13	-0.22	0.03	0.03	-0.03	0.08	-0.09	-0.07	-0.09

\*Note: Industries are classified by SIC92; only those with sample size above 100 are shown. The generic skills indices are the scores derived from factor analysis of the 35-item importance scale, pooling 1997 and 2001 data. The average score for each skill is zero; hence positive (negative) scores indicate above (below) average scores.

### Generic skills requirements by occupation

2.59 Although the demand for generic skills can be seen across the occupational groupings, requirement for such skills is especially noticed in the higher-ranking occupational groups: managerial, professional, and associate professional levels.

2.60 As shown in the table below, high level communication skills, numerical and planning skills are particularly associated with managers and professionals; client communication with managers and high-level communication, horizontal communication and problem-solving skills with professionals.

2.61 What the following table cannot indicate is the particular growth of an occupational group that has increased very rapidly in numbers in the recent past: 'business and public service associate professionals'. A review of the evidence on changing skill requirements for this group (KPMG, 2001) has suggested that there are three main categories of skill combinations that can be identified within this group:

- ▶ 'Traditional' associate professionals, such as legal executives, market researchers and technical insurance underwriters, who require a high level of technical skills, with generic skills and personal attributes. For this group there has been a rise in importance of generic and notably communication skills as they attempt to differentiate the product/service they offer to customers.
- ▶ 'Transitional' associate professionals, who tend to require an average level of technical skills. However, high-level generic skills and well-developed personal attributes are the key factors defining the job role. Examples include personnel officers and recruitment consultants.
- ▶ 'Generic' associate professionals, such as estate agents and barristers' clerks, requiring a high level of generic skills and personal attributes, but relatively low levels of technical skills have experienced little change. Changes that have occurred have tended to be around additional generic skills, especially basic IT.<sup>33</sup>

**Table 2.7 The distribution of generic skills across occupations, 2001<sup>34</sup>**

Occupation*	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
Managers	0.34	-0.36	0.53	0.08	0.61	0.55	0.56	0.33	0.36	0.13
Professionals	0.61	-0.51	0.45	0.07	0.86	0.58	0.27	0.40	0.41	0.12
Associate Professionals	0.38	-0.33	0.15	0.14	0.42	0.37	0.32	0.27	0.24	0.18
Administrative Secretarial	0.20	-0.54	0.07	-0.17	-0.28	-0.07	-0.04	-0.03	-0.11	0.22
Skilled Trades	-0.25	0.75	0.02	0.64	-0.27	-0.11	-0.38	-0.20	0.28	0.23
Personal Service	-0.04	0.39	-0.54	-0.30	-0.20	-0.14	0.10	0.22	-0.20	-0.34
Sales	-0.32	-0.08	-0.07	-0.17	-0.44	-0.46	0.38	-0.21	-0.43	-0.15
Plant/Machine Operatives	-0.51	0.59	-0.31	0.06	-0.60	-0.52	-0.57	-0.36	-0.24	-0.06
Elementary	-0.85	0.59	-0.70	-0.50	-0.64	-0.75	-0.69	-0.60	-0.71	-0.61

\*Note: Occupations are classified by SOC2000 Major Group. The generic skills indices are the scores derived from factor analysis of the 35-item importance scale, pooling 1997 and 2001 data. The average score for each skill is zero; hence positive (negative) scores indicate above (below) average scores.

33 Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DFES] 2001

34 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DFES] 2002

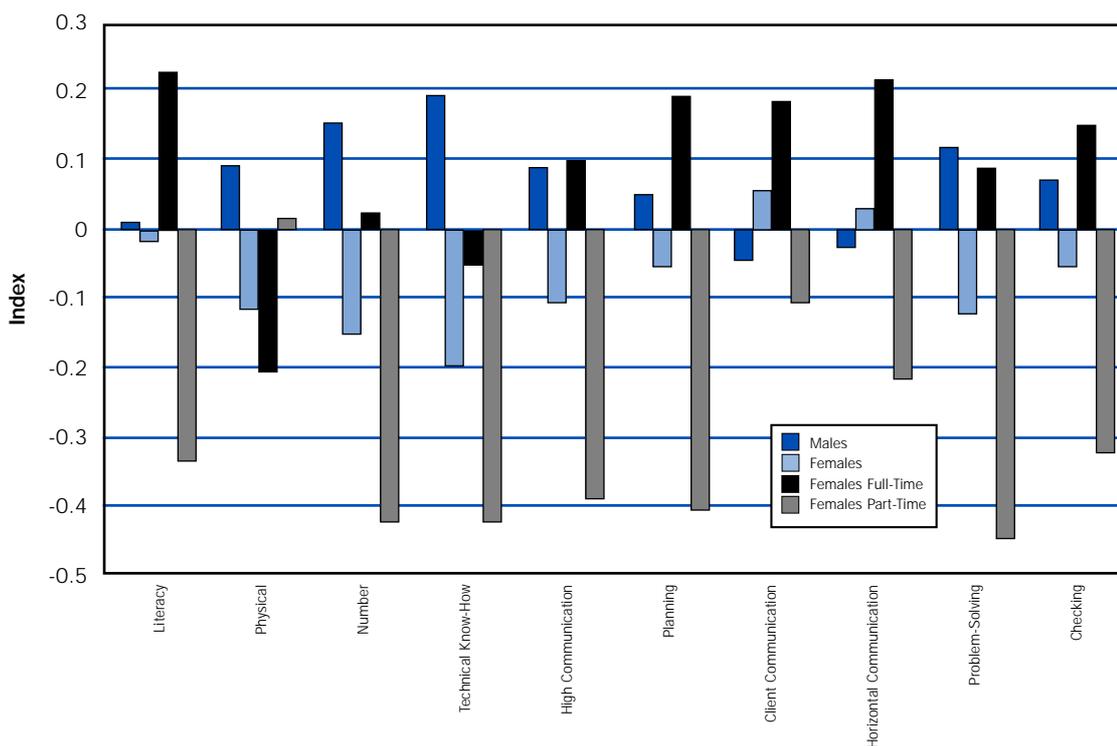
### Generic skills requirements by gender and employment status

2.62 The graph below clearly defines skill distinctions between men and women in full time employment. Overall, women show a high predilection towards generic skills, especially in Client and Horizontal Communication and Planning. The male worker is strongest in Numeracy and Problem solving.

2.63 The strong generic skills demonstrated by the full time female worker explains the efforts being made by a number of industries to attract women employees to boost generic skills levels amongst the workforce. Examples of sectors taking such action include ICT and engineering.

2.64 However, there is a critical difference between women in full time and part time employment. Whereas women in full time employment outperform their male counterparts in several areas, in sharp contrast, the generic skills abilities of women in part time work are significantly lower across the board than both women and men working full time.

**Figure 2.1 The distribution of generic skills by gender and by full-time/part-time status, 2001<sup>35</sup>**



### Generic skills requirements by region

2.65 Table 2.8 indicates the distribution of generic skills across UK regions. The North-South divide clearly delineates the imbalance in generic skills distribution, with such skills heavily concentrated in the South East, Eastern and Greater London areas. Client Communication, Planning and High-level communications are all strongest in Greater London.

2.66 The area which appears to suffer most from low generic skills abilities is the North East of the country. Overall, Scotland lags significantly behind England and Wales.

35 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DFES] 2002

**Table 2.8 The regional distribution of generic skills\*, 2001**

Region	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
South East	0.07	-0.08	0.09	0.02	0.03	0.07	0.04	0.03	0.05	0.04
Eastern	0.00	-0.06	0.04	0.00	0.03	0.03	0.01	0.00	0.05	0.02
Greater London	0.08	-0.24	-0.01	-0.08	0.16	0.11	0.09	0.01	-0.01	-0.02
South West	0.00	0.07	-0.03	0.02	-0.12	0.05	0.04	-0.01	-0.03	-0.02
West Midlands	0.00	0.08	0.03	0.10	-0.04	-0.07	-0.06	-0.02	0.00	0.04
East Midlands	-0.07	0.12	-0.00	0.01	-0.05	-0.02	-0.01	-0.05	-0.01	-0.01
Yorkshire & Humberside	-0.07	0.14	0.03	0.08	-0.04	-0.06	-0.07	-0.02	0.02	0.06
North West	0.04	-0.03	0.02	0.00	-0.05	0.02	0.03	0.00	0.01	0.00
North East	-0.09	0.09	-0.09	0.00	-0.15	-0.17	-0.09	-0.04	-0.11	-0.01
Wales	-0.01	0.11	0.03	0.03	-0.08	-0.04	0.00	0.08	0.03	0.09
Scotland	-0.03	0.03	-0.05	-0.01	-0.04	-0.08	-0.06	-0.02	-0.02	-0.02

\*Note: The generic skills indices are the scores derived from factor analysis of the 35-item importance scale, pooling 1997 and 2001 data. The average score for each skill is zero; hence positive (negative) scores indicate above (below) average scores.

## Generic skills trends

2.67 Although the increase is small, all generic skills have risen in demand since 1997, confirming that it is appropriate to carefully assess the impact that such developments will have on the work place. This trend is likely to continue, with a focus on cognitive skills such as planning, communication and numerical abilities.

2.68 The table below shows the changes in a range of generic skills (problem solving, communication skills, team working and computing skills) over a five year period from 1992-1997. All have increased in demand, excluding manual skills which have experienced a sharp decline. The most notable trends in demand are:

- ▶ The ability to provide analytical solutions.
- ▶ An understanding as to how to instruct, train, counsel and advise colleagues and clients.
- ▶ The skill to use a PC, or computerised equipment.

**Table 2.9 Type of work skill changes in Britain 1992 to 1997<sup>36</sup>**

Skill type	Increasing (a) %	Decreasing (a) %	Average change (b) %
<b>Problem-Solving Skills</b>			
Spotting problems or faults	34.6	20.4	0.25
Working out the causes of problems or faults	36.7	20.2	0.29
Thinking of solutions to problems or faults	34.1	19.9	0.25
Analysing complex problems in depth	39.3	18.6	0.37
<b>Communication and Social Skills</b>			
Dealing with people	34.7	12.6	0.34
Instructing, training or teaching people	46.7	17.3	0.62
Making speeches or presentations	31.9	12.4	0.27
Persuading or influencing others	36.4	21.8	0.25
Selling a product or service	29.4	20.1	0.20
Counselling, advising or caring for customers or clients	36.9	24.6	0.45
Working with a team of people	34.9	27.8	0.27
<b>Manual Skills</b>			
Physical strength	20.7	27.3	-0.12
Physical stamina	20.2	31.0	-0.20
Skill or accuracy in using hands or fingers	23.1	29.0	-0.10
<b>Computing Skills</b>			
Using a computer, PC, or other types of computerised equipment	42.0	10.4	0.63
Level of computer usage <sup>1</sup> [c]	29.2	6.1	0.27

Source: Green et al (2000) Table 4.9, Page 95. Notes:

a Work skills were self-assessed by job-holders against the 5-point scale: 'Essential/Very Important/Fairly Important/Not very important/Not at all important or does not apply'. A skill increase (decrease) is defined as a move up (down) one or more points of this scale between 1992 and 1997.

b Calculated as the average number of places moved up or down the skill response scale. A positive means a skill increase, while a negative means a skill decrease

c Assessed on a scale: 'Straightforward/Moderate/Complex/Advanced', using examples The base is all those who were in employment both in 1997 at the date of interview and five years earlier.

2.69 Table 2.10 takes a closer look at the many different elements that make up generic skills and further supports the finding that almost all cognitive skills are increasing in demand. Although some activities show no change, there are not any activities which show a statistically significant fall in skill level.

2.70 Most notable increases in the index are for IT usage, knowledge of how the establishment works and document writing. Some other areas that have seen significant increases are numerical calculations, customer handling, listening to colleagues and problem solving.

**Table 2.10 Differences between Detailed Skills in 2001 and Detailed Skills in 1997<sup>37</sup>**

Detailed Skills	Average for 2001 minus Average for 1997	Significant Change?
Paying close attention to detail	-0.02	None
Dealing with people	+0.01	None
Instructing, training or teaching people	+0.12	Rise **
Making speeches or presentations	+0.13	Rise **
Persuading or influencing others	+0.07	Rise **
Selling a product or service	-0.05	None
Counselling, advising or caring for customers or clients	+0.16	Rise **
Working with a team of people	+0.07	Rise **
Listening carefully to colleagues	+0.15	Rise **
Physical strength	-0.03	None
Physical stamina	-0.01	None
Skill or accuracy in using hands or fingers	+0.19	Rise **
How to use or operate tools/equipment/machinery	+0.02	None
Knowledge of particular products or services	+0.09	Rise **
Specialist knowledge or understanding	+0.18	Rise **
Knowledge of how your organisation works	+0.22	Rise **
Using a computer, PC, or other types of computerised equipment	+0.38	Rise **
Spotting problems or faults	+0.05	Rise †
Working out the causes of problems or faults	+0.11	Rise **
Thinking of solutions of problems or faults	+0.15	Rise **
Analysing complex problems in depth	+0.08	Rise **

<sup>37</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

Checking things to ensure that there are no errors	+0.08	Rise **
Noticing when there is a mistake	+0.10	Rise **
Planning your own activities	+0.13	Rise **
Planning the activities of others	+0.08	Rise **
Organising your own time	+0.10	Rise **
Thinking ahead	+0.11	Rise **
Reading written information such as forms notices or signs	+0.07	Rise **
Reading short documents such as short reports, letters or memos	+0.12	Rise **
Reading long documents such as long reports, manuals, articles or books	+0.11	Rise **
Writing written information such as forms notices or signs	+0.14	Rise **
Writing short documents such as short reports, letters or memos	+0.18	Rise **
Writing long documents such as long reports, manuals, articles or books	+0.20	Rise **
Adding, subtracting or dividing numbers	+0.07	None
Calculations using decimals, percentages or fractions	+0.15	Rise **
Calculations using more advanced mathematical or statistical procedures	+0.15	Rise **

*Note: In each case, the statistical significance of the difference between the means of the skill level for 2001 and 1997 is assessed. The level of significance is \*\*=5%, and †=10%. This means that, where \*\* is indicated, we can reject the hypothesis of no change, but risk being wrong only 5% of the time; for † we could be wrong 10% of the time.*

## Change in generic skills by region

2.71 In terms of regional spread, generic skills needs rose across England between 1992-1997. The following observations can be made:

- ▶ The need for Communication skills grew most significantly in the North West, South East and West Midlands.
- ▶ Team working has become increasingly important in West Midlands and the East.
- ▶ Computing skills are in strong demand in Southern England.
- ▶ Problem-solving skills have seen significant growth in West Midlands, the East and South East.
- ▶ Growth in Key skills needs have increased most markedly in West Midlands and the South East.

**Table 2.11 Particular Measures of Skill Demand by Region, 1992-1997<sup>38</sup>**

	Communication & Social		Teamworking		Computing		Problem Solving		All 'Key Skills'		All 36 Activities	
	1992	1997	1992	1997	1992	1997	1992	1997	1992	1997	1992	1997
North East	1.78	2.03*	2.77	2.96	0.66	1.18***	2.43	2.57	2.03	2.28***	NA	2.25*
North West	1.86	2.26***	2.68	2.92***	1.03	1.30***	2.46	2.74***	2.10	2.45***	NA	2.45
Y & H	1.81	2.16***	2.77	2.86	0.78	1.13***	2.52	2.73***	2.07	2.37***	NA	2.34
East Midlands	2.06	2.14	2.67	2.94***	0.77	0.96*	2.55	2.72*	2.22	2.36*	NA	2.34
West Midlands	1.61	2.10***	2.55	2.97***	0.91	1.26***	2.29	2.59***	1.90	2.33***	NA	2.34
East	1.87	2.19***	2.76	3.15***	1.04	1.31***	2.52	2.89***	2.12	2.48***	NA	2.46
London	2.06	2.29***	2.92	3.02	1.14	1.57***	2.57	2.79***	2.27	2.54***	NA	2.44
South East	1.84	2.23***	2.79	3.08***	1.14	1.54***	2.46	2.86***	2.12	2.53***	NA	2.44
South West	1.94	2.17***	2.53	2.84***	0.83	1.29***	2.55	2.61	2.13	2.36**	NA	2.35

Source: Felstead, (2001) Chi-squared tests were carried out in each region to assess the significance of the skill changes between 1992 and 1997. \*\*\*=99% significant, \*\*= 95% significant, \*= 90% significant

## Change in generic skills by industry

2.72 The table below demonstrates the changes in generic skills needs across industry types (blank cells indicate insignificant changes due to low numbers). Industries which show strongest upskilling trends over recent years are 'wholesale and retail' and the 'health and social work' sectors.

2.73 High level and horizontal communication and problem-solving have impacted numerous industries, but planning appears to have had greatest effect.

2.74 The need for problem solving and numeracy requirements are clearly shown in the 'health and social work' sector; planning is key in the 'hotel and restaurants' and 'transport and storage' sectors and horizontal communication is particularly important for 'personal services'. For other industries, there were relatively few significant changes, or none at all, in the generic skills requirements between 1997 and 2001.

**Table 2.12 The pattern of change in the distribution of generic skills, 1997-2001, by industry<sup>39</sup>**

Industry*	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
Manufacturing	+0.10					+0.10				
Construction										
Wholesale/Retail	+0.15	+0.12		+0.17	+0.16	+0.12		+0.14	+0.17	
Hotels/Restaurants						+0.28				
Transport/Storage				+0.17		+0.31			+0.21	+0.20
Finance										
Real Estate/ Bus. Services				+0.14						
Public Admin		+0.17			+0.16					
Education		+0.13					-0.12			
Health & Social Work	+0.19		+0.24	+0.33	+0.14	+0.19		+0.14	+0.28	+0.30
Personal Services		+0.18					+0.18	+0.23		

\*Note: Industries are classified by SIC92; only those with sample size above 100 are shown. The figures are the changes in the generic skills indices between 1997 and 2001. A positive (negative) figure indicates an increase (decrease) in skill. Only changes that are statistically significant at the 10% level are included in the table.

## Change in generic skills by occupational groups

2.75 Below is presented the changing needs for generic skills as experienced across occupational groupings. 'Elementary' occupations, traditionally considered to be relatively low skilled, have been have undergone significant upskilling in problem solving skills, which are also important for 'Personal Service' workers.

2.76 The only drop in skills needs has been in 'Professional Services' in the area of Client Communication and Numeracy.

**Table 2.13 The pattern of change in the distribution of generic skills, 1997-2001, by occupation**<sup>40</sup>

Occupation*	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
Managers	+0.14	-0.15								
Professionals			- 0.14				- 0.10			
Associate Professionals	+0.15							+0.17		
Administrative/ Secretarial				+0.14						
Skilled Trades										
Personal Service			+0.17						+0.19	
Sales		+0.29		+0.25		+0.14		+0.17		
Plant/Machine Operatives										
Elementary		+0.26	+0.12	+0.32		+0.21		+0.21	+0.31	+0.27

\*Note: Occupational groups are classified by SOC 2000 Major Group. The figures are the changes in the generic skills indices between 1997 and 2001. A positive (negative) figure indicates an increase (decrease) in skill. Only changes that are statistically significant at the 10% level are included in the table.

2.77 Green observes that changing occupational structure is likely to intensify the demand for many generic skills. These include basic skills such as verbal and numerical skills as well as problem solving, communication and social skills, team working and computing skills. Manual skills are the main exception to this rule.<sup>41</sup> The demand for generic skills is increasing across all occupational groups and is particularly high in the professional, associate professional and technical and managerial occupational groups (key growth areas in the economy).

2.78 As shown in the table below, the strongest relationships exist between the following:

- ▶ Professionals: Verbal; Planning; Professional Communication.
- ▶ Sales: Client communication.

40 Work Skills in Britain 1986 - 2001 Felstead. A., University of Leicester, et al., [Dfes] 2002

41 Management Skills, Research Paper 3, Johnson. S., Middlesex University Business School and Winterton. J. 1999

- ▶ Personal Services: Horizontal Communication.
- ▶ Craft: Problem solving.

**Table 2.14 Changing Generic Skill Requirements, 1999-2010**

Major Occupation Groups	Verbal		Manual		Problem Solving		Numerical		Planning		Client Communication		Horizontal Communication		Professional Communication	
	1999	2010	1999	2010	1999	2010	1999	2010	1999	2010	1999	2010	1999	2010	1999	2010
1. Managers and Administrators	0.25	0.29	-0.18	-0.24	0.13	0.15	0.56	0.57	0.56	0.57	0.52	0.49	0.22	0.25	0.41	0.44
2. Professional Occupations	0.71	0.72	-0.46	-0.47	0.18	0.19	0.55	0.55	0.57	0.57	0.15	0.16	0.30	0.29	0.85	0.84
3. Associate Professional and Technical Occupations	0.42	0.41	-0.29	-0.31	0.33	0.31	0.07	0.06	0.31	0.32	0.20	0.22	0.18	0.18	0.43	0.43
4. Clerical and Secretarial Occupations	0.21	0.20	-0.60	-0.60	0.15	0.16	0.06	0.08	-0.14	-0.15	-0.17	-0.17	0.08	0.07	-0.53	-0.52
5. Craft and Related Occupations	-0.26	-0.27	1.04	1.04	0.44	0.43	-0.03	-0.03	-0.21	-0.19	-0.26	-0.26	-0.33	-0.33	0.05	0.05
6. Personal and Protective Services Occupations	-0.07	-0.07	0.19	0.20	-0.50	-0.50	-0.62	-0.62	0.07	0.06	0.02	0.02	0.39	0.38	-0.19	-0.19
7. Sales Occupations	-0.38	-0.40	-0.27	-0.25	-0.37	-0.39	-0.00	-0.02	-0.46	-0.49	0.93	0.93	-0.23	-0.23	-0.59	-0.61
8. Plant and Machine Operatives	-0.51	-0.50	0.64	0.63	-0.05	-0.06	-0.29	-0.30	-0.56	-0.55	-0.59	-0.58	-0.35	-0.35	-0.37	-0.38
9. Other Occupations	-0.93	-0.93	0.40	0.39	-0.93	-0.94	-0.89	-0.89	-0.64	-0.65	-0.67	-0.66	-0.51	-0.50	-0.36	-0.37
TOTAL	0.01	0.06	0.02	-0.03	0.00	0.00	0.01	0.03	0.02	0.06	0.04	0.06	0.01	0.05	0.01	0.04

## Notes:

- Derived by applying skill scores from the Skill Survey to occupational employment data for 1999 and 2010 and aggregating to SOC 1990 major group level.
- Skill scores can be negative (low importance) to positive (high importance) across all occupations. The scores average zero in the original sample (they differ slightly from zero here because the current and projected occupational structure of the UK workforce differs from that in the original sample).
- The table indicates the growing importance of skills such as professional communication and planning, while manual skills are becoming less important.

- 2.79 These trends are confirmed by the analysis of work skills changes over the 1980s and 1990s. When linked to the expected changes in occupational structure over the next decade or so, this suggests that jobs are likely to require greater autonomy, more learning and training time on the job, and an increased need for formal qualifications.<sup>42</sup>
- 2.80 There is a changing pattern of 'new' labour demand in terms of occupations and qualifications which are expanding and growing, with a high degree of concentration in a relatively small number of occupations. Indeed just 6 occupational groups – caring and personal services; business and public service professionals and associate professionals; teaching and research professionals; health and social welfare associate professionals and corporate managers – together may account for as much as 8 in 10 of all new jobs created in the next 10 years.<sup>43</sup>

### Shift from manual to cognitive skill needs

- 2.81 As a result of the shift over the last few decades from manual-based skills to cognitive-based skills employment, demand for communication, problem-solving, IT and management has risen whilst skills associated with physical aptitude have substantially reduced in importance.
- 2.82 With the growth of white-collar work, focus is now on the opportunities in the managerial, professional and associate professional occupations (increasing from 27% to 36% of the workforce between 1971 and 1998).<sup>44</sup> Regionally speaking, this is of particular note in Greater London and the South East areas, together accounting for almost 50% of the overall increase in these occupations. On the other hand the increase in the North East is very modest.<sup>45</sup>
- 2.83 Although to a lesser extent, there has also been strong growth in employment in the service industries (accounting for 47% of employment in 1998) and decline in manufacturing (accounting for 16% of employment in 1998).<sup>46</sup> Operative and elementary occupations have reduced in absolute and relative importance, although there is an indication that the decline in absolute numbers is tailing off. The demand for craft and related workers has fallen, but at a lower rate than for operatives.<sup>47</sup>

### Changing profile of intermediate level occupations

- 2.84 The change from manual to non-manual work has brought with it the gradual professionalisation of the workforce with an upward move at intermediate level from craft/traditional skilled trade jobs towards associate professional employment. Many of the new jobs are to be found in the finance, business services and leisure sectors.

42 Management Skills, Research Paper 3, Johnson. S., Middlesex University Business School and Winterton. J. 1999

43 Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

44 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

45 Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

46 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

47 Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

Rapidly rising salaries in these occupations (rising from 124% to 143% of average male earnings between 1975 and 1998) suggests there have been some difficulties in attracting people with the right mix of skills.<sup>48</sup>

2.85 Employment criteria have also changed significantly for those remaining in the skilled trade occupations. Job scope is now broadening beyond the technical craft skills to encompass planning, organisational, IT and communication skills.

### Growth in professional jobs

2.86 The number of jobs in professional occupations increased by 50% between 1981 and 1998. Professional jobs are expected to be one of the fastest growing occupations through to 2009 with a further expansion of over 20% or nearly 867,000 jobs forecast. Much of the growth in employment in professional jobs can be explained by the expansion of the service sectors (both private and public).<sup>49</sup> These changes bring with them a requirement for higher levels of communication, team working and management skills.

### Employment opportunities remain for low skilled workers

2.87 However, there does still remain some demand for those that are semi-skilled. The total numbers employed in personal service, sales and customer service, operative and elementary occupations fell slightly between 1981 and 1998 (by 200,000 jobs). The number of jobs in these categories is set to rise, with over 2.5 million job opportunities in semi-skilled personal service and sales occupations. Despite the comparatively low level of skill requirement for these occupations, the nature of the skills they do require is changing. Many of these jobs will be in areas where there is an increased premium on communication and customer care skills.<sup>50</sup>

2.88 However, numbers employed in the predominantly unskilled operative and elementary occupations will continue to fall.

### Changes in Improving Learning and Performance

2.89 The importance of continuous development is shown to be increasing, with a 5% rise in numbers who believe that new learning is required of them at work. This highlights the need for a flexible workforce which can readily adapt to the changing demands on their skills base.

**Table 2.15 Percentage required to learn new things at work, 1992-2001<sup>51</sup>**

Responses to Statement 'My job Requires That I Keep Learning New Things'	1992	2001
Strongly Agree	26.1	30.2
Agree	50.1	51.1
Disagree	19.6	16.6
Strongly Disagree	4.2	2.1

48 Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DfEE] 2000

49 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

50 Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

51 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

## Changes in Management Skills

- 2.90 There are some indications that management skills are gaining in importance in the workplace. First, planning skills, which are important for those with managerial and supervisory duties, have been increasing alongside other generic skills. Second, the level of coaching skills is found, if anything, to be negatively related to age. Hence, a reasonable inference is that if individuals perceive an increase over five years in the importance of coaching skills, this reflects a trend in the workplace rather than a natural evolution over the life-cycle.
- 2.91 Of those who had been in employment either five, or if not four or three, years previously, 53% reported an increase in the importance of coaching skills, and only 7% reported a decrease. The finding suggests that there is an increasingly widespread obligation being placed on those with managerial or supervisory duties to coach their staff.<sup>52</sup>

## Increasing importance of IT

- 2.92 Much of the impetus behind developments in the work place is the integration of new technology in the running of day-to-day operations. Whilst many craft, clerical and secretarial posts are disappearing in the wake of a largely computerised work place, IT is also creating new opportunities for those in higher skilled occupations at professional, associate professional and managerial levels.

*Example 2.20 'One likely area of rising skill needs, almost across the board, is ICT. Recent developments that are increasing the need for IT skills are: web based marketing and transactions, computerised/remote project management, video-links between sites, web-purchasing, and computerised facilities management.'* [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]

- 2.93 Over the last four years the need for computing skills has risen more rapidly than any other job skill. Although this increase is marginally more evident amongst women (55% as opposed to 50% for men), both genders are increasingly expected to use computers as part of their job scope.
- 2.94 However, for those who are self-employed, or for women in part time employment, importance of computers at work has seen substantially (between 10-15%) less increase.

**Table 2.16 Whether change in importance of computing skills in own job in last five years, 2001<sup>53</sup>**

	Increase (%)	Little/ No Change (%)	Decrease (%)
All	51.7	42.5	5.8
Men	49.5	44.8	5.6
Women	54.6	39.4	6.0
Employed	53.4	40.8	5.8
Self-Employed	38.2	56.1	5.7
Full-time	63.4	32.1	4.4
Part-time	40.9	50.6	8.5

<sup>52</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DFES] 2002

<sup>53</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DFES] 2002

2.95 The importance of PCs and computerised equipment at work continues to rise, with almost 10% more employees claiming that IT is an 'Essential' element to their job. Whilst slightly more women than men see technology as 'Essential' to work, more women than men see it as 'Very important'. Once again, part-time female workers are considerably less IT-orientated, with almost a third considering PCs and computerised equipment as 'Essential' to their job as compared to their counterparts in full-time employment. Likewise, there has been comparatively little increase in the importance of computing skills amongst those who are self-employed.

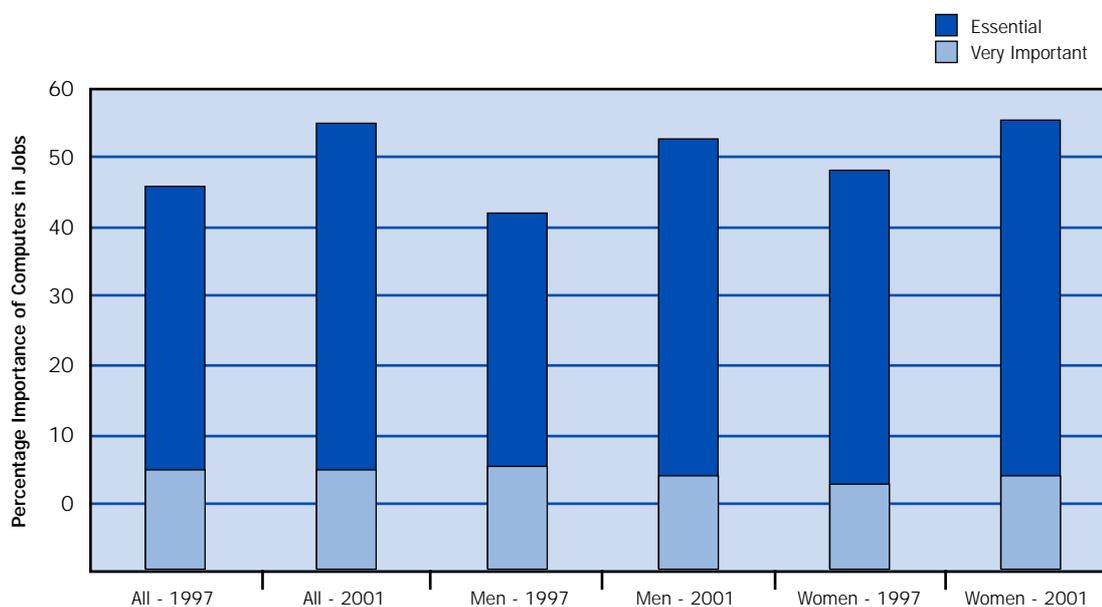
**Table 2.17 Importance of use of PC or other types of computerised equipment to job, 2001<sup>54</sup>**

	Essential (%)	Very important (%)	Fairly important (%)	Not very important (%)	Not at all important (%)
<b>All</b>					
1997	30.8	14.8	12.2	11.7	30.5
2001	39.7	14.8	13.8	10.5	21.1
<b>Men</b>					
1997	27.5	15.4	13.0	14.2	29.8
2001	38.5	14.7	14.5	11.2	21.1
<b>Women</b>					
1997	34.8	13.9	11.3	8.5	31.4
2001	41.4	15.0	13.1	9.7	21.2
<b>Contract Status (women)</b>					
Full-time 1997	42.9	16.6	12.2	7.8	20.6
Full-time 2001	49.5	16.4	12.9	8.1	13.0
Part-time 1997	23.9	10.4	10.2	9.5	45.9
Part-time 2001	28.8	12.8	13.3	12.0	33.1

2.96 For those who said that the use of such equipment was either 'essential' or 'very important' as an indicator of the centrality of computer skills to the work task, there was also notable growth of 9% in work where computing activities constituted a central component of the job.<sup>55</sup> Although over time this trend has been slightly stronger for men than for women, in absolute numbers, slightly higher numbers of women view computers as central to their work.

54 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

55 Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DfES] 2002

**Figure 2.2 The centrality of computers in jobs<sup>56</sup>**

### Changes in generic skills requirements by gender

2.97 Female employment is expected to grow by around 1.5 million over the period to 2010, while male employment is projected to increase by only half this amount.

Two key reasons for this development are:

- ▶ The decline of employment in the primary and secondary sectors over the recent decades has resulted in the loss of many full-time jobs, traditionally held by men.
- ▶ The growth of jobs in the service sector has increased the opportunities for women, particularly those working part-time.<sup>57</sup>

2.98 For female workers the occupations providing the largest number of new jobs are the associate professional and technical occupations (with a projected increase of over 500,000) and personal service occupations (projected to rise by over 600,000). Professional occupations are also expected to provide a large number of new employment opportunities for women.<sup>58</sup>

2.99 A number of sectors, including transport and ICT, are trying to attract more women into the workforce, because they are perceived to demonstrate strong generic skills; in particular, diagnostic skills, people skills and handling customers.

2.100 Table 2.18 examines the change in generic skills distribution over the recent 4-year period. Overall, there has been a small but meaningful rise in the level of generic skills (apart from physical skills) being used in UK companies.

<sup>56</sup> Work Skills in Britain 1986-2001 Felstead. A., University of Leicester, et al., [DFES] 2002

<sup>57</sup> Management Skills, Research Paper 3, Johnson. S., Middlesex University Business School and Winterton. J. 1999

<sup>58</sup> Management Skills, Research Paper 3, Johnson. S., Middlesex University Business School and Winterton. J. 1999

**Table 2.18 The pattern of change in the distribution of generic skills\*, 1997-2001, by gender and by full-time/part-time status<sup>59</sup>**

	Literacy	Physical	Number	Technical know-How	High-level Communication	Planning	Client Communication	Horizontal Communication	Problem Solving	Checking
All	+0.12		+0.09	+0.11	+0.11	+0.14	+0.07	+0.11	+0.12	+0.09
Males	+0.12	-0.08	+0.10	+0.08	+0.12	+0.12	+0.06	+0.10	+0.11	+0.08
Females	+0.13		+0.07	+0.15	+0.08	+0.15	+0.07	+0.13	+0.13	+0.09
Females Full-time Jobs	+0.12			+0.12		+0.14	+0.07	+0.12	+0.10	
Females Part-time Jobs	+0.11	+0.08		+0.17	+0.10	+0.15		+0.12	+0.14	

*\*Note: The figures are the changes in the generic skills indices between 1997 and 2001. A positive (negative) figure indicates an increase (decrease) in skill. Only changes that are statistically significant at the 10% level are included in the table.*

2.101 Overall, generic skills continue to rise in importance, with Planning and Problem Solving experiencing the most significant growth. In addition, High Level Communication is particularly important for men and Horizontal Communication is key for women.

### 3. Supply of Generic Skills

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- 3.1 This section will set out the evidence on the current supply of generic skills through education and training, outlining:
- ▶ current and projected generic skills levels;
  - ▶ the provision and availability of generic skills and the qualification and training routes through which they are obtained.
- 3.2 The key question we will try to address here is if sufficient people will have the right level and right type of qualifications to meet generic skill demand.
- 3.3 In assessing the demand for generic skills we have already established that generic skills are hard to quantify. It is therefore not surprising that there is limited information on the supply of generic skills within the existing Sector Skills Dialogues. The difficulty of quantifying the supply of generic skills presents a problem for generic skills research and more vitally for employers trying to recruit individuals with generic skills.
- 3.4 Issues surrounding the accurate assessment of generic skills supply primarily relate to:
- ▶ Difficulties surrounding the conceptualisation and measurement of generic skill elements in qualifications and training.
  - ▶ Lack of certification of many generic skills.
  - ▶ The 'hidden' nature of generic skills means that their development is often unstructured and ad hoc, preventing their formal recognition in the workplace.
  - ▶ The contextualisation of generic skills, whilst an important element for their effective development, creates problems in standardising and therefore identifying the supply and uptake of training for these skills.

#### Generic Skill Levels

- 3.5 The shift in occupational structure from 'qualification poor' towards 'qualification rich' employment is driving up the level of skills needed in the workforce. Even assuming a fixed qualification rate in occupations it is likely that 55% of new additional jobs will be at NVQ level 4 or equivalent and above. Indeed, it is expected (at a minimum) that 29% of all jobs in the economy by 2010 will be at NVQ level 4 or 5 or equivalent - an increase of over 1.5 million jobs from 1999.<sup>1</sup>
- 3.6 One of the main driving factors behind the rise in qualification levels is the increase in the proportion of young people staying in post-school education and training. In 1979, just over 50% of the workforce held some form of formal qualification compared to almost 90% now.<sup>2</sup>

<sup>1</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DFES] 2001

<sup>2</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DFEE] 2000

- 3.7 In terms of adult attainment at level 2, currently 74% of the economically active adult population (70% of the whole adult population of working age) are qualified to NVQ level 2 or above. 51% of the economically active adult population (47% of the whole adult population of a working age) are qualified to NVQ level 3 or above. There has been considerable progress in relation to the latter in particular, over recent years, with an increase from 36% to 51% of economically active adults qualified to this level since 1993. At NVQ level 4 or equivalent the proportion of economically active adults who are qualified to this level has increased from 22% to 27%.<sup>3</sup>
- 3.8 Occupations that are expected to be particularly affected by a need for higher levels of qualifications are corporate managers/administrators, professionals and other associate professionals. In order to meet this growing 'qualification intensity', considerable resources will be required to ensure that the routes to qualification and the qualifications themselves are appropriately structured to provide organisations with the higher levels of skills required to meet necessary performance levels.
- 3.9 Although it is relatively straightforward to measure the attainment of recognised qualifications, applying the same approach to the possession of generic skills does not offer the same level of understanding for cognitive skill sets. Looking at qualifications does not necessarily give a clear picture of the generic skills required for any given job.
- 3.10 The National Skills Task Force research into the market value of generic skills builds on this conventional approach to measuring supply defining generic skills and checking them against occupational status and educational attainment. This research is based on the commercial "job analysis" approach to skill measurement providing a starting point from which we can broaden our understanding of generic skills supply.
- 3.11 The following tables show that this approach to analysing skills supply concurs with the conventional broad measures in that, on average, they show higher skill levels for higher status occupations and more highly educated people. It can be seen from table 3.1 that all skill indices, except manual skills, tend to be greater amongst the higher-ranking occupations. With the exception of manual skills, the generic skill indices are higher for those with qualifications at least as high as NVQ level 3, compared with those having lesser or no qualifications.

**Table 3.1 Skill Indices by Occupation, Gender and Educational Attainment Level<sup>4</sup>**

	Verbal	Manual	Problem Solving	Number	Planning	Client Communication	Horizontal Communication	Professional Communication
<b>Average skill levels among:</b>								
Managers	2.7	-2.1	1.4	5.6	5.6	5.2	2.3	4.3
Professionals	6.9	-4.7	1.5	5.3	6.1	1.3	3.3	8.8
Associate Prof.	4.2	-3.2	3.1	0.5	3.4	2.3	1.9	4.2
Clerical	2.1	-6.1	1.6	0.8	-1.4	-1.8	0.8	-5.4
Craft etc	-2.4	10.2	4.6	-0.3	-2.4	-2.8	-3.3	0.7
Personal	-0.7	1.8	-4.9	-6.2	0.8	0.2	3.9	-1.9
Sales	-4.0	-2.6	-3.7	0.2	-4.9	9.1	-2.3	-6.0
Operatives	-5.2	6.3	-0.4	-2.9	-5.8	-6.0	-3.5	-3.6
Other	-9.6	3.8	-9.4	-8.9	-6.5	-6.8	-5.0	-3.6
<b>Average skill levels for those:</b>								
at least NVQ L3	3.1	-2.0	1.5	2.7	2.5	1.4	1.4	3.1
below NVQ L3 or unqualified	-2.3	1.5	-1.2	-2.3	-2.1	-1.0	-0.8	-2.7
<b>Average skill levels among:</b>								
Men	0.1	2.3	1.1	1.5	0.0	-0.3	-1.0	1.3
Women	-0.1	-2.4	-1.2	-1.8	-0.3	0.4	1.3	-1.8

3.12 It is also interesting to observe that men report greater skills than women in six out of eight cases, but the difference is only substantial in the case of manual skills and to a lesser extent professional communication and numerical skills.

3.13 Table 3.2 covers the remaining skill measures. As expected, computer skills are higher for people with higher qualifications. Of note also, is the fact that computer skills are greater in men's than in women's jobs. Autonomy is also greater in the higher status occupations, though the differences are not perhaps as great as might have been expected. The variety index is also on the whole highest for the higher-status occupations. Finally, the team working skills index is rather less obviously linked to occupational status. Nevertheless, team working skills are lower in the unskilled manual occupations than in other occupations.

**Table 3.2 Further Skill Indices by Occupation, Gender and Educational Attainment Level<sup>5</sup>**

	Computing	Autonomy	Variety	Teamwork
<b>Mean skill levels among:</b>				
Managers	1.7	4.8	5.4	75
Professionals	2.1	4.5	5.8	83
Associate Professionals	1.9	4.3	5.5	82
Clerical	1.9	4.0	4.1	75
Craft	0.9	4.2	4.6	75
Personal & Protective	0.6	4.1	4.3	73
Sales	0.9	3.7	4.9	67
Operatives	0.7	3.6	3.7	68
Other	0.2	3.8	3.3	55
<b>Average skill for those:</b>				
Qualified to at least NVQ3 level	1.8	4.3	5.2	80
Qualified below NVQ3 or not qualified	0.9	4.0	4.1	68
<b>Mean skill levels among:</b>				
Men	1.37	4.22	4.78	74
Women	1.22	4.05	4.35	73

3.14 The one surprising occupational area with low formal skill levels is that of small business managers and proprietors where almost a third (31%) of this group do not hold a Level 2 qualification, and 27% have no education or training qualifications at all (compared to the 12% of the workforce as a whole who have none).<sup>6</sup>

## Generic Skills Provision

3.15 The opportunities for learning are growing in scope, with providers increasingly seeking to offer a more flexible approach in order to draw as many employees as possible into the skill-improvement process. The development of community based adult education and new opportunities for distance learning are among some of the steps being taken to expand the learning facilities in terms of location and methods of study.

*Example 3.1 'The rise of multi-skilling in the workplace has contributed to an increase in the demand for short courses, so that people can extend, or update, their skills. There is little doubt that the industry's need for this type of multi-skilling will rise, and that this will be a growth area.' [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

<sup>5</sup> Market Value of Generic Skills, Research Paper 8 Green., F, University of Kent, [DfEE] 1999

<sup>6</sup> (IER analysis of DFEE Labour Force Survey) Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

3.16 In principle, though, there still remain three principle routes through which individuals participate in post-compulsory education and training: Further Education, Higher Education and Government Supported Training. These are the chief means through which the stock of generic skills is augmented, in particular in terms of qualifications.<sup>7</sup>

3.17 There is a growing emphasis on incorporating generic skills at a greater level into many of the qualification routes currently in existence. For example:

- ▶ Higher Education: A number of graduate apprenticeships and foundation degrees which are closely linked to employer and vocational needs, addressing generic skills and knowledge.
- ▶ Vocational Qualifications: A range of generic skills training focussing on Key Skills development such as IT, numeracy and communication.
- ▶ Professional Qualifications: These are especially important to adult learners, as they often not only act as licenses to practice but also frequently include requirements for professional learning.

3.18 Whilst academic qualifications are essential for verifying an individual's competence or knowledge in a certain field, they do not necessarily testify to an ability to operate effectively in the work-place environment. Work-readiness is increasingly cited as a key factor in assessing 'employability' of a new recruit, highlighting the importance of offering young people with the opportunity to gain work-experience as part of the education process. This often requires high levels of co-operation between local businesses, schools, colleges and education authorities.

3.19 There is a growing expectation from employers that school leavers should be able to demonstrate at least a basic level of generic employability skills. These could include skills in communication, team-working, problem solving, task organisation, and elementary business principles. There is real opportunity, and a real need, for the national curriculum to prepare leavers with these fundamental work-place skills that will assist them to successfully gain employment.

3.20 New measures have been introduced by the Government to improve the supply of qualifications and training. These can be summarised as follows:

- ▶ more effective delivery of key skills through the education system;
- ▶ a broad curriculum at upper secondary level which promotes the wider study of mathematics;
- ▶ an entitlement for all young people up to 25 to achieve their first Level 3 qualification;
- ▶ a high quality vocational route delivered through both further education and work-based training with clear ladders of progression to higher education;
- ▶ flexible opportunities for developing IT skills backed by clear standards and qualifications;
- ▶ a system backed by an entitlement which allows adults who have missed out on learning to upgrade their skills; the setting-up of the SSC network;
- ▶ better support for mobility amongst unemployed people coupled with encouragement for more economically inactive people to return to work.

- 3.21 In the context of changes to the vocational education and training system the following national qualifications can be assessed in relation to generic skills. While we have recognised that the link between qualifications and generic skills is difficult to measure there is benefit in exploring the generic nature and take up of these qualifications in more detail in order to support our understanding of current generic skills provision.
- 3.22 Problems in identifying how, where and to what extent generic skills are being developed is also, in part, due to the contextualisation of these skills in National Occupational Standards and in the design of sector specific programmes. It is generally agreed by employers, employees, training providers and government that facilitating the contextualisation of generic skills development to the particular needs of a given sector is vital to its effective implementation and take-up. Results are likely to be best if an individual can see immediate relevance to 'real world' scenarios. However, there is a risk that if generic skills become too embedded they lose visibility, and therefore are difficult to monitor. In addition, making any kind of cross-sector comparisons, or establishing a standardised national approach then becomes less feasible.
- 3.23 Contextualisation also raises the question of making a generic skill so specific (e.g. use of a particular piece of technology) that the skill becomes sector-specific and no longer generic, or transferable. The overlap between sector-specific and generic skills is an important one to recognise and may occur at an earlier stage in skills development than is thought.

### Vocational GCSEs

- 3.24 The Vocational GCSE will replace the Foundation and Intermediate GNVQ and will be available at level 2 and 3 respectively in a range of generic qualifications including business, information and communication technology and management.
- 3.25 For the most part, the existing GNVQ provision has been in relatively new subjects such as computing, communication studies and business studies. In contrast, the growth in more traditional GCSE subjects like maths, chemistry and physics was markedly lower, with entries in physics actually falling during the 1990s. Steedman et al (2000) found that the UK has a much smaller supply of individuals who have studied advanced mathematics and physics at age 16, than other countries (France, Germany, US and Singapore were the other countries considered).<sup>8</sup>
- 3.26 A key reason for this is that the base skills required for the study of mathematically-based disciplines is not being developed among young people before they complete compulsory education. Just 45% of 15 year olds gain a grade C in GCSE mathematics. Less than 10% of the cohort go on to take GCE A-level Maths, thereby limiting the pool of people that are leaving school with generic numeracy skills.<sup>9</sup>

### Vocational A levels

- 3.27 The vocational A level, or Advanced Vocational Certificate of Education (AVCE), will replace the Advanced GNVQ. The qualification has been revised to make its assessment more rigorous. The qualification is available in three, six and twelve units and is available as a number of generic qualifications including business, information and communication technology (ICT) and management.

<sup>8</sup> Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

<sup>9</sup> Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

- 3.28 Vocational A levels provide experiences and education relevant to working life but do not provide training for a specific job. Individuals develop the knowledge, skills and understanding relevant to a broad vocational area and often have experience of work within that area. The Key Skills within this qualification consist of three units: communication, application of number and information technology. To be awarded the Key Skills qualification, individuals must achieve a level, but not necessarily the same level, in each of the three key skills.
- 3.29 The Advanced GNVQ and new Vocational A' levels aim to provide individuals with a platform of generic skills on which to build a range of more technical and job specific skills. When comparing the take up of the Advanced GNVQ with the Foundation and Intermediate GNVQ the same story emerges in terms of take up. 57% of all Advanced GNVQs awarded in 1997/98 were for the business Advanced GNVQ of this qualification.<sup>10</sup>

### Key Skills

- 3.30 Key skills are defined by the DfES as being *"the generic skills, which individuals need in order to be effective members of a flexible, adaptable and competitive workforce and for lifelong learning"*. The following six key skills are designed for use in a wide range of settings including schools, colleges, training, higher education and employment:
- ▶ communication;
  - ▶ application of number;
  - ▶ information technology;
  - ▶ working with others;
  - ▶ improving own learning and performance;
  - ▶ problem solving.
- 3.31 Communication, application of number and IT are qualifications with both internal and external assessment. The Government has made a commitment to the inclusion and assessment of these key skill units in all post-16 qualification pathways. All qualifications in the National Qualifications Framework include signposting to opportunities for individuals to develop and produce evidence for these key skills.
- 3.32 The wider key skills working with others, improving own learning and performance and problem solving are separate qualifications in their own right sitting outside the National Qualifications Framework. While the wider key skills are not embedded into existing provision, research has indicated that employers and higher education institutions value evidence of the wider skills.

*Example 3.2 'In Mason's survey of employers recruiting technical graduates (1999b), 47% cited personal qualities/interpersonal skills as the single most important quality sought in graduates from IT/computer science disciplines (compared to 17% who cited technical knowledge).' [Skills Dialogues 5: An Assessment of Skill Needs in Information and Communication Technology 2001]*

3.33 For individuals in full time education or entering a government supported training programme there are a range of opportunities to work towards and achieve the key skills qualifications:

- ▶ Individuals at Key Stage 4, (14-16 year olds), can work towards and achieve the key skills of communication, application of number and IT.
- ▶ Individuals who choose to remain in full-time education at 16 or enter a government-supported training programme can work towards and achieve the key skills of communication, application of number and IT through the academic or vocational route.
- ▶ Key Skills are also included in Foundation Degrees, Graduate Apprenticeship Frameworks and some degree courses in Higher Education.

3.34 The range, availability and possible combinations of key skills vary according to which qualification or institution an individual attends. For those who choose the vocational route, there are currently three routes:

- ▶ Vocational 'A' level - to be awarded the Key Skills qualification (communication, application of number, information technology) students must achieve a level, but not necessarily the same level, in each of the three key skills.
- ▶ Foundation Modern Apprenticeship - to achieve the key skills component of FMA all individuals must achieve the communication and application of number key skills at least level 1.
- ▶ Advanced Modern Apprenticeship - to achieve the key skills component of AMA all individuals must achieve the communication and application of number key skills at least level 2.

3.35 The review of curriculum 2000 aims to give institutions the flexibility to shape their policy and match key skills provision and expectations to individuals' prior attainment, needs and aspirations. It will give individuals flexibility and choice within their programmes, with individual counselling to inform their options across key skills and levels. The Secretary of State for Education and Skills has asked that:

*"In terms of the implications for institutions and students what I want to see is key skill programmes offered to all post 16 students. Where students have not already achieved A\* - C grades in GCSE English, Maths, or ICT their programmes should lead to the formal acquisition of relevant key skills qualifications at level 2. Where students are starting on advanced levels with the aim of pursuing a professional or higher qualification post 19, then institutions should support them in gaining at least one relevant key skill qualification at level 3."*

## Cross Sector National Vocational Qualifications (NVQs)

- 3.36 Generic skills are also covered by a range of cross sector National Occupational Standards (NOS) and NVQs. These cross sector qualifications relate to occupations (e.g. administrator, manager) that are present across most sectors of the economy. Within these cross sector qualifications, generic skills are covered by particular units (e.g. administration, finance, management) which can be used across a wide range of occupations.
- 3.37 Cross sector NVQs are competence-based qualifications currently available across 2 (of the 11) national framework areas at five levels. National statistics available from QCA indicate that in terms of cumulative take up the highest numbers of NVQs are awarded in the cross sector areas. The following table outlines the take up of current cross sector qualifications within the National Framework.

**Table 3.3 Take up of Cross Sector Qualifications by National Framework Area**

National Framework Area	Cross Sector Qualifications	NVQ Level	Cumulative Awards
Providing Business Services	Accounting	2-4	158,329
	Administration	1-4	583,198
	Customer Service	2-3	111,010
	Information Technology (Using)	2-3	172,143
	Management	3-5	16,321
	Owner Management (Small Firms)	3-4	4,435
Developing/Extending Knowledge and Skill	Personnel/Training and Development	3-5	25,537
			<b>1,070,973</b>

*Note: These figures represent cumulative total awards since the inception of NVQs to 30 Sept 2000*

- 3.38 As can be seen, administration, information technology, accounting and customer service NVQs represent approximately 95% of all take up of cross sector NVQs. With the total take up of cross sector NVQs (1,070,973) representing approximately 35% of all NVQ take up (3,090,505).

## Cross Sector Modern Apprenticeship (MA) Frameworks

- 3.39. A key route to achieving NVQ qualifications is through the Foundation Modern Apprenticeship (FMA) and Advanced Modern Apprenticeship (AMA) programmes. In 1999-2000, approximately one third of all leavers from the FMA achieved a level 2 qualification (14,500 qualifications in total), with a higher proportion of leavers from the AMA achieving a level 3 qualification (26,000).<sup>11</sup>

3.40 Again, the occupational areas in which trainees on these programmes are participating indicate a significant take up in the cross sector areas, particularly business administration, customer service and information technology. As the following table shows 33% of all FMA trainees and 22% of all AMA trainees are working towards a cross sector framework.

**Table 3.4 Participation by Cross Sector Apprenticeship Framework**

Cross Sector Framework	Number training as % of all on:		% of young women training:	
	FMA	AMA	FMA	AMA
Business Administration	15	11	77	81
Customer Service	11	8	67	69
Information Technology	4	1	16	22
Accountancy	3	1	58	61
Management	N/A	1	59	N/A
<b>Total %</b>	<b>33%</b>	<b>22%</b>		

3.41 As can be seen there is also a strong gender dimension to this with, for example, 81% of AMA trainees in business administration being female compared to around 78% of AMA trainees in information technology being male.

### Sector NVQs and MA Frameworks

3.42 In addition, there are a large number of sector bodies, all of which have an interest and responsibility for generic skills in their industry sector. In addressing the generic skill needs of an industry sector many of these bodies implement key skills through their apprenticeship frameworks and/or import units from cross sector qualifications to address generic skill needs within their sector specific qualifications.

*Example 3.3 'Critical skills that courses offer include not just the practical and vocational elements, but also softer, more generic skills. Indeed, much effort in recent years has been directed at capturing some of these qualities in formal qualifications systems. Modern Apprenticeships have introduced such concepts into the qualifications system, [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

3.43 To illustrate the number of cross sector units imported by sector bodies to meet generic skill needs, table 3.5 lists the number of imported units across the cross sector areas of administration, customer service, information technology and management. This table indicates that a total of 619 of these cross sector units have been imported within sector specific qualifications across the national framework. In reviewing these figures it is evident that the most significant take up of cross sector units has been in the areas of management and information technology. With the majority of cross sector units being imported into qualifications categorised in the business services area of the national framework.

**Table 3.5 Number of imported units from cross sector by National Framework Area**

National Framework Area	Number of units imported from:				
	Admin	Cust. Service	Using IT	Mgmt	Total
1. Animals/Plants	1		8	8	17
2. Natural Resources			3	1	4
3. Construction	6	2		10	18
4. Engineering	3		7	10	20
5. Manufacturing	8			38	46
6. Transporting	4			2	6
7. Providing Goods and Services	54	13	19	63	149
8. Health Social Protective	19		4	28	51
9. Business Services	55	45	103	63	266
10. Communicating	4		27	8	39
11. Knowledge and Skills	2			1	3
<b>Total</b>	<b>156</b>	<b>60</b>	<b>171</b>	<b>232</b>	<b>619</b>

3.44 It is also interesting to compare these broad figures relating to the take-up of imported units with the type of units that have been consistently imported into sector specific qualifications. Table 3.6 illustrates that over 50% of the take up of administration, customer service, management and information technology cross sector units is distributed across 12 units. As can be seen from the table the majority of these units relate to management skills with the unit with the most significant take up relating to health and safety.

**Table 3.6 Summary of the most frequently imported cross sector units**

Unit Title	Number of units	Cross Sector Area
Ensure your own actions reduce risks to Health and Safety	80	IT
Manage yourself	46	Management
Lead the work of teams and individuals to achieve their own objectives	42	Management
Contribute to the development and selection of personnel for activities	27	Management
Support the efficient use of resources	24	Management
Maintain information for action	16	Management
Create effective working relationships	16	Management
Draft and prepare documents	14	Administration
Maintain and use databases	13	IT
Receive and transmit information	12	Administration
Develop customer service	12	Customer Service
Respond to poor performance in your team	11	Management

3.45 In the context of reviewing the take up and distribution of these units, it is important to note that the QCA encourages sector bodies responsible for the development of NOS and NVOs to import existing units where they are available and meet the needs of their sector. However, the sector bodies also have the flexibility to develop units to meet the needs of their sector. In conducting a wider review of units within the National Qualifications Framework there are also a proliferation of units covering generic skill areas such as working effectively and health and safety.

3.46 The implementation of key skills within modern apprenticeship and the importation of units within NVOs aims to encourage flexibility, transferability and promote mobility in a changing labour market. However, until there is a more structured approach at a national and sector level to meeting the generic skill needs of employers and individuals this will be difficult to achieve.

### Vocationally Related Qualifications

3.47 There are approximately 17,000 traditional vocational qualifications which are not NVOs. They include highly regarded qualifications such as the BTEC National Diploma as well as single skill certificates. QCA is currently consulting on ways to incorporate these qualifications into the national qualifications framework.

## Training

3.48 The expansion of formal education has played an important part in the growth of qualifications amongst the UK workforce. However, there has been a growing disquiet amongst some employers regarding the academic shift that has been perceived in the specification and measurement of key skills. The increased emphasis on external assessment and certification has been criticised by employers and may cause some to review their involvement in government education and training schemes. For those employees with low or no levels of qualifications, and who have shown reluctance in the past to participate in compulsory education, a formal learning environment is unlikely to be the means by which to improve qualification attainment. To such individuals, it is important that generic skills training is not presented as an 'academic exercise'. Workplace learning may therefore provide the most appropriate route for upgrading the qualifications and skill levels for such employees.

## Work-place Training

3.49 In regards to types of workplace learning, there is evidence to suggest that the provision of on-the-job training is significantly higher than off-the-job training. According to the Learning and Training at Work 2000 survey, 41% of employers have provided off-the-job training and 90% on-the-job training within the last 12 months. Furthermore, training relating to information technology (43%), managing your own development (41%), working with others (38%), communication (34%) and problem solving (32%) were amongst those most commonly provided by employers in 2000.<sup>12</sup>

3.50 Work-based training is often comparatively informal<sup>13</sup>, focussing on learning by imitation and experience. This can provide an important opportunity for learning generic skills and developing personal attributes, which are often associated more with maturity and exposure to business practice e.g. leadership, judgement and commercial awareness.

3.51 Intuitively one might expect many low qualified individuals to be more comfortable learning in this way than in more formal settings which bear closer resemblance to the classroom-based courses where they enjoyed limited success in the past. It is therefore important to note that not all informal learning is necessarily captured by statistical data. Generally survey respondents tend to adopt a relatively narrow definition of training<sup>14</sup> and as a result recorded statistics may underestimate the extent of training activity.

## Off-the-job training

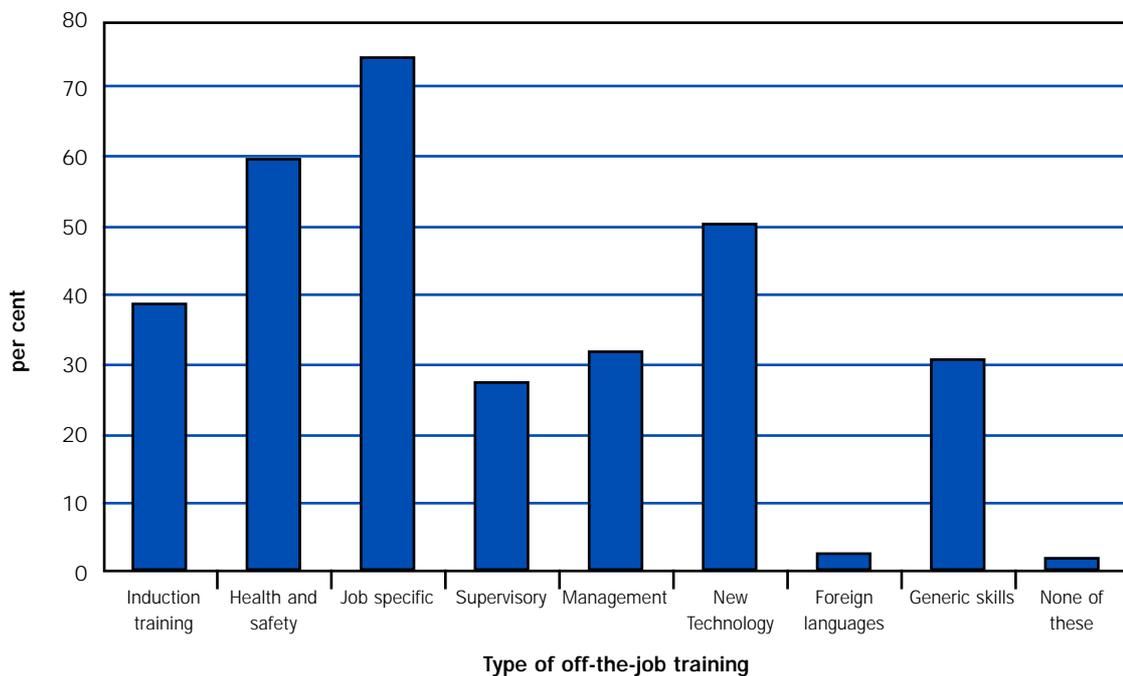
3.52 Where it is offered, off-the-job training is most commonly provided in respect to 'job specific' (75% of establishments) and health and safety (60%); approximately half that number of establishments resource training in generic skills. However, if generic skills are also understood to incorporate Supervisory, Management and New Technology training, it becomes apparent that there is in fact quite considerable levels of cognitive skills development.

12 Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

13 (Stern et al. 1999) Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

14 (Felstead et al. 1997) Skills for all: Research Report from the National Skills Task Force [DfEE] 2000

**Figure 3.1 Type of Off-the-Job Training Provided<sup>15</sup>**



Base: All establishments providing off-the-job training

Source: ESS 2001 (IER/IFF)

3.53 There is a direct relationship between the size of an establishment and the incidence of training, with skills development in off-the-job training increasing with number of employees. This is especially noticeable in training connected with Management, Languages, IT and other generic skills. Overall, training in these types of skills are two, three or sometimes four times greater when comparing either end of the size spectrum. In the case of Languages, the opportunities for training increase seven fold when comparing the smallest with the largest establishments.

**Table 3.7 Type of Off-the-Job Training by Size of Establishment<sup>16</sup>**

	1-4	5-24	25-49	50-99	100-199	200-499	500-999	1000+	Total
Induction training	26	47	60	65	71	76	83	84	39
Health & Safety or First Aid	46	70	83	86	88	89	92	91	60
Job specific training	72	74	82	83	86	90	90	94	75
Supervisory training	15	32	47	52	63	73	77	84	27
Management training	22	37	53	59	68	79	83	88	33
Training in new technology	46	52	61	66	75	78	87	89	51
Training in other languages	3	2	3	7	11	12	24	21	3
Soft/generic skills training	22	38	44	51	60	71	81	86	32
None of these	3	2	1	1	*	*	*	0	2
Don't know	*	*	*	*	*	*	*	2	*
Weighted base	376610	253188	59580	35440	13775	9787	1784	957	751122
Unweighted base	1239	5290	4771	2797	2310	1615	430	235	18687

Base: All establishments providing off-the-job training

Source: ESS 2001 (IER/IFF)

- 3.54 Research evidence confirms that smaller firms provide the least training to their workers, but also that they have the lowest levels of, or no, internal personnel and training support to help implement effective approaches to training. With a third of the workforce employed in firms with fewer than 50 employees, helping to raise aspiration and capability in such employers will be key to increased adult participation in learning.<sup>17</sup>
- 3.55 Support for small employers is essential for successfully raising adult skills levels and for embedding an effective vocational education and training system. The National Skills Task Force proposes three key areas of action:
- ▶ The Learning and Skills Council should work with the University for Industry (Ufi) to create employer learning networks around learning centres in local or sectoral clusters.
  - ▶ The Small Business Service should prioritise programmes to introduce modern flexible working practices to small businesses because evidence shows that this improves both competitiveness and employer investment in learning.
  - ▶ The Government should incentivise training and development best practice in employers with less than 50 employees through either a tax credit against, or a reduction in, the small business rate of corporation tax for the achievement of Investors in People.<sup>18</sup>

<sup>16</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DFES] 2001

<sup>17</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DFEE] 2000

<sup>18</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DFEE] 2000

3.56 Turning to off-the-job training across sectors, the following patterns can be seen:

- ▶ Supervisory and management training is most prevalent in the finance, public administration, education, health and social care sectors. By contrast, only about a third as many establishments in agriculture and construction offer such training.
- ▶ The development of IT skills is most likely in the finance, public administration, education and business services industries.
- ▶ Other generic skills training is particularly visible in public administration, but is also strong in hotels/restaurants, finance and health and social care.

3.57 In large part the type of training provided is simply a reflection of the incidence of training. The more employers engage in training, the more likely they will do so across all designated areas of training. Hence, the overall incidence of training is high in public administration and the incidence of each type of designated training is also relatively high.<sup>19</sup>

**Table 3.8 Off-the Job Training by Industry<sup>20</sup>**

	Agriculture	Manufacturing	Construction	Wholesale/retail/repair	Hotels/Restaurants	Transports/Communications	Finance	Business Services	Public Admin	Education	Health/Social Care	Other Services	Total
Induction training	22	44	32	41	46	42	52	30	53	56	54	36	39
Health & Safety or First Aid	84	68	66	56	85	57	58	44	78	75	74	63	60
Job specific training	73	70	68	73	64	69	89	78	86	84	75	73	75
Supervisory training	15	31	16	26	40	28	43	19	45	43	40	24	27
Management training	10	32	13	30	47	30	45	29	56	54	52	27	33
Training in new technology	26	56	44	45	28	56	69	61	68	65	42	48	51
Training in other languages	1	4	1	1	5	3	5	4	2	6	2	1	3
Soft/generic skills training	15	26	8	35	48	32	48	25	60	44	49	38	32
None of these	2	2	4	3	1	2	*	2	*	*	1	1	2
Don't know	*	*	0	*	*	*	0	*	*	*	*	*	*
Weighted base	18007	55984	62001	144414	39662	23122	18806	207823	14946	36832	65394	61662	751122
Unweighted base	178	3009	1410	2169	1799	1124	599	2903	470	1308	2056	1557	18687

Base: All establishments providing off-the-job training

Source: ESS 2001 (IER/IFF)

19 Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

20 Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

## Identifying and evaluating generic skills supply

- 3.58 The problems in measuring generic skills are one of the key obstacles in assessing their supply. There has been much useful discussion as to the most effective way to quantify the importance, value and usage of generic skills in the workplace, but as yet there is little consensus on how to quantify such skills. Whether data is gathered from employers or employees, there still remains an element of subjectivity and ambiguity. Issues surrounding the conceptualisation, identification, and measurement of generic skills cause difficulties in establishing a common framework by which to accurately assess these types of skills.
- 3.59 These problems are further compounded by the lack of certification for many of the generic skills. Even where they do form part of vocational qualifications, these relevant modules are not always compulsory, so uptake, and therefore supply, is difficult to ascertain. Whilst companies may value the demonstration of generic skills, they are not necessarily formally recognised, nor built into skills assessment procedures, especially in many of the smaller firms.

*Example 3.4 'The ACS requirements ensure that those working on gas installation meet the required standards on competence and safety. However, registration does not cover softer skills such as customer care or business skills, and it is possible that there is a failure to appreciate the importance of these skills - particularly since most installers are self-employed, and hence are assessing their own skills.' [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

- 3.60 With limited documented evidence therefore to prove the development of such skills, employees are not always in a position to 'profit' from such skills when moving job, company or even sector. The utility of previous employer references is known to be limited by low validity, low reliability, poor response rates and leniency bias. The interview and the curriculum vitae still remain the main methods of selection. Yet the reliability of these methods in detecting and gauging interpersonal skills is mixed, thus potentially accounting in part for the low market valuation put on communication and interpersonal skills.<sup>21</sup>
- 3.61 The 'hidden' nature of some generic skills impacts their supply; employers and government can not necessarily rely on the labour market to advance the acquisition of such skills. The onus falls on companies to ensure generic skills become inculcated through the routines of daily work and through on-the-job training. The onus also falls on government to ensure that qualifications and training provision deliver improved generic skills in a range of fields, so that individuals are likely to raise their levels of these skills in the course of their other training.<sup>22</sup> To accelerate the development of generic skills, areas that need to be addressed include:
- ▶ Visibility of generic skills – training employees to demonstrate, and employers to recognise, generic skills.
  - ▶ Communicating the values inherent in generic skills - assisting the market place to measure them in absolute terms wherever possible.
  - ▶ Creating a demand led market for generic skills – encouraging employers to include generic skills in setting remuneration and thereby driving employees to upskill by showing them premium earning possibilities.

<sup>21</sup> Market Value of Generic Skills, Research Paper 8 Green. F, University of Kent, [DfEE] 1999

<sup>22</sup> Market Value of Generic Skills, Research Paper 8 Green. F, University of Kent, [DfEE] 1999

- 3.62 There are a range of initiatives that could be employed by the Government and key stakeholders to equip current employees and future employees with the generic skills required for maximum employability and to develop an ethos of life-long learning.
- ▶ National Curriculum education: Consolidating and safeguarding generic skills learning in schools and through Further Education/Higher Education – setting behavioural patterns for the workplace.
  - ▶ Non-experienced workers: Up-skilling new entrants to the workforce with complimentary generic skills and establishing an understanding of their importance.
  - ▶ Experienced workers: Re-training older employees/returners to work who may have accumulated extensive sector specific skills but may lack the complementary wider generic skills, particularly IT skills – reducing vulnerability to labour market changes.
  - ▶ Unqualified employees: assisting employees who may have generic skills, but no qualifications or formal training to prove so, to demonstrate and communicate their added value to employers.

*Example 3.5 'Our key goal for young people is for a system that ensured all individuals received "a sound foundation [of skills and knowledge] which equips them properly for working life and widens opportunities for further learning and economic mobility". The first expectation we should have of compulsory schooling is that young people should emerge from it literate and numerate. They should also have sufficient general education to be able to participate effectively in society and in further learning. However, this is not enough. They need, in addition, to have acquired a sound base in the generic skills which are so much sought by employers.'* [Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force 2000]

- 3.63 To meet the demands of the modern workplace, it is essential that generic skills supply is developed alongside technical and practical skills sets. If employees are to be able to demonstrate the versatility needed to cope with the changes in labour market requirements, they need to be equipped with a broad combination of skills on which to draw from. Technical and generic skills need to be more closely allied with and applied in combination. This may require the contextualisation of generic skills training if employer investment and buy-in is to be maximised. The demand for this mix of skills is evident throughout the Sector Skills Dialogues and National Skills Task Force Reports.
- 3.64 To resolve the shortfalls in generic skills supply, employers, education establishments and training providers need to take shared responsibility for action and adopt a co-ordinated approach to responding to labour force needs.
- 3.65 In particular, the use of quality models such as the Business Excellence Model, quality circles, working towards Investors in People have all been strongly linked to the formation of new work-specific skills as well as mechanisms to improve the supply of generic skills.<sup>23</sup>

## 4. Demand/Supply Balance for Generic Skills

- 4.1 This section examines the current balance between the demand and the supply of generic skills in the UK workforce and also looks at trends in these skill patterns over recent years.
- 4.2 The imbalances between skill needs and their provision are termed 'skill deficiencies' and are broken down into two principal categories:
- ▶ External recruitment problems – these are associated with the difficulties in finding the necessary skills amongst applicants and can occur as 'hard-to-fill' (although these are not necessarily always specifically related to skill deficiencies) and 'skill shortage' vacancies. Skill shortage vacancies are hard-to-fill vacancies caused by a low number of applicants with the required skills, lack of work experience and/or insufficient qualifications.
  - ▶ Internal skill problems found amongst existing employees are referred to as 'skill gaps'; they indicate the skills which are lacking in an organisation's workforce and which prevent business objectives being met. In addition to these, there exist 'latent skill gaps' which are those skill deficiencies which are unreported, or remain undetected by employers until they seek to improve performance levels.
- 4.3 In terms of all skill types, there are still a considerable number of businesses affected by skill-related problems. Around 1 in 10 establishments experience some form of skill deficiency, whether in the external labour market or within their own workforce.<sup>1</sup> However, findings from the ESS 2001 show that skill deficiencies have lessened, with vacancies reported by 27% of establishments, compared to 32% of establishments in 1999. There were 8,000 fewer skill shortage vacancies reported in this survey, representing an 8% decrease. The number of internal skill gaps has decreased by around 112,000, or 13%.<sup>2</sup>

*Example 4.1 A West London TEC survey (1999) found that while skill shortages among IT professionals 'remain an area for concern', they had not reached the magnitude of past predictions earlier in the 1990s. Key skill gaps were not specifically ICT related and included business knowledge, design skills, project management, problem solving and customer focus.' [Skills Dialogues 5: An Assessment of Skill Needs in Information and Communication Technology 2001]*

- 4.4 The overall analysis of skills deficiencies may appear positive, but the changes in occupational structure and work organisation over recent decades has significantly impacted the demand for new skill sets with increasing emphasis on generic skills, often in combination with technical and job-specific skills. Whilst there is wide recognition of the rise in importance of generic skills, many sectors have not yet clearly 'conceptualised' such skills, nor yet established a formal or systematic programme for their development. This is likely to cause a problem in terms of supply, a fact which is already being demonstrated in most industries at some level.

<sup>1</sup> Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

<sup>2</sup> Employers Skill Survey 2001 Hogarth. T et al, IFF Research Ltd. and IER [DfES] 2001

- 4.5 Over recent years, much attention has been concentrated on some of the more 'fundamental' skills such as numeracy, literacy and IT. However, skills such as communication, problem solving and team working are in high demand from employers and pose some of the most serious problems in terms of skills gaps.

*Example 4.2 'Respondents indicated that current skill deficiencies lie in three principal areas: Communication (55%); Customer handling (54%); Team working (49%).' [Skills Dialogues 3: An Assessment of Skill Needs in Transport 2001]*

## Recruitment Difficulties

- 4.6 Skills problems related to recruitment can manifest themselves as 'hard-to-fill' and skill shortage vacancies. The severity of external skill deficiencies is greater in establishments which are more demanding in terms of the skills required of new applicants. This is likely to be the case in those organisations which are adopting modern work practices such as team working, job rotation etc.<sup>3</sup>

*Example 4.3 'In the Employer Skills Survey, over three-quarters of construction and contracting firms reported that they have difficulties in meeting their customer service standards as a result of recruitment problems.' [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

- 4.7 As the work force as a whole seeks to upskill and employees are expected to demonstrate an increasingly broad range of skills, difficulties in recruitment are increasingly characterised by candidate 'quality' issues, rather than quantity or availability concerns. Employers complain of a lack of client management skills, the ability to work flexibly and show a willingness to learn.

*Example 4.4 'The nature of the experience employers are looking for is not purely technical but relates more to the application of technical skills in a business environment (e.g. dealing with clients, rapidly changing requirements, linking with other business systems etc.) Employers recruit as many graduates from non-IT as from IT subjects, mainly for their personal skills, aptitude and intelligence.' [Skills Dialogues 5: An Assessment of Skill Needs in Information and Communication Technology 2001]*

- 4.8 Increasingly, employers in many sectors consider the generic skills of graduate recruits to be as crucial as their technical competence. Research has shown that many graduates themselves consider generic skills to be those most important for success in the labour market.<sup>4</sup>

<sup>3</sup> Skills and Performance: An econometric analysis of employers skill survey 1999

<sup>4</sup> Bosworth. D. et al., IER, [DFES] 2001

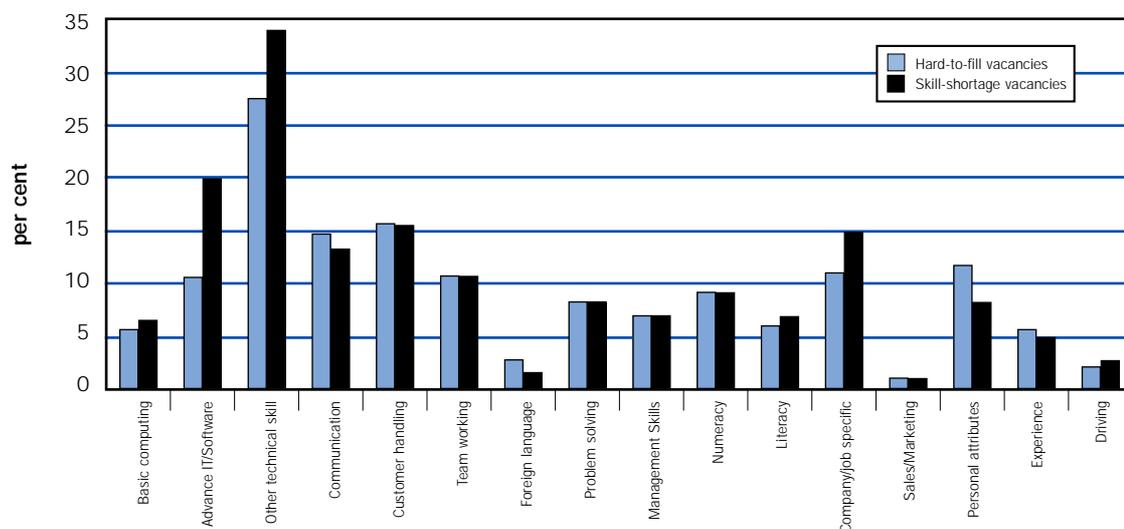
- 4.9 There is often an expectation that graduates, including those from more conventionally technical faculties, should be able to demonstrate the generic skills required in the new generation work place, such as communication and presentation skills. However, in actuality, many graduates are perceived to fall short in such skills, especially in interpersonal skills, commercial awareness and work readiness.
- 4.10 A review by Mason (2001), shows that in some sectors, graduates are now being recruited into occupations that until recently have been filled by people with intermediate skills. Graduates are often preferred by employers because of their more developed generic skills, such as information handling and problem solving as well as superior academic or technical qualifications. However, difficulties encountered by employers in recruiting graduates confirm the problems associated with 'quality shortcomings' in some graduate job applicants – especially lack of practical work experience and business knowledge – and reflect a continuing demand by employers for workplace skills that are most easily acquired through employment-based intermediate skills training.<sup>5</sup>

*Example 4.5 'In engineering services, the most important skills that employers say are missing in school leavers are communications skills, problem-solving and customer service. The last of these is also the most serious deficiency among graduate recruits, followed by lack of both managerial and job-specific skills.'*  
*[Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

- 4.11 The impact of a lack of generic skills has forced some employers to opt for taking on candidates that demonstrate 'personality attributes' rather than cognitive or technical abilities. Although far from ideal, the lack of applicants with suitable generic skills is having to be remedied whilst 'on-the-job', and a willingness to learn and development potential has now become the minimum requirement for employability within some industries.

### **Skills associated with recruitment difficulties**

- 4.12 As demonstrated by the graph below, the requirement for generic skills in regards to hard-to-fill and skill shortage vacancies are comparable, with Communication, Customer handling and Team working shown as most important. The need for Basic computing skills is marginally more pronounced in skill shortage vacancies, whilst Communication (including Foreign language) is associated more in terms of hard-to-fill positions.

**Figure 4.1 Skills sought in connection with hard-to-fill and skill-shortage vacancies<sup>6</sup>**

Base: Hard-to-fill and skill shortage vacancies

Source: ESS 2001 (IER/IFF)

## Hard to fill vacancies

4.13 In 1999, personal and protective services, sales and craft and related occupations accounted for 47% of all hard-to-fill vacancies but by 2001, this figure had decreased to 35%. By contrast, elementary occupations, associate professional and technical occupations and professionals now account for almost half of all hard-to-fill vacancies, whereas in 1999, only a quarter of all hard-to-fill vacancies were to be found in these occupations.<sup>7</sup>

*Example 4.6 'There are rapid increases in the employment of sales and customer services workers in the construction and specialist contracting sector – occupations in which the sector has traditionally been very weak. A lack of customer care skills accounts for a significant share of skill shortages in the sector.' [Skills Dialogues 1: An Assessment of Skill Needs in Construction and Related Industries 2000]*

4.14 There exist some clear patterns across occupations as to the generic skills sought in relation to hard-to-fill vacancies. Key occupational groupings showing particular recruitment problems are:

- ▶ Sales/Customer Services, perhaps unsurprisingly in light of the significant growth in the tertiary industries, are experiencing deficiencies in Communication and Customer Handling skills.
- ▶ Managers/Senior officials show a deficit in Team working, Problem solving and Management skills.
- ▶ Admin/Secretarial occupations encounter hard-to-fill vacancies especially in relation to Basic Computing.

<sup>6</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

<sup>7</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

**Table 4.1 Skills sought in connection with hard-to-fill vacancies, by occupation<sup>8</sup>**

Column percentages

Occupations	Managers/Senior Officials	Professionals	Associate Professionals	Admin/Secretarial	Skilled Crafts	Personal Services	Sales/Customer service	Operatives	Elementary Occupations	Total
<b>Skill</b>										
Basic Computing	14	12	4	23	1	5	3	2	1	6
Advanced IT	14	40	25	17	2	2	2	2	1	11
Other Technical/ Practical	30	30	21	21	60	23	10	34	17	28
Communication	15	5	11	18	5	22	33	15	17	15
Customer Handling	26	4	11	29	5	27	34	12	16	16
Team Working	30	3	9	10	5	18	19	11	10	11
Foreign Language	1	3	4	4	2	4	2	1	1	3
Problem Solving	26	5	5	18	5	8	11	5	5	8
Management	25	6	7	9	3	4	13	2	3	7
Numeracy	20	4	2	13	4	14	22	6	6	9
Literacy	6	1	2	19	4	3	9	9	5	6
Company specific	20	19	12	10	12	11	3	8	7	11
Sales/marketing	*	*	2	*	0	0	2	0	*	1
Personal attributes	3	1	3	9	15	16	17	17	23	12
Experience	5	4	48	4	4	4	4	5	3	6
Driving	*	*	*	*	0	1	1	14	1	2
DK/NS	25	19	18	22	20	32	17	21	33	22
Weighted Base	12784	40757	59386	25455	57222	38671	44725	32974	45529	357681
Unweighted Base	587	3344	4117	1714	2345	2578	1932	2667	3128	22433

Base: All hard-to-fill vacancies

Source: ESS 2001 (IER/IFF)

## Skill Shortage Vacancies

4.15 One in 25 of all employers report the existence of skill shortage vacancies and the total number of skill shortage vacancies is around 159,000. One third of skill shortage vacancies take over 6 months to fill.<sup>9</sup>

4.16 As is shown in the table below, just over a fifth of establishments with skill-shortages require technical and generic skills in combination, but overall (with Skilled Trades as the notable exception) greatest need is for generic skills only (35%). Those occupations where the need for generic skills only is most acute are Sales, Managers/Senior Officials, Admin/Secretarial and Personal Services.

**Table 4.2 Skills sought in relation to skill-shortage vacancies and occupation<sup>10</sup>**

Row percentages

Occupations	Type of Skill Sought					Total	Weighted Base	Unweighted Base
	Technical skills only	Generic skills only	Technical & generic skills in combination	No particular type of skill				
Managers/senior officials	15	48	26	11	100	4894	175	
Professionals	30	29	24	17	100	12265	382	
Associate professional	29	33	19	18	100	13040	384	
Admin./secretarial	18	46	25	12	100	6556	133	
Skilled trades	41	22	21	16	100	6556	214	
Personal service	13	45	17	26	100	14633	384	
Sales	20	54	19	6	100	6227	155	
Operatives	34	31	17	18	100	8285	147	
Elementary occupations	19	40	14	27	100	7778	221	
All	27	35	21	17	100	75081	2033	

Base: All Establishments with skill-shortage vacancies

Source: ESS 2001 (IER/IFF)

Note: Technical Skills refer to advanced IT/software skills and other technical/practical skills.

Generic Skills refer to basic computer literacy, communication skills, customer handling skills, team working, problem solving, management skills, numeracy and literacy skills.

<sup>9</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

<sup>10</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

4.17 Table 4.3 shows the distribution of skills required in relation to skill-shortage vacancies. Whilst Technical and Advanced IT skills are of top importance, there are significant levels of generic transferable skills sought as well, most notably: Customer handling (16%); Communication (13%) and Team working (11%).

**Table 4.3 Skills Sought in Connection with Skill Shortage Vacancies<sup>11</sup>**

Skill Sought	% of all skill shortage vacancies
Other Technical/Practical	34
Advanced IT	20
Customer Handling	16
Company specific	15
Communication	13
Team Working	11
Numeracy	9
Problem Solving	8
Personal attributes	8
Literacy	7
Basic computing	7
Management	7
Experience	5
Driving	3
Foreign Language	2
Other	16

Source Hogarth et al table 2.19; p 37

Base: All Skill Shortage Vacancies

4.18 Skill-shortage vacancies are mainly found in professional, associate professional and technical and skilled trade occupations. Over time, greatest growth in skill-shortage vacancies has been in professional occupations, which now account for 19% of skill-shortage vacancies compared to 8% in 1999. However, the proportion of skill-shortage vacancies accounted for by craft and related occupations (skilled trades) has fallen from 20% to 15%.<sup>12</sup>

4.19 The most notable generic skills required in regards to skill-shortage vacancies are:

- ▶ Basic computing in relation to Managers/Senior officials and Administrative/Secretarial occupations.
- ▶ Communication skills are lacking most acutely in Personal Service and Sales/Customer service vacancies.

<sup>11</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

<sup>12</sup> Employers Skill Survey 2001 Hogarth. T et al, IFF Research Ltd. and IER [DfES] 2001

- ▶ Customer handling skills are most often reported to affect applicants for Personal Service and Administrative/Secretarial positions.
- ▶ Team working, Problem solving, Numeracy and Management are all sought particularly in relation to Managers/Senior officials.

**Table 4.4 Skill-shortage vacancies by occupation<sup>13</sup>**

Occupations	Column percentages									
	Managers/Senior Officials	Professionals	Associate Professionals	Admin/Secretarial	Skilled Crafts	Personal Services	Sales/Customer service	Operatives	Elementary Occupations	Total
<b>Skill</b>										
Basic Computing	23	16	1	23	1	2	4	3	2	7
Advanced IT	21	51	41	22	2	3	4	2	1	20
Other Technical/ Practical	43	29	24	23	64	22	13	39	28	34
Communication	16	4	8	17	6	33	35	11	15	13
Customer Handling	36	3	8	44	5	41	38	8	12	16
Team Working	41	2	4	7	5	32	23	11	9	11
Foreign Language	1	2	4	2	1	2	1	1	2	2
Problem Solving	38	5	4	23	5	7	5	6	6	8
Management	27	5	8	8	2	5	18	2	2	7
Numeracy	31	3	3	13	5	28	18	4	6	9
Literacy	9	1	2	27	4	4	16	9	7	7
Company specific	32	19	14	15	15	15	4	14	5	15
Sales/marketing	*	*	4	1	0	0	5	0	16	1
Personal attributes	2	1	2	15	1	3	33	22	3	8
Experience	7	4	6	5	5	3	6	6	1	5
Driving	*	*	1	0	0	*	2	24	1	3
DK/NS	5	10	9	8	14	29	4	9	29	13
Weighted Base	7436	28886	28287	10831	31592	14889	14500	14440	8100	159081
Unweighted Base	327	1993	2036	896	1188	760	533	1077	537	9357

Base: All skill-shortage vacancies

Source: ESS 2001 (IER/IFF)

## Skills Gaps

- 4.20 The widespread evidence of skill gaps across the British workforce signals concern about the proficiency of employee skills. Approximately one out of every 14 establishments report problems of skill gaps amongst their staff.<sup>14</sup>
- 4.21 Although skill deficiencies overall have decreased since the ESS 1999, in terms of quantity, internal skill gaps are more prevalent than skill shortage vacancies. According to employers, about 1.9 million people are not fully proficient in their jobs. Using a definition where 'a third or more staff in at least one occupational area' is not fully proficient in their job, 7% of establishments claim to be encountering a skills gap.<sup>15</sup>
- 4.22 Skills gaps, including generic ones, are particularly likely to become apparent in those organisations which are committed to structuring resources in line with new work practices. As a company responds to increased competition by focusing on quality, performance, team working and IT usage, deficiencies in the skills available are magnified. Since pressures in the modern workplace affect all levels from senior management through to elementary occupations, skills gaps are not necessarily restricted to any particular level of employee. However, there do appear to be occupation groups that are particularly susceptible to lower levels of proficiency, particularly those in lower-skilled occupations. Small establishments are much less likely to report internal skill gaps. Between 20% and a quarter of all establishments employing 25 or more people, report an internal skills gap.<sup>16</sup>
- 4.23 When trying to meet the needs of internal skill gaps, employers are more likely to look to generic skills development than is the case for skill shortage vacancies. Generic skills on their own are particularly sought at four levels: Managers/Senior officials; Personal Service; Sales and Elementary Occupations. In combination with technical abilities, generic skills are especially needed to meet skill gaps in Administrative/Secretarial and Operative occupations.

**Table 4.5 Type of skills sought in relation to internal skill gaps<sup>17</sup>**

Occupations	Type of Skill Sought				Total	Row percentages	
	Technical skills only	Generic skills only	Technical & generic skills combination	No particular type of skill		Weighted Base	Unweighted Base
Managers/senior officials	8	53	29	9	100	94091	10168
Professionals	13	40	34	13	100	41810	4411
Associate professional	21	38	33	9	100	40571	3676
Admin./secretarial	17	36	39	9	100	89451	9049
Skilled trades	21	33	29	18	100	56965	5355
Personal service	5	54	20	21	100	75628	8609

14 Skills in England 2001: Key messages Campbell. M., Leeds Metropolitan University [DfES] 2001

15 Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

16 Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

17 Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

Sales	5	52	31	12	100	117640	10699
Operatives	17	34	37	12	100	115776	15957
Elementary occupations	8	53	19	20	100	99330	12563
All	12	45	30	14	100	731262	80488

Source: ESS 2001 (IER/IFF)

Base: Internal Skill Gaps which were followed up: employee based measure

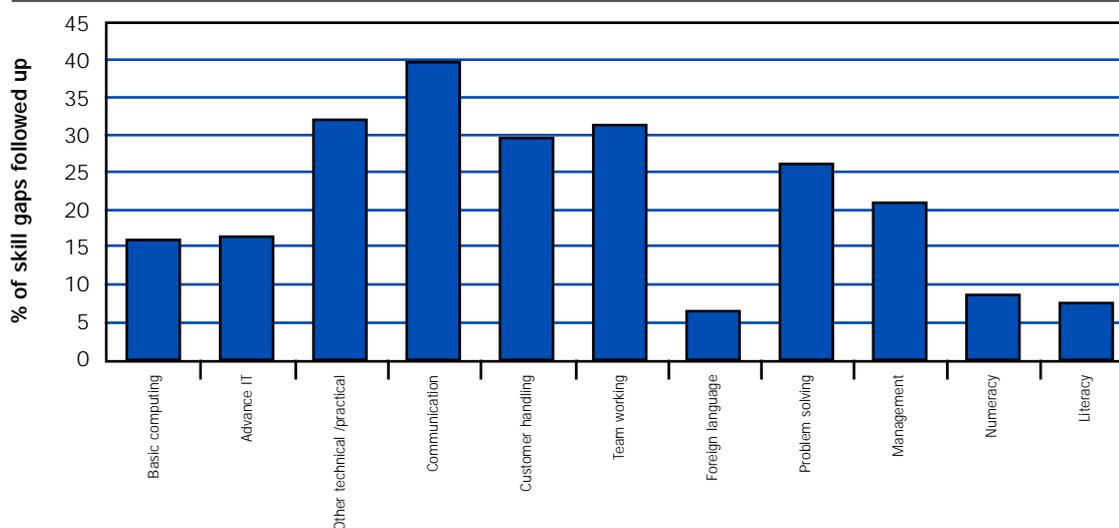
Note: 'Technical skills' here comprise advanced IT and other technical/practical skills; 'Generic skills' comprise communication skills, customer handling skills, team working skills, problem solving skills, basic computer literacy, management skills, numeracy skills and literacy skills

4.24 The critical importance of generic skills deficiencies associated with skill gaps is demonstrated in the graph below. In contrast to skills issues surrounding recruitment difficulties where Advanced IT and Technical needs are a priority, skill gaps are characterised by acute proficiency problems in many generic skills. This confirms the overall trend in upskilling in 'cognitive' skills and the need in interpersonal skills to respond to the changing business environment that many companies are facing.

*Example 4.7 'Skills gaps and the lack of crucial generic skills, shortages in areas of rapidly changing technology, the quality of all technical skills and the ability to apply them in a business context, are all likely to remain issues of concern over the coming years.' [Skills Dialogues 5: An Assessment of Skill Needs in Information and Communication Technology 2001]*

4.25 In particular, Communication, Team working and Customer handling are highlighted as 'hot spots'. Management and Problem solving are also shown to be significantly lacking.

**Figure 4.2 Skill characteristics of internal skill gaps<sup>18</sup>**



Source: ESS 2001 (IER/IFF)

Base: All internal skill gaps which were followed up: employee based measure

4.26 The table below examines the pattern of generic skills gaps across the occupational groups. Communication skills (40%), team working skills (32%), customer handling skills (30%) are of similar importance across most of the occupational areas. Skills which feature in connection with specific occupations are:

- ▶ Basic computing skills are most associated with Administrative/Secretarial posts.
- ▶ Communication, Team working and Management skill gaps are most acute in relation to Managerial/Senior official occupations. Team working skills were also frequently mentioned in regards to Production and Process Operatives.
- ▶ Customer handling skills are needed to meet Sales and Customer services roles in particular.
- ▶ Foreign language skill gaps were not especially important, but were most commonly associated with Administrative/Secretarial occupations.
- ▶ Problem solving skills were of particular issue for Professionals and Production and Process Operatives.

**Table 4.6 Skill characteristics of occupational skill gaps<sup>19</sup>**

Occupations	Column percentages									
	Managers/Senior Officials	Professionals	Associate Professionals	Admin/Secretarial	Skilled Trades	Personal Services	Sales/Customer service	Production and Process Operatives	Elementary Occupations	Total
<b>Skill characteristics</b>										
Basic Computing	19	15	16	25	12	8	20	16	7	16
Advanced IT	24	34	27	35	12	7	16	10	5	17
Other Technical/ Practical	23	21	40	33	42	21	28	51	24	32
Communication	47	39	41	38	29	39	43	39	37	40
Customer Handling	22	27	26	28	21	38	48	16	33	30
Team Working	39	27	26	26	29	33	28	37	32	32
Foreign Language	7	7	8	12	5	5	6	7	5	7
Problem Solving	24	33	25	27	22	19	29	34	21	26
Management	56	34	22	26	16	10	19	13	8	22
Numeracy	3	5	6	10	7	9	9	16	10	9
Literacy	2	3	6	8	5	11	9	16	10	8
Weighted Base	94091	41810	40571	89451	56965	75628	117640	115776	99330	731262
Unweighted Base	10168	4411	3676	9049	5355	8609	10699	15957	12563	80488

Source: ESS 2001 (IER/IFF)

Base: Internal skill Gaps which were followed up: employee based measure

4.27 There has been little overall change to the hierarchy of industries affected by skill gaps and, in many sectors, skill gaps have decreased as a proportion of employment since 1999. The exceptions to this are the hospitality sector (hotels and restaurants) where skill gaps have increased as a proportion of employment (from 4.5% to 6.6%), the construction sector which saw an increase from 3.6% to 3.9%, and public administration where skill gaps remain at the same level as a proportion of employment as in 1999.<sup>20</sup>

*Example 4.8 'Employees across all occupations were reported to be lacking a range of generic skills. For example:*

- *Between one-third and half of employers thought that employees in each occupation lacked problem solving skills.*
- *60% reported a lack of proficiency in management skills amongst managers. Between one-fifth and one-third reported a lack of management skills in other occupations.*
- *Communication skills were thought to be lacking by 61% amongst managers, 50% amongst sales employees and between one-third and 47% in all other occupations.*

*These internal skill deficiencies again include many of the skills which are reported to be increasingly important amongst engineering employers.' [Skills Dialogues 2: An Assessment of Skill Needs in Engineering 2001]*

4.28 Below are shown the key skill gaps associated with different sectors. Although not an exhaustive list, it does demonstrate the wide spectrum of generic skills problems across industries. This is explored more fully in the Sector Fact Sheets at the end of this report.

**Table 4.7 Examples of generic skills Gaps by Sector<sup>21</sup>**

Sector	Skills Gaps
Land Based sector	Owner managers require business and management skills
Engineering	Generic skills, especially people management Experienced designers able to manage teams
ICT	Generic skills
Transport	Customer service skills Basic IT in haulage drivers (important with increasing ICT tools)
Food Manufacturing	Ability to develop flexibility to realise efficiency gains
Hotels and Catering	Basic IT
Telecommunications	Management skills Latest IT developments
Health Care	Managing diverse customer groups under resource pressure

<sup>20</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

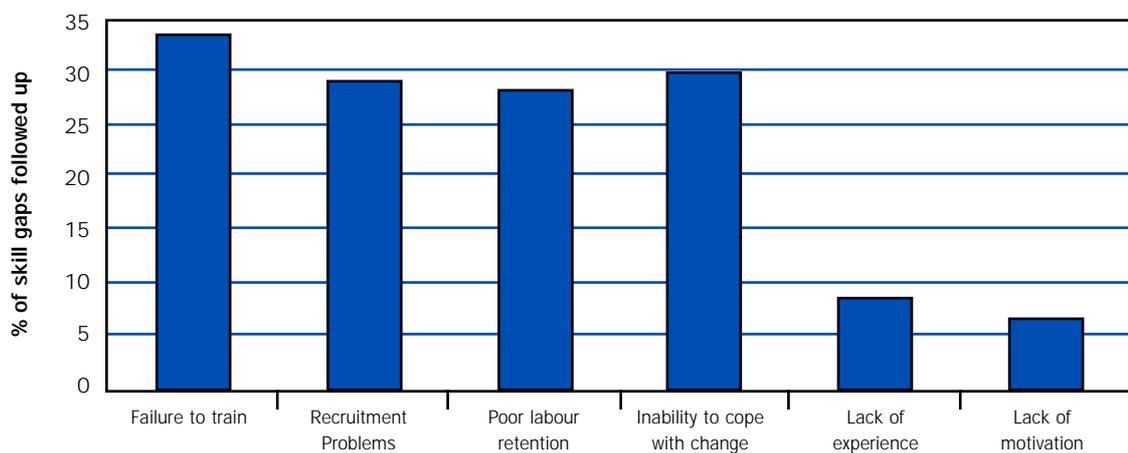
<sup>21</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

## Causes of skill gaps

4.29 Although there is limited data available regarding the causes of generic-related skill gaps, there does exist information relating to the causes of skill gaps per se. Since generic skills are so closely associated with skill gaps, there is value in examining the overall reasons for lack of proficiency in employees in so far as these are likely to relate, at least in part, to some of the causes in generic skill gaps.

4.30 As many UK companies try to cope with changes in the economy, occupational growth trends and pressures in productivity, some employees who are unable to demonstrate the new multi-functional skills are less likely to be able to progress and effectively perform in their roles. This is often compounded by failings in the organisation to provide the necessary training to equip staff to meet new job requirements. This is illustrated in the graph below, which shows 'Failure to train' as the most frequently cited cause of internal skill gaps.

**Figure 4.3 Main causes associated with internal skill gaps<sup>22</sup>**



Source: ESS 2001 (IER/IFF)

Base: All internal skill gaps which were followed up: employee based measure

## Latent Skill Gaps

4.31 The existence of skill gaps are often only identified if, and when, an organization seeks to improve its performance levels in the competitive market. Up until this point, these skill gaps have gone unnoticed as 'latent skill gaps'. These types of skill gaps reduce a company's potential for growth and represent an equivalent to an increase in the scale of skill gaps by about 10% and skill shortage vacancies by 30%.<sup>23</sup>

<sup>22</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

<sup>23</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

*Example 4.9 'More serious, possible emergent, skill gaps were seen as being senior management's ability to drive the business forward and transform business systems (eg manufacturing processes) for competitive advantage. Themes emerging from other studies include:*

- *improve communication skills, and develop leadership skills and change management skills in the aerospace sector (SBAC, 2000);*
- *project management, and a lack of leadership particularly, at high levels in head office companies in the engineering construction industry. This includes the inability of senior managers to recognise skill needs, weaknesses in generic management, and a failure to develop older engineers to get the best out of the available new technology (ECITB, 2000).'*

*[Skills Dialogues 2: An Assessment of Skill Needs in Engineering 2000]*

4.32 It is therefore worth noting that the severity of generic skills gaps can be masked by their lack of detection, and in interviews carried out for this report with representatives from various industries, concern was expressed that employers are not sufficiently aware of the need or impact of generic skills in the workplace. This was an issue raised, unprompted, in the Financial Services and Food and Drink manufacturing sectors. This suggests that undetected generic skill problems might contribute to a 'low skill equilibrium' where the demand for skills development is suppressed because its importance is not fully understood. Changes such as increased innovation, entry into new markets, introduction of value added services and technological advances are all triggers which may uncover latent skill gaps.

*Example 4.10 'DfEE's Employer Skills Survey (1999) identified that 5% of companies in the transport sector as a whole thought they would like to move into new higher quality product or service areas but were unable to do so because of the skills of the workforce. As with those companies that were moving forward, customer handling (70%) and team working skills (63%) were the important missing skills.'* [Skills Dialogues 3: An Assessment of Skill Needs in Transport 2001]

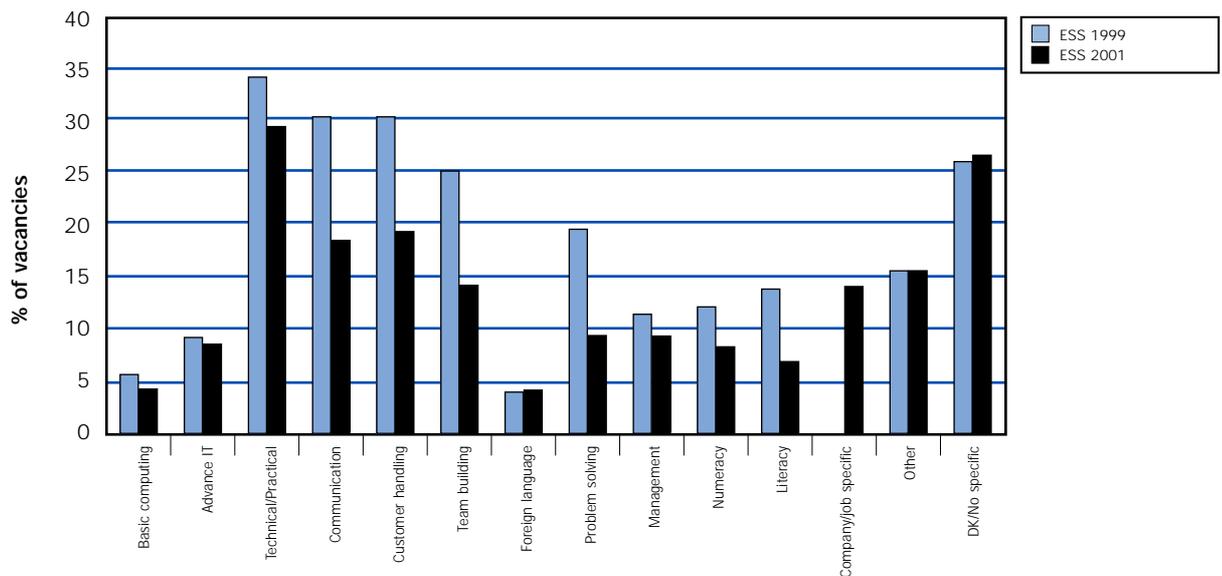
4.33 Importantly, it is generic skills that employers say they most need when seeking to move into new product markets or to improve service quality. Over 70% of firms seeking to move into higher quality products or services said they would need additional team working skills and customer handling skills to do this, with 60% or more saying they would need additional communication and problem solving skills.<sup>24</sup>

## Patterns in Skills Imbalance

### Trends in Recruitment Difficulties

4.34 The graphs shown below demonstrates that there have been only minor changes in the type of skills sought in relation to hard-to-fill and skill shortage vacancies over the last few years. Communication, Customer handling and Team building are still the generic skills most sought, although overall there has been a reduction in skill-related recruitment problems.

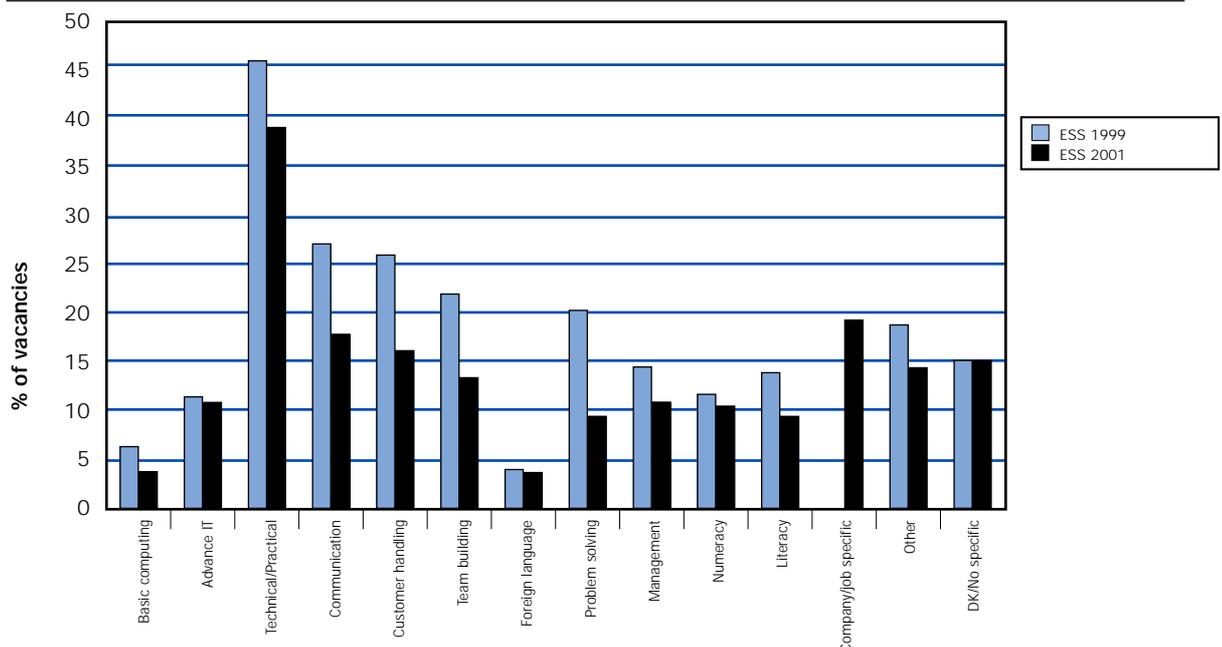
**Figure 4.4 Skills sought in connection with hard-to-fill vacancies<sup>25</sup>**



Base: All hard-to-fill vacancies

Source: STF Employers' Survey (IER/IFF) and ESS 2001 (IFF/IER)

**Figure 4.5 Skills sought in connection with skill shortage vacancies<sup>26</sup>**



Base: All skill shortage vacancies

Source: STF Employers' Survey (IER/IFF) and ESS 2001 (IFF/IER)

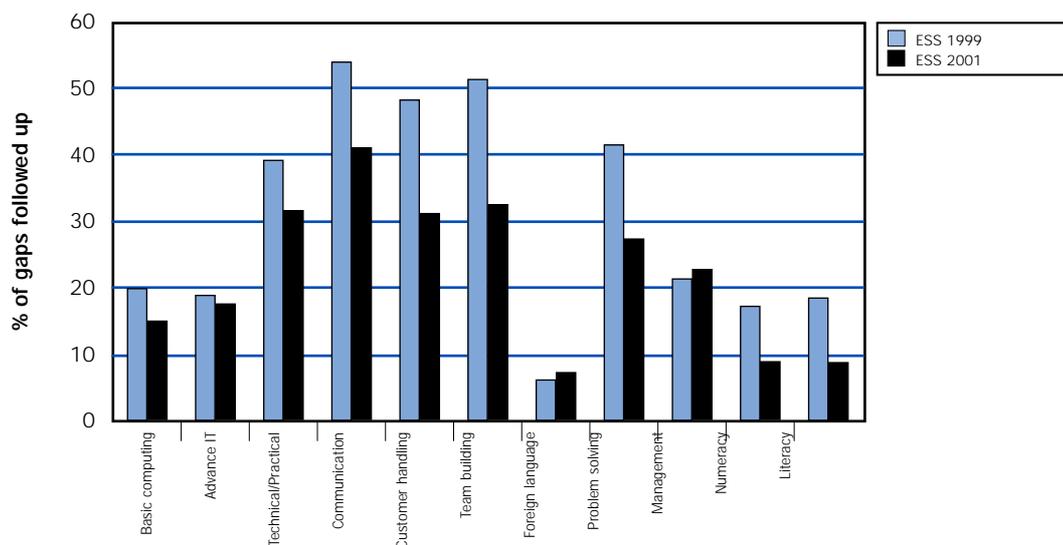
<sup>25</sup> Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force [DFEE] 2000

<sup>26</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DFES] 2001

### Trends in Skill Gaps

4.35 Skill gaps also pose less of a problem now than in recent years. As seen with hard-to-fill and skill shortage vacancies, Communication, Customer handling and Team building account for the highest proportion of generic skill gaps. The only skills to experience a rise in reported deficiencies are management skills and foreign languages, although increases were only marginal.

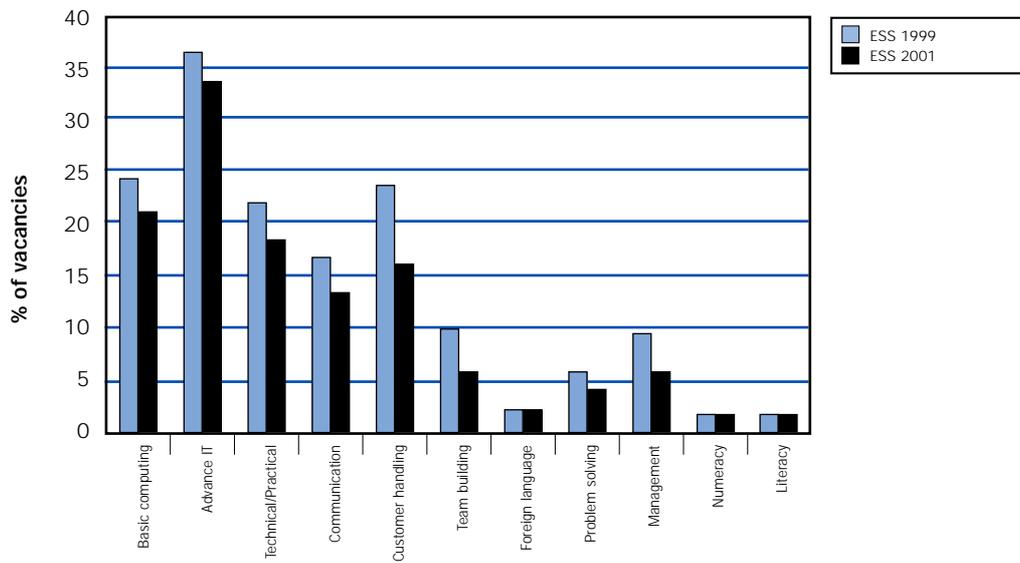
**Figure 4.6 Skills sought in connection with internal skill gaps<sup>27</sup>**



Base: All internal skill gaps that were followed up

Source: ESS 2001 (IFF/IER) and ESS 1999 (IER/IFF)

4.36 Over the next 2-3 years, the generic skills that are most likely to be needed are Basic computing, Customer handling and Communication. Customer handling skills show the largest differential between those establishments with skill gaps and all establishments generally.

**Figure 4.7 Skills needed over next two to three years<sup>28</sup>**

Base: All establishments

Source: ESS 2001 (IER/IFF)

- 4.37 Generic skill needs become more acute the larger the size of the establishment. This underlines the weaker correlation between generic skills and smaller businesses compared to larger ones. For instance, 27% of establishments with 1000 or more employees expected a future demand for communication skills, compared to 12% amongst those with 1-4 employees.
- 4.38 Basic computer literacy (34% of establishments) will be of greatest importance in the next few years, quite closely followed by Communications (27%), Customer handling (26%) and Management (24%).

**Table 4.8 Future skill needs<sup>29</sup>**

	Number of employees in establishment								Percentages
	1-4	5-24	25-49	50-99	100-199	200-499	500-999	1000+	Total
Basic computer literacy	19	26	27	27	28	28	28	34	21
Advanced IT/software	31	36	42	43	47	46	52	56	33
Other technical/practical	17	19	20	20	21	22	25	23	18
Communications	12	16	17	18	19	19	21	27	13
Customer handling	14	22	21	22	22	25	24	26	16
Team working	4	9	11	11	12	13	12	17	6
Foreign language	1	2	1	2	2	2	2	4	1
Problem solving	4	6	6	6	6	7	8	10	4
Management	5	8	11	12	15	15	23	24	8
Numeracy	2	2	2	2	2	2	2	3	2
Literacy	1	2	2	2	1	2	1	2	2
Weighted base	1481190	430708	75987	41507	15493	10928	1895	1014	2058713
Unweighted base	3701	8766	6151	3306	2605	1799	457	248	27031

Base: All establishments

Source: ESS 2001 (IER/IFF)

4.39 Concerns in meeting Basic computer literacy needs are again emphasised when looking at new skills needs arising from business activity over the next 2-3 years. With 46% of establishments looking for new skills to cope with the introduction of technology, IT skills will be of key importance. There is also an anticipated need to source skills related to moving into new product and service areas, as well as the introduction of new working practices. As has already been observed, these types of business strategies rely heavily on the full range of generic skills and indicate the continued importance in equipping a work force with the softer skills which help ensure flexibility and responsiveness amongst employers.

4.40 These new skills are especially expected of the more highly skilled occupational groups, corroborating evidence to date that there is a general up-skilling of the workforce, which particularly impacts managers/senior officials, professionals and associate professionals. For example, new skills required to cope with changing work practices is reported by 45% of establishments to affect Associate professionals, in contrast to 21% in connection with Elementary occupations.

**Table 4.9 Reasons for changing skill needs by occupation<sup>30</sup>**

Occupations	Column percentages									
	Managers/Senior Officials	Professionals	Associate Professionals	Admin/Secretarial	Skilled Crafts	Personal Services	Sales/Customer service	Operatives	Elementary Occupations	Total
New skills needed in order to develop new products and services	28	35	35	24	28	21	25	14	11	29
New skills needed to cope with new working practices	39	46	45	37	38	33	32	25	21	40
New skills needed to cope with the introduction of new technology	45	54	56	53	41	22	40	26	15	46
No change	39	30	28	36	43	58	47	59	71	49
Weighted Base	1227661	318644	208308	636938	356188	198157	363703	150899	248160	2058713
Unweighted base	24138	10597	7449	18256	9089	7132	8441	5845	8198	27031

Base: All establishments

Source: ESS 2001 (IER/IFF)

## Responding to Skill Deficiencies

4.41 Employers often turn to training as a solution to skill problems; training is cited as a response to 72% of internal skill gaps. Although training is evidently seen as a tool to improve employee proficiency, progress in providing such development opportunities is not always as straightforward as employers would wish. Barriers to maintaining requisite skill levels are for the most part linked to a lack of training. 31% of organisations report a lack of time for training, and 23% cite a lack of cover and/or a lack of funding for training.<sup>31</sup> In fact, 34% of skill gaps are attributed to a failure to develop or train staff by employers.<sup>32</sup>

4.42 Table 4.10 shows that establishments reporting skill deficiencies are more likely to engage in training. Of the organisations which provide off-the-job training, those that report hard-to-fill and skill shortage vacancies were approximately 10% more likely to offer generic skills training.

30 Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

31 Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

32 Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

**Table 4.10 Type of off-the-job training by skill deficiencies<sup>33</sup>**

	Hard-to-fill vacancies (1)		Skill-shortage vacancies		Skills gaps			Total
	Yes	No	Yes	No	Narrow measure	Broad measure only	All proficient	
Induction Training	56	37	54	39	53	50	33	39
Health & Safety or First Aid Training	69	59	67	60	71	73	54	60
Job specific training	85	73	87	74	77	76	74	75
Supervisory Training	39	25	39	26	38	36	21	27
Management Training	40	32	40	32	42	40	29	33
Training in new technology	64	49	72	50	56	51	50	51
Training in foreign languages	4	3	4	3	3	3	3	3
Soft or generic skills training	44	31	42	32	42	40	27	32
None of these	1	2	1	2	1	2	2	2
Don't know	*	*	*	*	*	*	*	*
Weighted Base	90175	660947	45863	705259	72401	185016	490217	751122
Unweighted Base	3723	14964	1694	16993	3557	7634	7292	18687

Base: All establishments providing off-the-job training

Source: ESS 2001 (IER/IFF)

Note: (1) 'Narrow measure' skill gaps refer to all establishments where less than nearly all staff are fully proficient (internal skills gaps - see Chapter 3 for details); 'broad measure only' skill gaps refer to all establishments where some staff in at least one occupation are not fully proficient, but where no skills gaps are reported using the more narrow measure.

4.43 It is worth noting that where training is provided, skill gaps are more likely to be reported than where such training is not supplied. Table 4.11 demonstrates the correlation between provision of training and the reporting of skill gaps. For example, establishments providing induction training are more likely to report skills shortcomings in terms of customer service skills (37% vs. 23%).<sup>34</sup> Overall, reporting of generic skill deficiencies amongst existing staff increases by approximately 10% where organisations are training their staff. It is interesting to note that a possible reason for this is the more advanced HR policies adopted by establishments who provide training and who have identified skill needs as part of on-going business development.

<sup>33</sup> Employers Skill Survey 2001 Hogarth.T et al, IFF Research Ltd. and IER [DfES] 2001

<sup>34</sup> Skills in England 2001: Research Report Campbell. M. et al, Leeds Metropolitan University [DfES] 2001

**Table 4.11 Specific Skills Lacking By Establishments Who Report Skill Gaps and Provide Training<sup>35</sup>**

	Induction		Health & Safety		Job specific		Supervisory		Management		New technology		Foreign languages		Soft / generic skills	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	Column percentages															
Basic Computing	20	17	20	17	20	17	21	18	21	18	22	17	22	18	20	18
Advanced IT	27	19	26	18	27	17	26	20	26	20	34	16	34	21	25	20
Other Technical/ Practical	37	26	36	26	38	24	35	28	33	28	38	26	35	29	35	28
Communication	43	33	42	33	43	32	46	34	44	34	39	35	50	36	46	33
Customer Handling	37	23	34	23	35	22	36	25	34	25	31	25	29	27	35	25
Team Working	34	22	33	20	31	21	33	23	33	23	31	23	39	25	32	23
Foreign Language	9	4	8	4	8	4	9	5	8	5	9	4	20	5	9	5
Problem Solving	32	21	30	20	31	19	33	22	29	22	30	21	30	24	34	21
Management	31	22	33	20	30	21	33	22	33	22	32	21	43	24	32	22
Numeracy	7	7	7	7	7	7	8	7	7	7	7	7	6	7	7	7
Literacy	10	7	8	7	9	7	9	7	9	7	9	7	7	8	10	7
Weighted Base	38351	103174	51499	90026	55655	85870	27320	114205	30176	111349	40419	101106	2343	139182	30665	110860
Unweighted Base	2231	2421	2958	1694	2854	1798	1799	2853	1927	2725	2123	2529	221	4431	1794	2858

Base: All establishments with internal skill gaps  
Source: ESS 2001 (IER/IFF)

### Addressing current and future generic skills needs

4.44 This chapter concludes the overview on generic skills needs in the UK workforce and highlights the key areas of generic skills deficiencies. The conclusions and recommendations emerging from the report as a whole have been included in the executive summary.

## **Appendices**

**Appendix 1: Generic Skills by Sector**

**Appendix 2: References and Data Sources**

**Appendix 3: Glossary and Definitions**

## Construction and Related Industries

### Generic Skills Fact Sheet

Key Stakeholders	Composition of Sector Employees (approx.)
British Plumbing Employers' Council [BPEC]	Construction and contracting: 69%
Construction Industry Training Board [CITB]	Professional Services: 29%
Extractive and Mineral Processing NTO [EPIC]	Extractive Mineral Processing: 2%
Engineering Services Training Trust [ESTT]	
Gas Industry NTO [GINTO]	
National Electrotechnical Training [NET]	
Training Organisation for Professionals in Construction [TOPIC]	

### Generic Skills Demand

Generic skills will play a particularly important role as Managerial, Professional and Customer Care jobs are generally projected to rise in the sector. For example, heating and ventilation employers say that they are placing increasing importance on certain key skills, including the following generic skills: numeracy, negotiation, verbal communication, customer service, flexibility and IT. The Employer Skills Survey results provide evidence that construction and contracting firms are today very conscious, at least in principle, of the importance of softer skills.

Principle demand areas across the sector are:

- ▶ Project management skills (esp. in construction and contracting)
- ▶ ICT skills
- ▶ Problem-solving
- ▶ Customer Care
- ▶ Team-working

### Generic Skills Supply

Although regulatory requirements, such as for the ACS, do not always cover softer skills such as customer care or business skills, much effort in recent years has been directed at capturing some of the generic skills in formal qualifications systems. Modern Apprenticeships, and the membership requirements of many professional organisations, have introduced such concepts into the qualifications system, and there has been a lot of radical change in the way in which assessment is taking place, with a move away from testing rote-learning and towards testing more conceptual skills. Occupational standards are intended to cover not just the ability to perform specific tasks, but wider skills such as managing unexpected contingencies or being effective within the job environment. There is a worry though, that training pays insufficient attention to the growing demand for a multi-skilled workforce.

## Generic Skills Shortages

Skill deficiencies are most likely to be cited by employers in relation to recruitment difficulties rather than in relation to those already in their employment. In terms of generic skills, poor customer-handling skills are the most likely to be picked up as a skill shortage. A lack of IT, marketing, financial and general management skills were also identified in all categories.

## Generic Skills Gaps

It should be recognised that the majority of employers in the construction and contracting sectors say that most of their staff are proficient. In part, that may be because they employ relatively few people in sales and personal service/care occupations, both of which tend to be 'black spots' in terms of skill deficiencies. Where problems are cited, Team working, Communication and Management are some of the key gaps. Extraction and mineral processing: The EPIC research suggests a wide range of skills deficiencies in the extractive industries. Technical, practical, managerial, IT, communication, multi-skilling, customer care and problem-solving skills were all reported as deficient.

## Engineering Industries

### Generic Skills Fact Sheet

Key Stakeholders	Distribution of sector employment
Engineering and Marine Authority [EMTA]	Engineering manufacturing: 58%
Engineering Construction Industry Training Board [ECITB]	Other manufacturing: 14%
Construction Industry Training Board [CITB]	Computer & business services: 7%
Rail Industry Training Council [RITC]	Public: 3%
Chemicals and processing [PINTOG]	Construction: 4%
Engineering Council	Utilities: 2%
Engineering Employers Federation [EEF]	Other services: 12%

### Generic Skills Demand

According to the EEF (1997), there will be growth in IT systems in all aspects of business, greater flexibility in working practices and less traditional demarcation, more 'just in time' management and cellular manufacturing, and more global business and a greater prevalence of international supply chains. This will give rise to requirements for the following skills in particular:

- ▶ Multi-skilling and greater flexibility
- ▶ Ability to deal with change
- ▶ Ability to continue learning, re-skilling
- ▶ Computer literacy and IT skills
- ▶ Understanding the business
- ▶ Customer service awareness
- ▶ Broader skills base (combination of technical and generic)

### Generic Skills Supply

Engineering is criticised for not developing personal and transferable skills sufficiently among graduates, losing too many of the most able students to other jobs (e.g. in IT, the City) and also failing to utilise some of the engineering graduates appropriately and develop their skills. Although a number of changes have been introduced to improve engineering education and put more emphasis on broadening skills and flexibility of provision, more could be done, for example in improving work placement opportunities available to graduates and undergraduates. However, an issue identified as having a negative effect on the quality of higher education is the difficulty many universities face in recruiting young engineering staff.

## Generic Skills Shortages

Main problems are at higher-level occupations, particularly professional engineering graduates with four to five years commercial experience. There is a shortage of professional engineers with a combination of specific technical skills, commercial awareness, project management skills and other 'soft' people management skills. Main problem areas are as follows:

- ▶ Managers: Team working; Problem solving; Management; Communication
- ▶ Sales: Communication: Customer handling; Basic computer literacy
- ▶ Clerical: Basic computer literacy; Numeracy

## Generic Skills Gaps

Employees across all occupations were reported to be lacking a range of generic skills. For example:

- ▶ Between one-third and half of employers thought that employees in each occupation lacked problem solving skills.
- ▶ Communication skills were thought to be lacking by 61% amongst managers, 50% amongst sales employees and between one-third and 47% in all other occupations.
- ▶ 60% reported a lack of proficiency in management skills amongst managers. Between one-fifth and one-third reported a lack of management skills in other occupations.

## Financial Industries

### Generic Skills Fact Sheet

Key Stakeholders	Employment in UK Financial Services, 1998	
Financial Services National Training Organisation (FSNTO)	Professional Services	63%
Accountancy National Training Organisation (ANTO)	Banking and Finance	26%
Association of Unit Trusts & Investment Funds (AUTIF)	Insurance	11%
General Insurance Standards Council		

### Generic Skills Demand

Overall, employees are expected to have the following generic skills: communication, team-working, problem-solving, organisation and management.

Particular future skills requirements include general management abilities as well as softer communication skills aimed at improving client interface. Corporate management, professional and associate professional occupations will be required to demonstrate high quality management, new technical, ICT and generic skills ranging from leadership to communication skills. Clerical and administration occupations will experience significant change, associated with Call Centre activity and other ICT user-related professions which may be the main focus of demand for generic skills.

### Generic Skills Supply

The development of generic skills tends to be left to the individual whilst the industry focuses on accreditation and regulatory needs. The identification and development of these more generic and technical skills will extend the concept of employability throughout the industry; the most important skill to have now is that which deals with continuous change since this is the only certainty in the sector. Simply securing minimum accreditation standards does not equate with competence to do the work. As such, a market which is becoming increasingly client focused at every level requires more than just technical skills. Competence is therefore thought to encapsulate a much broader definition of what the accreditation process should be.

## Generic Skills Shortages

Shortages in generic skills are likely to include ICT, high quality managerial skills linked to corporate management, professional and associate professional occupations. Hard-to-fill vacancies are characterised by the following problems:

- ▶ A lack of basic computer literacy amongst clerical and secretarial staff.
- ▶ Deficiencies in communication skills, customer handling skills and team working skills among professionals and clerical and secretarial applicants.
- ▶ A shortage of managerial skills amongst professionals and associate professionals.

## Generic Skills Gaps

Employees across all occupations are reported to be lacking a range of generic skills (percentage of employees):

- ▶ Communication (54%)
- ▶ Customer handling (50%)
- ▶ Team-working (43%)
- ▶ Problem-solving (39%)
- ▶ Management skills (34%)

This reflects a move towards being client focused and the need for innovation. Other areas which will feed off such skills are business awareness, leadership skills, risk management and flexibility. New technologies and the increasing importance of Call Centres require upskilling in general IT user skills.

## Food and Drink Industries

### Generic Skills Fact Sheet

Key Stakeholders	Numbers employed by sub-sector*:	
Food and Drink NTO	Food and Drink	40%
Meat Training Council	Meat	24%
Dairy Training and Development Council	Bakery	16%
Seafish Training	Sea fish	15%
Bakery Training Council NTO	Dairy	4%

### Generic Skills Demand

New working practices are increasing the emphasis teamwork and flexibility. In many businesses, sales and customer service skills will be increasingly important while supervisory, leadership and management skills will be essential for the long term success of all sector businesses. Workers with poor attitudes to work will be increasingly difficult to employ.

### Generic Skills Supply

It may be anticipated that there will be a limited demand for staff with the ability to train up to become truly multi-skilled and so to become capable of working in the production team and on machinery setting, maintenance and problem solving. Some food and drink manufacturers use a range of training responses that include induction; basic skills development; working on behaviour and attitudes; formal identification of skills needs.

Modern Apprenticeships are making very little impression in the sector and the need to make MAs more attractive, and the possibility of alternative qualifications and initiatives at level 2, are questions that are under discussion. The NTOs have mostly concentrated their research on qualifications that are directly relevant to specific occupations in their industry. Generalised national statistics tend to count highest qualifications regardless of their relevance, academic or occupational emphasis. In many cases workers do need to possess both types of qualification even though the levels could be different. This is already reflected in the importance being attached to basic, key or core skills.

*\*Estimates include the numbers employed in food production and processing occupations in companies that are primarily involved in distribution, wholesaling and retailing, as well as manufacturing companies.*

## Generic Skills Shortages

The skills shortages and recruitment difficulties in skilled baker and butcher occupations are mitigated by the adoption of alternative production methods. However, the difficulties remain so severe that they are contributing to the downward trend in the numbers employed in the skilled occupations. The need for lowly skilled workers is also decreasing but there are increasing needs for level 2 process and machinery operatives.

## Generic Skills Gaps

Skill gaps are most widely recognised among managers. The skills that are most in need of development in managers are team working, communications and generic management skills. Furthermore, 10% of firms recognise problems with providing adequate customer service. The latent skills gap is usually in generic skills such as communication, customer care, team working and problem solving.

Generic skills gaps (as a percentage of manufacturers) in the food and drink industry are:

- ▶ Team working (43%)
- ▶ Communication (38%)
- ▶ Problem-solving (30%)
- ▶ Management (24%)
- ▶ Customer handling (22%)
- ▶ Basic IT (20%)
- ▶ Foreign Language (5%)

## ICT Industries

### Generic Skills Fact Sheet

Key Stakeholders	Estimates of the size of ICT population*	
National Training Organisation for Engineering Manufacturers [EMTA]	ICT Sector	870,000-1,200,000
Skillset	ICT Service sub-sector	810,000
e-skills NTO	ICT occupations	900,000-1,900,000

### Generic Skills Demand

While many ICT professionals need advanced technical skills, they also need other generic skills to be able to apply their technical expertise in a business environment and to work well with others. Key generic skills needs are:

- ▶ problem solving - particularly for systems development professionals, ICT operations managers and people in customer or service support roles;
- ▶ oral communication skills - of most importance in support, sales and training roles;
- ▶ general IT user skills - thought to be most important in less skilled roles such as ICT support operators and administrators and helpdesk operators;
- ▶ team working skills - especially for customer systems support professionals;
- ▶ numeracy - important in systems development and consultancy roles.

Other skills areas which are cited as important include: leadership, advice and guidance, project management, 'entrepreneurship' and commercial awareness.

### Generic Skills Supply

More attention is needed to the importance of generic skills (communication, team working) as well as technical skills in ICT work. Increasingly the focus is on how to meet the high levels of demand for problem solving, customer handling, team working and communications.

Comment has been made on the mismatch between the 'quality' of some IT graduates and the skills and attributes being sought by employers, which tend to focus on non-technical skills. In Mason's survey (1999b), 47% cited personal qualities/interpersonal skills as the single most important quality sought in graduates from IT/computer science disciplines (compared to 17% who cited technical knowledge).

*\*Definitions, and therefore estimated size, of the ITC sector vary significantly, so it has not been able to show a percentage representation of the sector employment split.*

## Generic Skills Shortages

Skill shortages are widespread but not as severe as in previous years. However, there is widespread complaint about the quality of recruits:

- ▶ A lack of knowledge in generic IT skills and the fundamentals of ITC.
- ▶ An inability to apply technical skills in the modern business environment through a lack of generic skills.

Almost a quarter of the Skills Survey (e-skills NTO, 2001c) sample said that they had recruited mature people over the last year – a source with better 'soft' skills according to some interviewees.

## Generic Skills Gaps

The most commonly identified skill gaps of a generic kind given by employers who felt that their ICT workforce was less than fully proficient, were:

- ▶ general IT user skills;
- ▶ written and oral communication skills (incl. customer service);
- ▶ general awareness of development in IT and Telecommunications industry;
- ▶ problem solving.

## Land-based Industries

### Generic Skills Fact Sheet

<b>Key Stakeholders</b>		Animal Care	5.7%
Lantra NTO		Equine	5.7%
<b>Employment Split 2000</b>			
Agriculture Livestock	30.9%	Fencing	5.0%
Agriculture Crops	12.7%	Forestry	3.2%
Landscaping	11.7%	Floristry	3.0%
Production Horticulture	7.3%	Game Conservation	1.6%
Environmental Conservation	5.9%	Professions allied to Vet. Science	1.0%
Agriculture/Garden Machinery	5.7%	Fish farming	0.8%

### Generic Skills Demand

New technologies have reduced the manual skills demanded in these jobs; there is now an increasing need to oversee and maintain the equipment, and work within a more complex production environment. Operational workers will therefore need a higher level of job-specific skills, but complemented by good communication and customer service skills, the ability to work independently, make decisions and overcome problems as they occur. The dominance of small firms within the sector means there is almost a virtual absence of direct supervision in much of the sector, requiring a more self-managed workforce.

Current and predicted skill requirements include:

- ▶ Higher levels of business and management skills
- ▶ Better ICT skills
- ▶ Communication
- ▶ Initiative and Problem-solving
- ▶ Customer care

## Generic Skills Supply

In assessing the potential supply of generic skills, the following issues are encountered:

- ▶ Skill levels are likely to be under-estimated because a large proportion of learning does not lead to recognised qualifications.
- ▶ Many educational qualifications are general, therefore measuring academic attainment rather than skills.
- ▶ Many people have job-related and generic skills that are uncertified.
- ▶ Many people with job-related qualifications either enter unrelated occupations, or leave the industry/occupation they have trained for within a short period of time.

## Generic Skills Shortages

National evidence of the main types of skill for which employers report external skill shortages indicate that these are mainly vocational in nature (technical and practical). However, generic skills shortages were widely reported in relation to hard-to-fill vacancies, in particular communication (31%), customer handling (29%), team working (26%) and problem-solving (21%).

## Generic Skills Gaps

Under a fifth of businesses reported a skills gap within their existing workforce. Reported skills gaps are mostly concentrated within the skilled occupations, with job specific and generic skills reported as a skills gap. The most often reported generic skill gaps were in Management; Basic IT; Communication; Leadership; People management and Customer service skills.

## Transport Industries

### Generic Skills Fact Sheet

Key Stakeholders	Sector Employment Profile	
Aviation Training Association [ATA]	Road Haulage/Distribution	34.7%
British Ports Industry Training [BPIT]	Motor Industry	32.8%
Merchant Navy Training Board [MNTB]	Transfed (bus/coach)	15.6%
Motor Industry Training Council [MITC]	Rail	7.5%
Rail Industry Training Council [RITC]	Aviation	5.8%
Road Haulage and Distribution Training Council [RHDTTC]	Ports	1.5%
Confederation of Passenger Transport [TRANSFED]	Merchant Navy	0.2%

### Generic Skills Demand

Changes to the way this sector is structured, coupled with changing market needs will give rise to the following generic skills needs:

- ▶ Increasing use of IT skills.
- ▶ Multi-skilling and flexibility.
- ▶ Increasing the need for customer care skills for all employees.
- ▶ Increasing the need for better management skills in response to a more demanding environment and an increasingly sophisticated role.

### Generic Skills Supply

Most sectors are increasingly relying on sub-contracted labour. Employers have less control over the skills workers use and are relying on sub-contractors to provide training. This leads to a number of issues which affect the identification and training of generic skills:

- ▶ Establishing who is responsible for long-term succession planning.
- ▶ A focus on skills issues for intermediate level skills (engineers, drivers, etc) and not enough on the scarcer high value-adding skills which really make the competitive difference.
- ▶ Improving quality and deepening competence in the long-term.

This is a sector which is well-used to formal qualifications, but a high proportion of them are industry-specific. The best firms within each industry in the transport sector are showing the way - changing their management styles, skilling and continually re-skilling their workforces and creating long-term career paths and recruitment strategies.

## Generic Skills Shortages

At least in the passenger road transport sector the real issue is staff shortages, not skill shortages. In other words, there are sufficient people with the right skills, but they choose to work in other industries. Skills, including generic ones, tend to be gained and lost through the significant movement in and out of the sector. Most transport careers are two-stage, feeding to, or from, another career. Recruitment is especially difficult in the more generic occupations such as clerical, administration and security operations.

## Generic Skills Gaps

Current skill deficiencies lie in three principal areas: Communication (55%); Customer handling (54%); Team working (49%). Companies that wish to move into new higher quality product or service areas are unable to do so because of the skills of the workforce. As with those companies that were moving forward, customer handling (70%) and team working skills (63%) were the important missing skills.

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## Glossary

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CEP	Centre for Economic Performance
COVE	Centres of Vocational Excellence
DEL	Department for Employment and Learning (N Ire)
DETR	Department of Environment, Trade and the Regions
DfEE	Department for Education and Employment
DfES	Department for Education and Skills
ELWa	Education and Learning Wales
ESS	Employer Skills Survey
IALS	International Adult Literacy Survey
ICT	Information and Communication Technology
IER	Institute for Employment Research (University of Warwick)
IES	Institute for Employment Studies
IFS	Institute of Fiscal Studies
ILAs	Individual Learning Accounts
LFS	Labour Force Survey
LLSC	Local Learning and Skill Council
LMI	Labour Market Information
LSC	Learning and Skills Council
NALs	National Adult Learning Survey
NCIHE	National Committee of Inquiry into Higher Education
NIESR	National Institute of Economic and Social Research
NOS	National Occupational Standards
NSTF	National Skills Task Force

NTO	National Training Organisation
OECD	Organisation for Economic Co-operation and Development
PEQ	Projections of Employment and Qualifications
PIU	Performance and Innovation Unit
PSAG	Projects and Standards Approval Group
QAA	Quality Assurance Agency
QCA	Qualifications and Curriculum Authority
RDA	Regional Development Agency
SBS	Small Business Service
SF	Skills Foresight
SIC	Standard Industrial Classification
SNIB	Skills Needs in Britain Survey
SOC	Standard Occupational Classification
SSCs	Sector Skills Councils
SSDA	Sector Skills Development Agency
STF	Skills Task Force
WBL	Worked based learning
WfS	Workforce Development

## Definitions<sup>1</sup>

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**Intermediate skills:** This phrase is used to describe the range of occupational skills needed to be effective in intermediate level occupations - covering craft, clerical and associate professional jobs – typically requiring qualifications at Levels 3 and 4.

**Multi-skilling:** For example, combining traditional craft work with maintenance tasks previously undertaken by technicians.

**Multi-functioning:** For example, the need to be able to schedule work, to liaise with customers and work within a team environment.

**Recruitment difficulty:** Any difficulty experienced by an employer in recruiting, whether it was strictly related to skills or not.

**Skill shortage:** A recruitment difficulty caused specifically by a shortage of individuals with the required skills in the accessible labour market.

**Skills gap:** A deficiency in the skills of an employer's existing workforce which prevents them from achieving their business objectives.

**Latent skill gaps:** Where establishments fall short of what might be considered good or best business practice and is reflected in relatively low skill levels and relatively poor business performance, even though there is no report of recruitment problems or skill gaps. This is akin to the notion of a low-skill equilibrium.<sup>2</sup>

<sup>1</sup> All definitions (exc. Latent Skills) are taken from Skills for all: Proposals for a National Skills Agenda, Final Report of the National Skills Task Force, [DfEE] 2000

<sup>2</sup> Taken from Employers Skill Survey 2001, Hogarth.T et al, IFF Research Ltd. and IER, [DfES] 2001





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