

**Bulletin number: 13**

## **Quantifying Core Skills Competence in an SCQF Context**

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Scottish Qualifications Authority  
by 4most plus ltd

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# 1 Background and methodology

## 1.1 Rationale for the project

In 2002/03 the 4most plus consultancy undertook Core Skills research on behalf of Skills for Logistics as part of their Pathfinder literacy and numeracy project, funded by the Scottish Executive through its Literacy and Numeracy strategy. That research investigated the literacy and numeracy competences required by LGV drivers, removals porters and warehouse staff across a variety of road freight logistics companies in Scotland.

In order to undertake this research as effectively as possible, 4most plus developed an innovative methodology which provided a system to:

- ◆ assess the literacy (writing and reading) and numeracy skills of individual employees against the SQA Core Skills competences
- ◆ quantify the extent and level of literacy and numeracy competence in specific job roles against the SQA Core Skills competences and thus the Scottish Credit and Qualifications Framework
- ◆ estimate the scale of literacy and numeracy skills gaps for these roles in the sector

Using this methodology, for example, it was possible to:

- ◆ establish that LGV drivers require competences of written communication at minimum Intermediate 1 and numeracy at minimum Access 3
- ◆ produce a list of tasks involving literacy and numeracy skills which would typically be undertaken by those employed in such a job role
- ◆ make a measurement, on a comparative scale, of the skills gaps for the sector

Although this research did not set out to test the validity of the SQA Core Skills framework, the researchers found no literacy or numeracy competences which could not be accommodated within the Core Skills framework. The Core Skills framework, in fact, proved to be an excellent tool on which to base such literacy and numeracy assessment by viewing them as tasks within the Core Skills framework.

Recognising that this new methodology could have wider applications in other industry sectors and for other Core Skills, 4most plus supplied SQA with a copy of the research report. Subsequently, 4most plus agreed to work for SQA on further research which applied the methodology to a variety of job roles in a number of industry sectors. These sectors demonstrated a variety of different characteristics and are critical to the Scottish economy.

SQA had planned to conduct a consultation on Core Skills during 2003/04. 4most plus had already undertaken a series of research projects on behalf of SQA which explored attitudes to and perceptions of Core Skills. These covered schools, further and higher education, training providers, employers and candidates. From this and other research it was clear that the current approach to the certification of Core Skills had not been performing as well as intended — either in improving national performance or in meeting the needs of the economy and employers. In particular, SQA was aware of concerns regarding the apparently limited extent to which the system was creating an awareness of Core Skills among teachers, learners and employers and about the value of what was being certificated.

In researching and reviewing the options for addressing these issues it had become clear that a number of national initiatives (such as the Review of the 3–18 Curriculum and development of Progress Files and Personal Lifelong Learning Plans) placed the development of Core Skills in a much broader context. This led logically to the deferment of the consultation work planned in this area so as to allow all the options for change to be fully considered in the light of the emerging outcomes of the initiatives referred to above. The research in this present project supplies valuable information to inform the Core Skills review, when it does take place, because it helps enhance understanding of employer attitudes and other Core Skills issues in the workplace.

## 1.2 Project aim and objectives

The **overall aim** of the project was to:

- ◆ further develop, test and refine the 4most methodology for assessing Core Skill competences in the workforce and relating this to the Scottish Credit and Qualifications Framework.

This would be done by assessing the actual Core Skills competence required by staff employed at four levels in a number of industry sectors and examining this in the light of qualifications held.

The **specific objectives** of the project were to:

- ◆ further develop, test and refine the methodology for producing:
  - a job role specific Core Skills profile for jobs at SCQF levels 5–11
  - a measurement of skills gaps within any industry sector in respect of Core Skills
- ◆ develop and test research tools to assess the Core Skill competence required by individual employees in different industry sectors in jobs at SCQF levels 5–11. The end result is a toolkit for assessing Core Skills competence requirements, which can be applied in any industry sector
- ◆ report on the research findings

In the course of achieving the above specific objectives, it would be possible to:

- ◆ develop some understanding of the relationship between the Core Skills required for a job and qualifications held
- and
- ◆ obtain an insight into how employers use qualifications in recruitment practices, in relation to the Core Skills which are required for a job

A **further objective** of the project was to assess how far the previously used methodology could be extended to all Core Skills and what adaptations might have to be made to accommodate this. Prior to this present project, the methodology had been used in one industry and for the Core Skills of written communication and numeracy only. It was relatively straightforward to extend the existing methodology to IT. However the ‘softer’ Core Skills of Problem Solving and Working with Others were somewhat more challenging to address.

These were the specified aims and objectives of the project. However, 4most plus has not limited its report merely to findings related to the above. During the course of the research, the consultants reported on other important Core Skills issues and these too are included in the findings. These wider findings relate to:

- ◆ employers’ and employees’ understanding (or lack of understanding) of the SQA Core Skills profile
- ◆ employers’ and employees’ views as to the extent to which Core Skills competence developed in an academic setting is transferable into the workplace
- ◆ the high regard for SVQs as a means of increasing Core Skills competence by those employees who had achieved these qualifications
- ◆ the apparent mismatch between the Core Skill levels specified in some modern apprenticeship frameworks and the Core Skills levels actually used in the job, as quantified by the present research
- ◆ Core Skills Units, tasks and Performance Criteria which are totally absent for certain jobs
- ◆ the need to revise the wording of the Working with Others Core Skill Unit and its assessment guidance in order that this Core Skill Unit more accurately reflects the needs of the workplace

## 1.3 Methodology

Five industry sectors were selected by SQA and 4most plus for the research. These sectors provided a spread of varied job roles and different working practices. The sectors were relevant to the Scottish economy and

provided a mix of service and manufacturing industries. The chosen sectors were:

- ◆ construction
- ◆ financial services
- ◆ food and drink manufacture
- ◆ hospitality (hotels)
- ◆ personal services (hairdressing)

For each sector, 11 companies were included in the research, giving a total of 55 companies. It must be remembered that the main aim of the project was to develop and test a methodology for Core Skills competence assessment and not to produce statistically robust data for each sector. A much larger sample would have been needed to provide statistically reliable sectoral data. However, the information in this report may be considered to be indicative of Core Skills competence in each of the sectors researched.

The consultants designed research tools, developed from the original literacy and numeracy tools used in the road haulage research. These tools were used as the basis for information gathering through visits by consultants to companies. The tools are reproduced in Appendix A.

A 4most plus consultant visited each company involved in the research to interview the selected personnel and to examine the relevant work products and documentation. It was important that each of the consultants had extensive knowledge and experience of Core Skills and the SQA Core Skills framework. Within each of the companies, employees with similar job roles and titles were chosen to be interviewed. The table below illustrates typical job roles for each of the five sectors. No jobs below SCQF level 5 (SVQ level 2) were included because so few jobs of any nature exist at this level.

<b>Sector</b>	<b>Job role SCQF level 5 (SVQ level 2)</b>	<b>Job role SCQF level 6 (SVQ level 3)</b>	<b>Job role SCQF level 8 (SVQ level 4)</b>	<b>Job role SCQF level 11 (SVQ level 5)</b>
<b>Construction</b>	<b>General building operative</b>	<b>Joiner, plasterer, roofer, tiler etc</b>	<b>Site manager</b>	<b>Company director</b>
<b>Financial services</b>	<b>Contact centre representative</b>	<b>Customer service adviser</b>	<b>Financial adviser</b>	<b>Senior manager</b>
<b>Food and drink manufacturing</b>	<b>Process operative</b>	<b>Supervisor</b>	<b>Quality controller</b>	<b>Senior manager</b>
<b>Hospitality</b>	<b>Porter</b>	<b>Chef</b>	<b>Front of house manager</b>	<b>Hotel manager</b>
<b>Personal services</b>	<b>Trainee stylist</b>	<b>Stylist</b>	<b>Salon manager</b>	<b>Managing director</b>

In addition to an employee at each of SCQF levels 5, 6, 8 and 11, the 4most plus consultant interviewed a manager with responsibility for

recruitment within the business. This permitted a comparison of the views of managers regarding Core Skills and qualifications with the employees' opinions and with the consultants' assessment of the Core Skills actually used in the job.

One 4most plus director or senior associate was responsible for all of the interviews in any one sector. In order to achieve consistency of approach across all five sectors, all consultants were briefed on the use of the tools and the format of the interviews before they visited the businesses. Each consultant was responsible for recruitment of the participating companies in his/her sector, attempting as far as possible to select companies with a spread of activities, sizes, geographical locations etc. In the event, only two companies with fewer than 10 employees featured in the research because of the requirement for the business to employ at least one person at SCQF levels 5,6, 8 and 11.

Company involvement was achieved in one of two ways:

- 1 For construction, financial services and personal services, the consultant enlisted the assistance of the Sector Skills Councils/former NTOs, namely CITB-Construction Skills, Financial Services Skills Council and HABIA (Hairdressing and Beauty Industry Authority). These sectoral organisations were able to carry out the initial briefing of potential companies, which the consultants then followed up in order to secure definite agreement to participate in the project. IMPROVE (the sectoral organisation for the food and drink manufacturing sector) would have been willing to assist the project but had no detailed knowledge of suitable Scottish companies. The Hospitality Training Foundation declined to assist the project.
- 2 For hospitality and for food and drink manufacturing, the consultants received assistance from Local Enterprise Companies — SE Ayrshire, SE Dumfries and Galloway, SE Dunbartonshire and SE Glasgow. The LECs supplied details of quality companies with which LEC staff had dealt and the consultants made direct approaches to these companies.

The directors of 4most plus would like to record their thanks to the three sectoral organisations and the four LECs. Their assistance greatly smoothed the process of gaining company involvement.

4most plus designed tools for analysis of the data from the interviews and this report presents the project findings based on this analysis, together with an evaluation of the methodology and recommendations for future action and dissemination.

In addition 4most plus have produced a toolkit for assessing Core Skills competence requirements which can be applied in any industry sector. However, it should be noted that the use of such a toolkit will only give meaningful results if the interviews are undertaken by researchers with in-depth knowledge and understanding of SQA Core Skills.

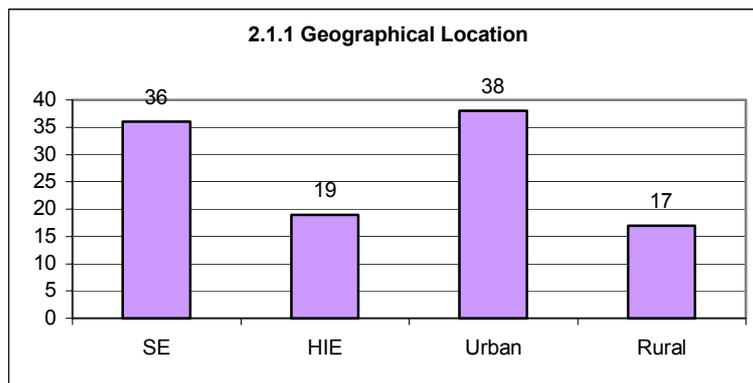
## 2 Profile information on consultants' visits to companies

### 2.1 The 55 participating companies

4most plus selected the companies to be visited so that they provided a spread of characteristics typical of the sector in Scotland, in terms of:

- ◆ geographical location (Scottish Enterprise or Highlands and Islands Enterprise area)
- ◆ urban and rural businesses
- ◆ size (measured in terms of number of number of employees)

**Figures 2.1.1 and 2.1.2 summarise the profile of the companies finally selected.**



(Numbers are out of a maximum of 55 companies)

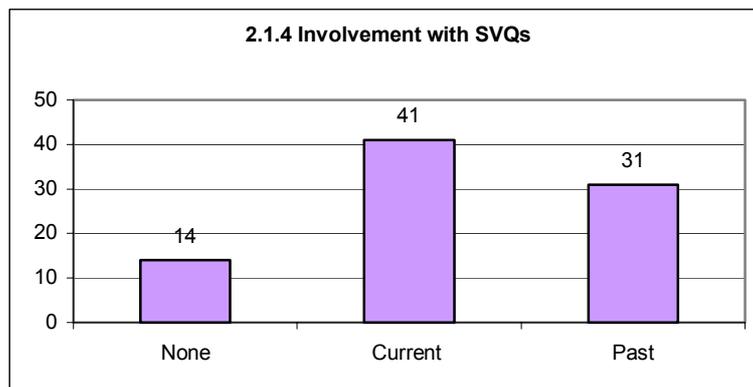


(Numbers are out of a maximum of 55 companies)

**Figure 2.1.3 illustrates the range of company sizes within the five sectors**

<b>2.1.3 Company size (out of 11 companies per sector)</b>				
Sector	Number of Employees			
	1 – 10	11 – 50	51 – 250	Over 250
Construction	1	7	2	1
Financial services	0	4	4	3
Food manufacture	0	1	6	4
Hospitality	0	1	7	3
Personal services	1	8	2	0

The companies were asked about their involvement with SVQs. Higher than average involvement rates were reported (Figure 2.1.4) Only 25% of companies (mostly from the financial services sector) had no members of staff who possessed or were working towards SVQs; 75% of companies had staff currently working towards SVQs and 56% of companies had staff who possessed SVQs. These high figures may be the result of the selection method — companies recommended by SSCs or LECs were probably more likely to be involved in vocational training.



(Numbers are out of a maximum of 55 companies)

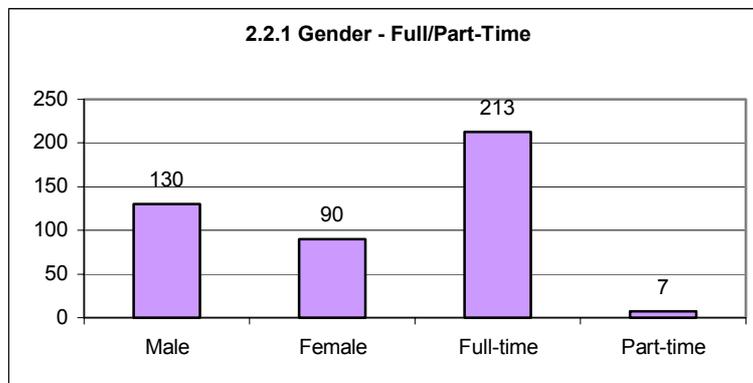
Figure 2.1.5 shows SVQ involvement in each of the sectors. Only in the financial services sector, was SVQ involvement low, in spite of the companies having been nominated by the Sector Skills Council. However this is consistent with the fact that there has been little uptake of either NVQs or SVQs in this sector. Because of FSA regulation and the FSA, now FSSC, approved exam list, the sector largely relies on professional institute qualifications. Interestingly, where there was an involvement with SVQs in financial services companies, this was with Customer Services SVQs, rather than those developed specifically for the financial services sector.

By contrast, the construction sector is heavily reliant on SVQs, as their craftspeople have to undertake Modern Apprenticeships. HABIA’s labour market intelligence for the personal services sector also shows that the majority of staff qualify through MAs.

<b>2.1.5 SVQ Involvement by sector (out of 11 companies per sector)</b>			
Sector	No involvement with SVQs	One or more employees currently working towards SVQ	One or more employee has already achieved SVQ
Construction	2	9	1
Financial services	9	1	2
Food manufacture	2	9	8
Hospitality	0	11	10
Personal services	0	11	10

## 2.2 Employee profile

The consultants collected some basic data relating to the staff interviewed for the project. In total 220 employees were interviewed (44 in each of the 5 industry sectors). Figures 2.2.1 – 2.2.6 illustrate the gender, age, employment type and length of service patterns of these interviewees.

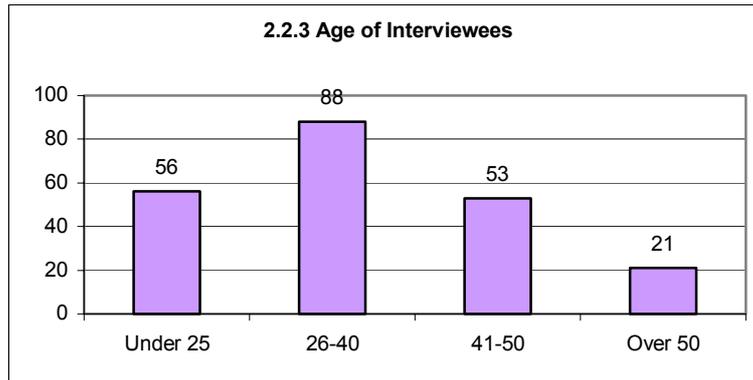


(Numbers are out of a maximum of 220 employees)

The breakdown across the five sectors is shown in Figure 2.2.2. Males predominate in construction and females in personal services — a typical pattern for these two sectors. CITB — Construction Skills, with the help of ESF funding, has numerous projects which aim to increase the number of women entering the industry. HABIA too is attempting to address the gender imbalance in the hairdressing industry.

<b>2.2.2 Gender — full/part-time (out of 44 employees per sector)</b>				
Sector	Gender		Employment	
	Male	Female	Full-time	Part-time
<b>Construction</b>	42	2	43	1
<b>Financial services</b>	25	19	43	1
<b>Food manufacture</b>	25	19	43	1
<b>Hospitality</b>	28	16	43	1
<b>Personal services</b>	10	34	41	3

Figure 2.2.3 shows the number of employees in different age bands.



(Numbers are out of a maximum of 220 employees)

Figure 2.2.4 presents the age band breakdown for the five sectors. The average age of interviewees was highest in the construction sector and lowest in personal services. These findings for the construction and personal services sectors are consistent with the latest labour market intelligence produced by the two SSCs.

2.2.4 Age of interviewees (out of 44 employees per sector)				
Sector	Under 25	26 – 40	41 – 50	Over 50
Construction	6	12	20	6
Financial services	7	16	14	5
Food manufacture	13	21	8	2
Hospitality	13	20	6	5
Personal services	17	19	5	3

Figure 2.2.5 shows that over 50% of the employees in the sample have more than 10 years service in the industry.

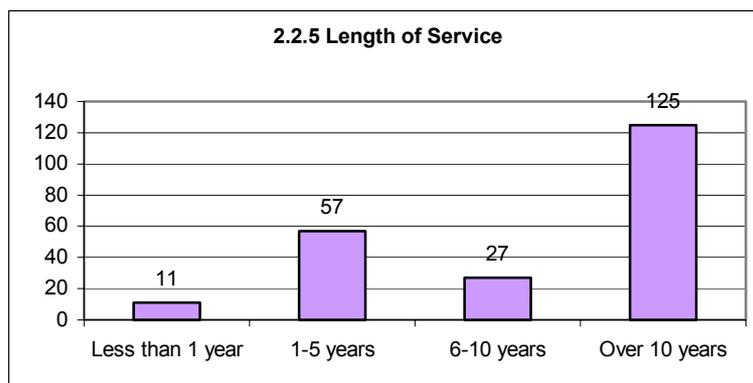


Figure 2.2.6 shows that a similar pattern regarding length of service was found across four of the industry sectors. The construction sector had the highest proportion of long serving employees. This is consistent with the statistics relating to the age of interviewees in table 2.2.4. All CITB-Construction Skills labour market intelligence has identified the aging workforce as a problem for the sector.

<b>2.2.6 Length of service (out of 44 employees per sector)</b>				
<b>Sector</b>	<b>Less than 1 year</b>	<b>1 – 5 years</b>	<b>6 – 10 years</b>	<b>Over 10 years</b>
<b>Construction</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>35</b>
<b>Financial services</b>	<b>4</b>	<b>11</b>	<b>6</b>	<b>23</b>
<b>Food manufacture</b>	<b>1</b>	<b>13</b>	<b>6</b>	<b>24</b>
<b>Hospitality</b>	<b>2</b>	<b>15</b>	<b>7</b>	<b>20</b>
<b>Personal services</b>	<b>3</b>	<b>13</b>	<b>5</b>	<b>23</b>

## 3 Estimating applicants' Core Skills at recruitment

This section reports on the information provided by the managers on the methods which they used to estimate applicants' Core Skill competence. The managers also estimated candidates' Core Skills competence from qualifications held. (This is covered in Section 4 of this report).

### 3.1 Overall results

The managers were shown a list of possible ways of estimating Core Skills competence and asked to indicate which of these their company would use with job applicants. Managers were also asked if they used any other methods in addition to those listed. Four companies (all hairdressing salons) suggested alternative methods. These four salons all asked applicants to attend for a trial work experience day or days, during which their Core Skill competence was observed. Figure 3.1.1 shows the numbers of methods used per company across the five industry sectors.

Sector	Number of companies using methods (out of 11 companies per sector)							
	1 method	2 methods	3 methods	4 methods	5 methods	6 methods	7 methods	8 methods
<b>Construction</b>	1	8	0	0	0	0	0	0
<b>Financial Services</b>	0	1	0	4	4	0	2	0
<b>Food Manufacture</b>	0	0	1	1	2	4	2	1
<b>Hospitality</b>	0	0	0	0	2	2	2	5
<b>Personal Services</b>	0	0	0	2	2	4	2	1

All but two of the companies used at least one method to estimate applicants' Core Skills. Both of the companies who made no estimation of Core Skills at recruitment stage were in the construction sector. This sector also exhibited the fewest methods used to estimate Core Skills, with no company using more than two methods. By contrast, companies in the hospitality sector used a wide variety of approaches to estimating applicants' Core Skill competence.

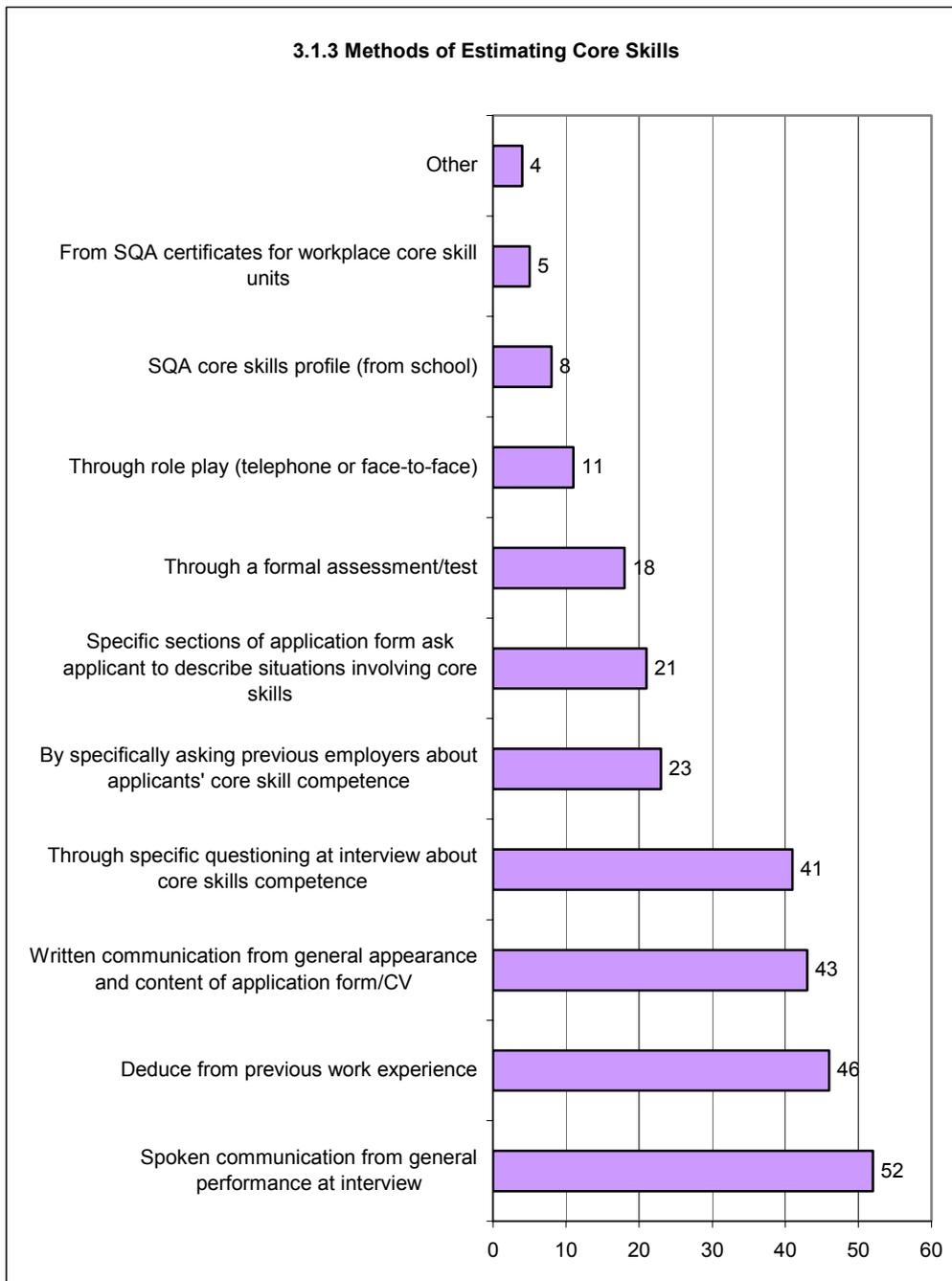
The actual methods used to estimate Core Skills competence varied across the five sectors, as shown in Figure 3.1.2 on page 12.

<b>3.1.2 Estimating Core Skills competence at recruitment (out of 11 companies per sector)</b>					
<b>Method of Estimating Core Skills</b>	<b>Construction</b>	<b>Financial Services</b>	<b>Food Manufacture</b>	<b>Hospitality</b>	<b>Personal Services</b>
<b>Written communication from general appearance and content of application form/CV</b>	0	11	11	11	10
<b>Specific sections of application form ask applicant to describe situations involving Core Skills</b>	0	4	7	10	0
<b>Spoken communication from general performance at interview</b>	9	10	11	11	11
<b>SQA Core Skills profile (from school)</b>	0	1	1	3	3
<b>From SQA certificates for workplace Core Skill Units</b>	0	0	1	1	3
<b>Deduce from previous work experience</b>	8	8	10	10	10
<b>Through specific questioning at interview about Core Skills competence</b>	0	10	9	11	10
<b>By specifically asking previous employers about applicants' Core Skill competence</b>	0	1	5	8	9
<b>Through role play (telephone or face-to-face)</b>	0	2	1	4	4
<b>Through a formal assessment/test</b>	0	5	6	6	1
<b>Other — Observed during induction day/trial day/week's trial</b>	0	0	0	0	4

The extensive range of methods used demonstrates the high level of importance which employers place on Core Skills within their workforce,

even though they did usually not use the term Core Skills to describe these competences. Only in construction were few formal methods used and the consultant conducting the interviews in this sector noted that generally construction employers were less convinced of the value of Core Skills than employers from other sectors. He also commented that at the higher levels of employment (ie jobs at SCQF levels 8 and 11) Core Skills appeared to be frequently utilised at lower levels than might have been expected. This is consistent with the Core Skills in the construction modern apprenticeship being set at the lowest level (Access 3), the only Scottish apprenticeship which has all five Core Skills at this level.

Figure 3.1.3 illustrates the managers' responses overall. The maximum score if all managers used a method would be 55.



It is clear from figure 3.1.3 that, in general, managers involved with recruitment of staff placed considerable weight on candidates' Core Skill competence and (with the exception of construction) made considerable efforts to estimate this at the recruitment stage. It is somewhat disheartening, and of relevance to SQA's forthcoming Core Skills review, that the two least popular methods of estimating Core Skills were from a candidate's SQA Core Skills profile or from SQA workplace Core Skill Units certificates. Employers' and potential employees' lack of knowledge of/lack of regard for this Core Skills certification is a cause for concern which 4most plus has emphasised in previous Core Skills related projects for SQA.

## 4 Core Skills and qualifications

An ancillary objective of the project was to ascertain managers' and employees' opinions as to the extent to which employees develop Core Skills through achieving other qualifications within the SCQF. It is self evident that interviewees can only give meaningful opinions on this in respect of qualifications with which they are familiar. Therefore the managers were asked about qualifications which they might typically expect a candidate for a job at SCQF level 5, 6, 8 or 11 to possess at the point when they were recruited to the firm. The employees were asked which qualifications they had achieved at the time of the interview with the 4most plus consultant. (One must remember that some of these qualifications may have been achieved while working for the company, ie subsequent to recruitment. This would typically apply to SVQs). Both managers and employees were then asked to indicate the Core Skills contribution of the qualifications which they had selected. The detailed tables of results for each job level for each sector are shown in Appendix B.

Section 4 of this report presents the findings broken down by industry sector. Although it would have been possible to aggregate the data over all five sectors, this would not be meaningful. Creating average figures across the five sectors would simply even out the employee-manager differences for the individual sectors. Averaging would also mask the differences between sectors in respect of qualifications sought and achieved. For instance there is almost no overlap between the qualifications from the construction sectors (SVQs and HNC/HNDs) and those from the financial services sector (Highers, degrees and professional qualifications).

However, some common themes emerged across the sectors.

A positive theme was the high scoring by employees in respect of the degree to which Scottish Vocational Qualifications had developed their Core Skill competence. Perhaps this is because SVQs are generally delivered in the workplace and so employees can easily see a clear connection between any Core Skill implicit in the SVQ and the Core Skill which they require in their day-to-day work. It might also be that SVQ trainers and assessors point out the Core Skills aspects of the qualification more clearly than teachers in schools and colleges.

Good practice was identified in relation to workplace training. As SVQs and professional qualifications are gained in the workplace, the results demonstrate the considerable amount of post-recruitment training undertaken by the companies, most notably at SVQ level 2 and through professional qualifications.

An encouraging finding was that, although many employers did not seek specific qualifications from applicants at the recruitment stage, those employers who did so, scored many of these qualifications highly as giving an indication of Core Skills competence. This indicates that employers have made the link between many qualifications and Core Skills competence — it is thus particularly discouraging that almost none

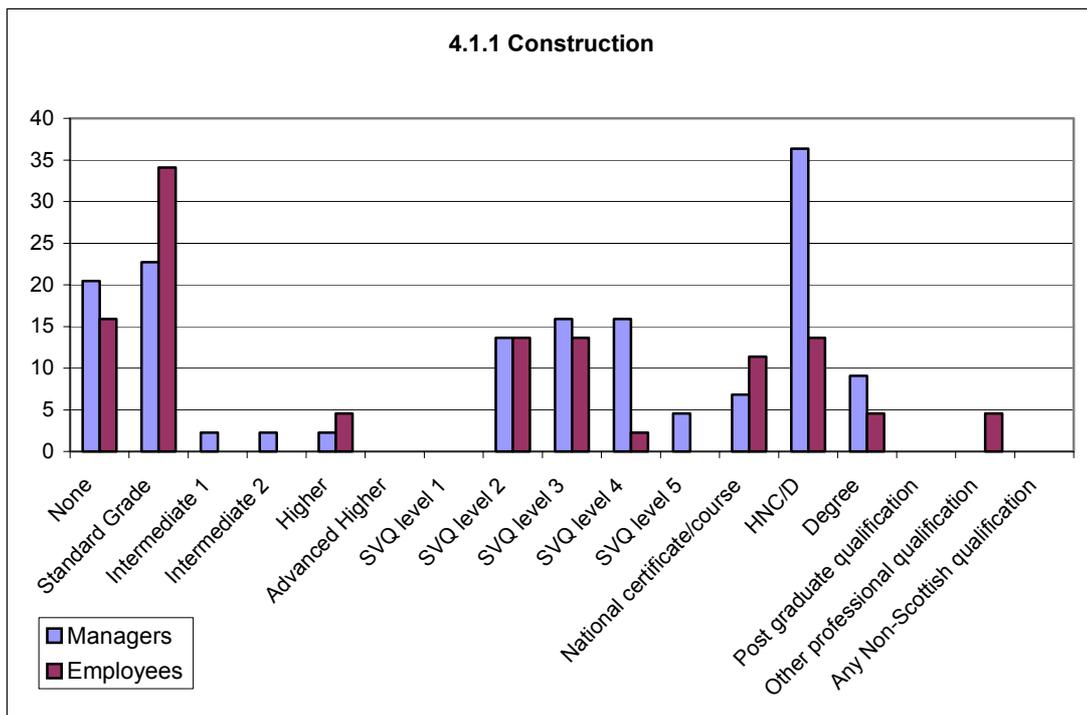
of the employers interviewed were aware of nor understood the purpose of the SQA Core Skills profile for school qualifications.

Less encouraging was an apparent lower regard for Standard Grades. Managers often did not appear to rate these qualifications as important for recruitment purposes, while employees did not see them as developing Core Skill competence relevant to the workplace. Many staff who had these school qualifications had been recruited by managers who stated that they did not look for these qualifications from candidates. This was corroborated by statements to the consultants made by several managers. These managers said that the candidate's attributes and attitude were more important than school qualifications. A related issue reported by the 4 most plus consultants was that managers appeared to have difficulties in understanding the grading system applicable to Standard Grade qualifications. This meant that they were unsure what level of subject knowledge was implied by a particular Standard Grade pass. These are issues which SQA might wish to investigate further.

School qualifications other than Standard Grades barely featured in the findings. Intermediate 1 and Intermediate 2 qualifications are probably too new for employers and employees to have experienced them to any great extent. Financial services emerged as the only sector where Highers were seen as desirable entrance qualifications. Highers were understood by employers in the other four sectors but they did not see them as relevant for recruitment purposes.

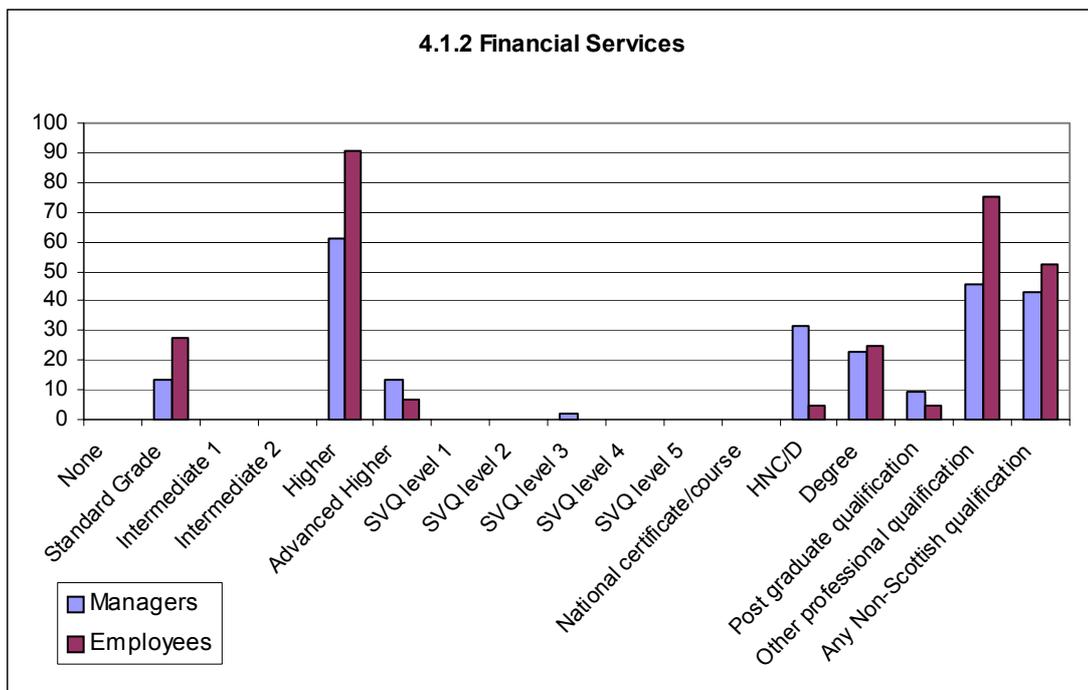
## 4.1 Qualifications desired and achieved

In this sub-section the figures show for each sector the comparison of qualifications sought by the managers at recruitment and qualifications actually held by the employees. The scores in the tables represent the **percentages** of managers/employees who gave these responses.



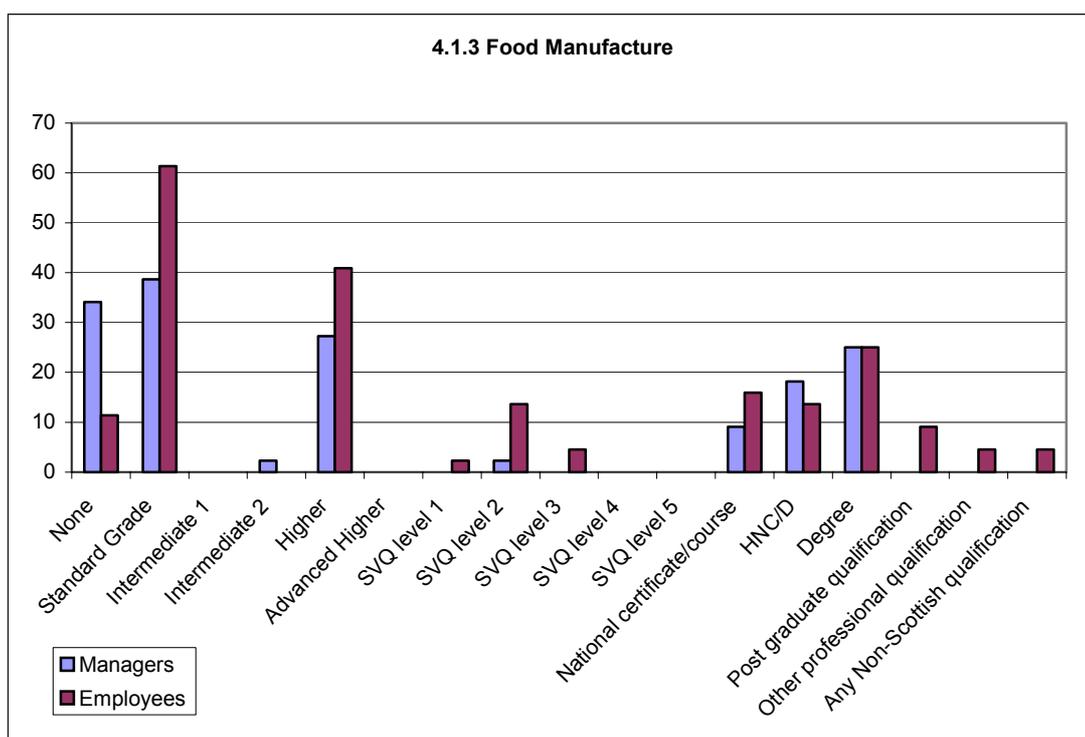
Qualification	Percentage of managers	Percentage of employees
None	20	16
Standard Grade	23	34
Intermediate 1	2	0
Intermediate 2	2	0
Higher	2	5
Advanced Higher	0	0
SVQ level 1	0	0
SVQ level 2	14	14
SVQ level 3	16	14
SVQ level 4	16	2
SVQ level 5	5	0
National certificate/course	7	11
HNC/D	36	14
Degree	9	5
Post graduate qualification	0	0
Other professional qualification	0	5
Any non-Scottish qualification	0	0

As seen in Figure 4.1.1, the construction sector managers appeared to set considerable store by HNC/HNDs. However, only 14% of employees possessed these qualifications — a big shortfall. Only 23% of managers looked for candidates with Standards Grades, but 34% of the employees possessed such qualifications. In construction the SVQs at levels 2 and 3 would typically be delivered by means of modern apprenticeships. CITB-Construction Skills administers a basic numeracy skills test for all applicants to their MA.



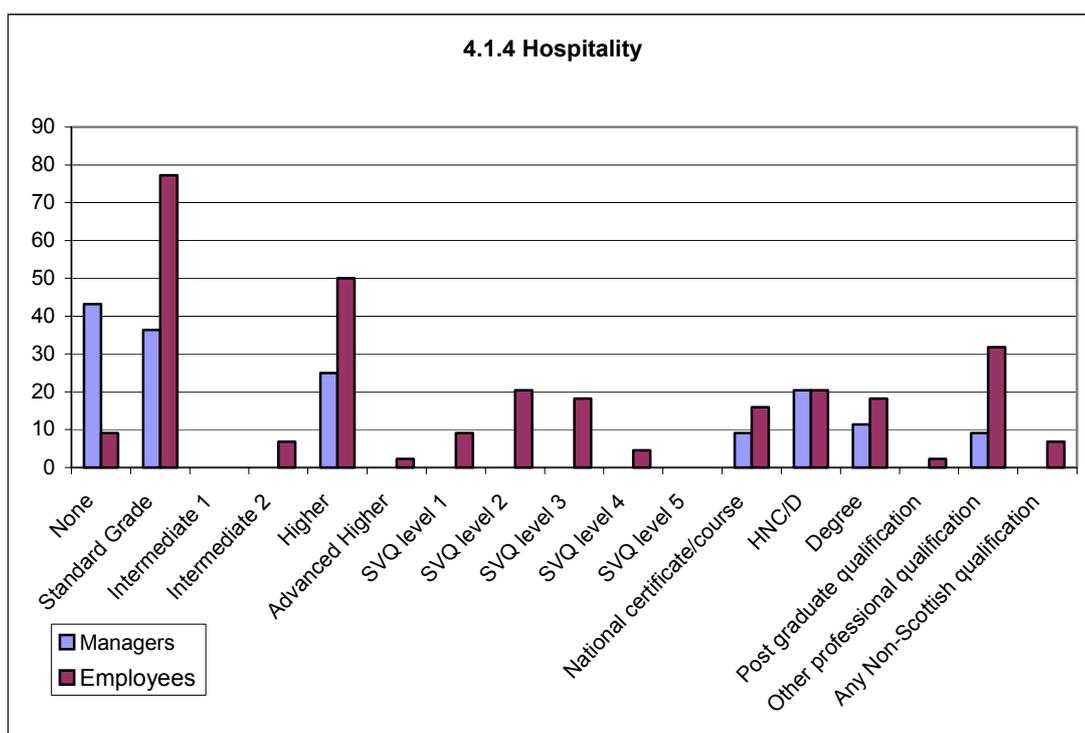
Qualification	Percentage of managers	Percentage of employees
None	0	0
Standard Grade	14	27
Intermediate 1	0	0
Intermediate 2	0	0
Higher	61	91
Advanced Higher	14	7
SVQ level 1	0	0
SVQ level 2	0	0
SVQ level 3	2	0
SVQ level 4	0	0
SVQ level 5	0	0
National certificate/course	0	0
HNC/D	32	5
Degree	23	25
Post graduate qualification	9	5
Other professional qualification	0	5
Any Non-Scottish qualification	0	0

Figure 4.1.2 illustrates that financial services was the most qualifications-oriented sector in that all the employees possessed at least one type of qualification and no manager would recruit someone to a post who did not possess appropriate qualifications. This is largely because of regulatory demands for approved/appropriate qualifications. As discussed previously, a notable point is the almost complete absence of SVQs. This is due to a combination of the sector's tendency to recruit straight from school and its subsequent reliance on professional qualifications. No managers sought SVQs for recruiting at any level of post and only one employee in the sample possessed an SVQ. The most popular Scottish qualifications in this sector were Highers and professional qualifications such as those delivered by the Chartered Institute of Bankers in Scotland. Financial services was the only sector to demonstrate a high level of use of qualifications which are not in the SCQF. Currently none of the professional qualifications used in the financial services sector in Scotland are included in the SCQF. However, this is currently being addressed.



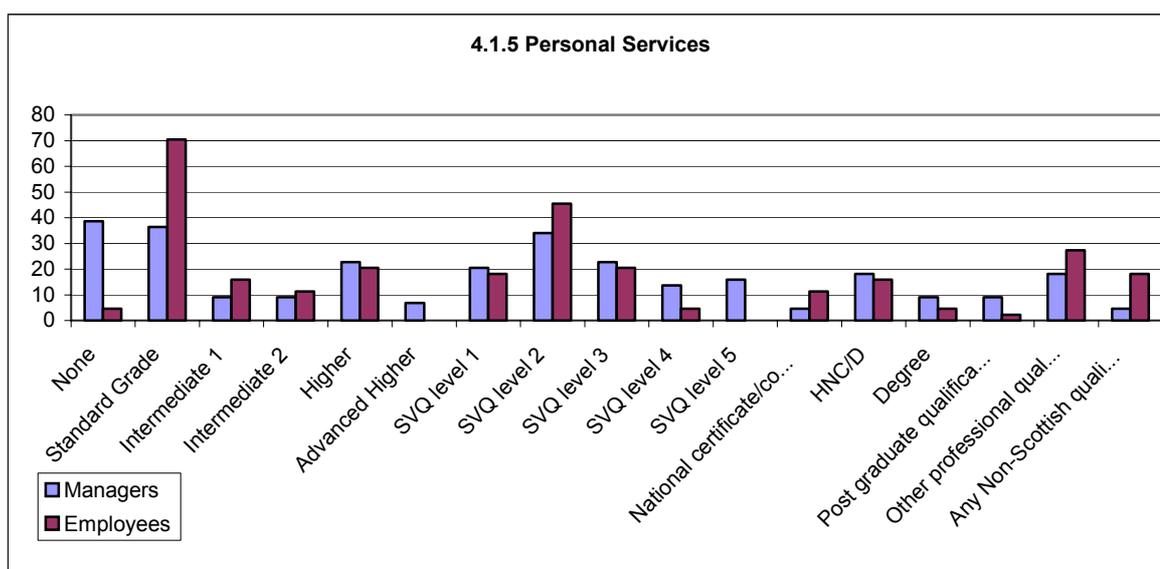
Qualification	Percentage of managers	Percentage of employees
None	34	11
Standard Grade	39	61
Intermediate 1	0	0
Intermediate 2	2	0
Higher	27	41
Advanced Higher	0	0
SVQ level 1	0	2
SVQ level 2	2	14
SVQ level 3	0	5
SVQ level 4	0	0
SVQ level 5	0	0
National certificate/course	9	16
HNC/D	18	14
Degree	25	25
Post graduate qualification	0	9
Other professional qualification	0	5
Any Non-Scottish qualification	0	5

In the food manufacturing sector (Figure 4.1.3) employees possessed more qualifications than employers sought. This sector had a high proportion of posts (34%) for which managers stated that they did not look for any qualifications at all at recruitment stage. The majority, but not all, of these posts were at SCQF levels 5 and 6.



Qualification	Percentage of managers	Percentage of employees
None	43	9
Standard Grade	36	77
Intermediate 1	0	0
Intermediate 2	0	7
Higher	25	50
Advanced Higher	0	2
SVQ level 1	0	9
SVQ level 2	0	20
SVQ level 3	0	18
SVQ level 4	0	5
SVQ level 5	0	0
National certificate/course	9	16
HNC/D	20	20
Degree	11	18
Post graduate qualification	0	2
Other professional qualification	9	32
Any Non-Scottish qualification	0	7

The hospitality sector (Figure 4.1.4) had the highest number of posts (43%) for which managers stated that no qualifications were necessary, although only 9% of employees had no qualifications and most had achieved more than one type of qualification.



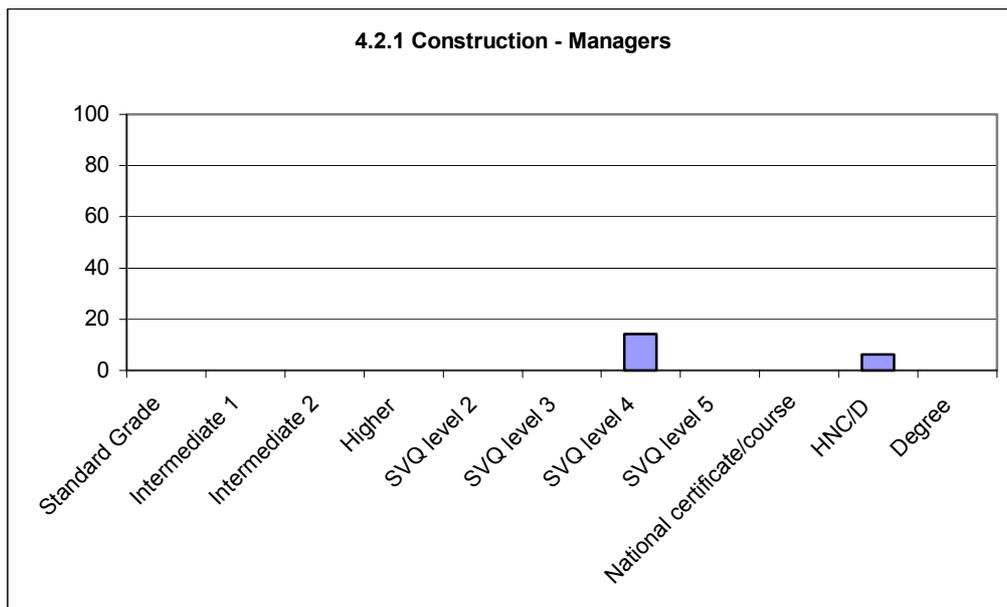
Qualification	Percentage of managers	Percentage of employees
None	39	5
Standard Grade	36	70
Intermediate 1	9	16
Intermediate 2	9	11
Higher	23	20
Advanced Higher	7	0
SVQ level 1	20	18
SVQ level 2	34	45
SVQ level 3	23	20
SVQ level 4	14	5
SVQ level 5	16	0
National certificate/course	5	11
HNC/D	18	16
Degree	9	5
Post graduate qualification	9	2
Other professional qualification	18	27
Any Non-Scottish qualification	5	18

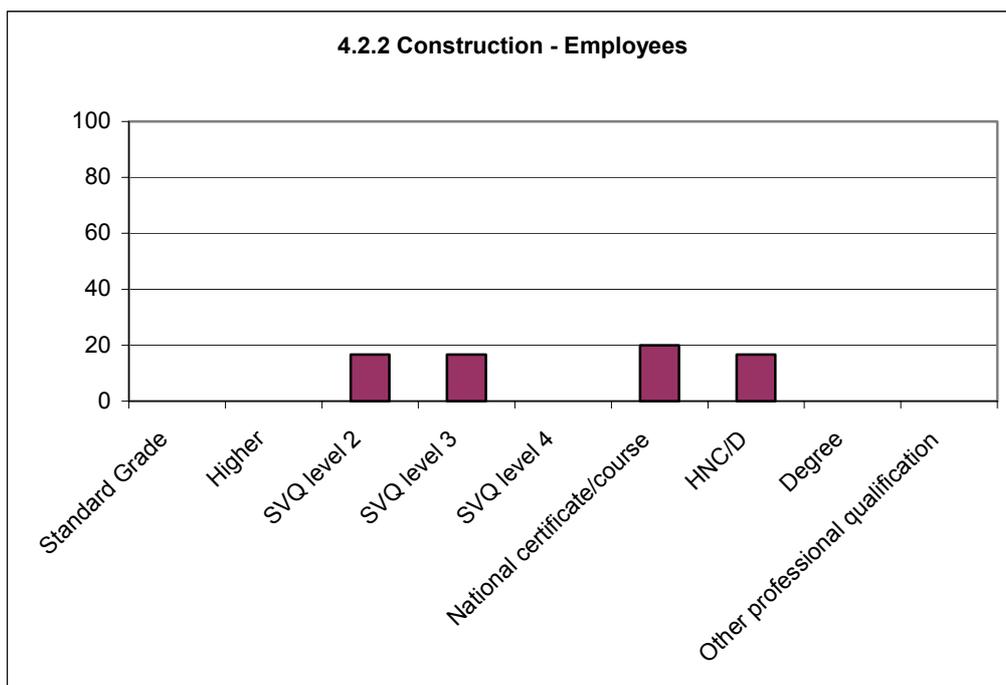
The personal services sector exhibited what might appear to be two contradictory trends (Figure 4.1.5). On one hand a high proportion of employers (39%) stated that they did not look for any qualifications when recruiting staff. This contrasted with employees having a wide range of qualifications. Only two employees in the sample had no qualifications at all. Part of the explanation lies in the sector's high involvement with SVQs, which are likely to be achieved after recruitment to the business. However, it should be noted that employers in this sector did not appear to value particularly the Standard Grades which nearly three quarters of the employees possessed. Indeed, the consultant reported a number of instances where both employers and employees were not at all sure either what Standard Grades were or whether they still existed.

## 4.2 Views on the contribution of qualifications towards Core Skills competence

The data in this section analyses the opinions of managers and employees regarding the contribution to Core Skills competence made through achieving an academic or workplace qualification. In figures 4.2.1 – 4.2.10 the scores are shown as percentages of the number of respondents who selected a qualification. (For example, construction managers told us that they looked for Standard Grades in ten cases but no manager considered that these qualifications contributed to the development of their employees' Core Skills and thus the score for Standard Grades in figure 4.2.1 is zero. In seven cases construction managers stated that they sought an SVQ level 4 qualification. One of these seven managers considered that SVQ level 4 qualifications demonstrated Core Skill competence and so in figure 4.2.1 SVQ level 4 scores 14% (ie a seventh).

Figures 4.2.1 to 4.2.10 permit the comparison of manager and employee views for each sector.

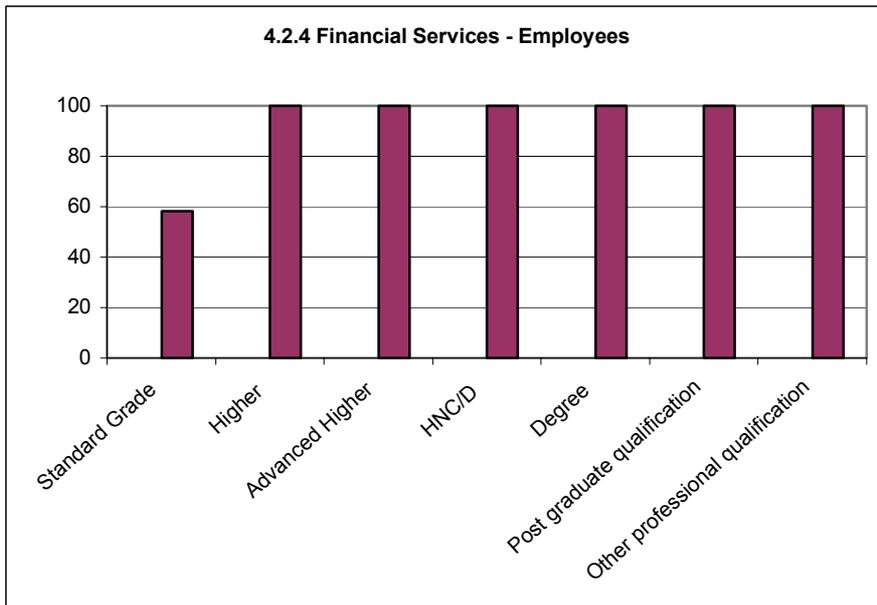
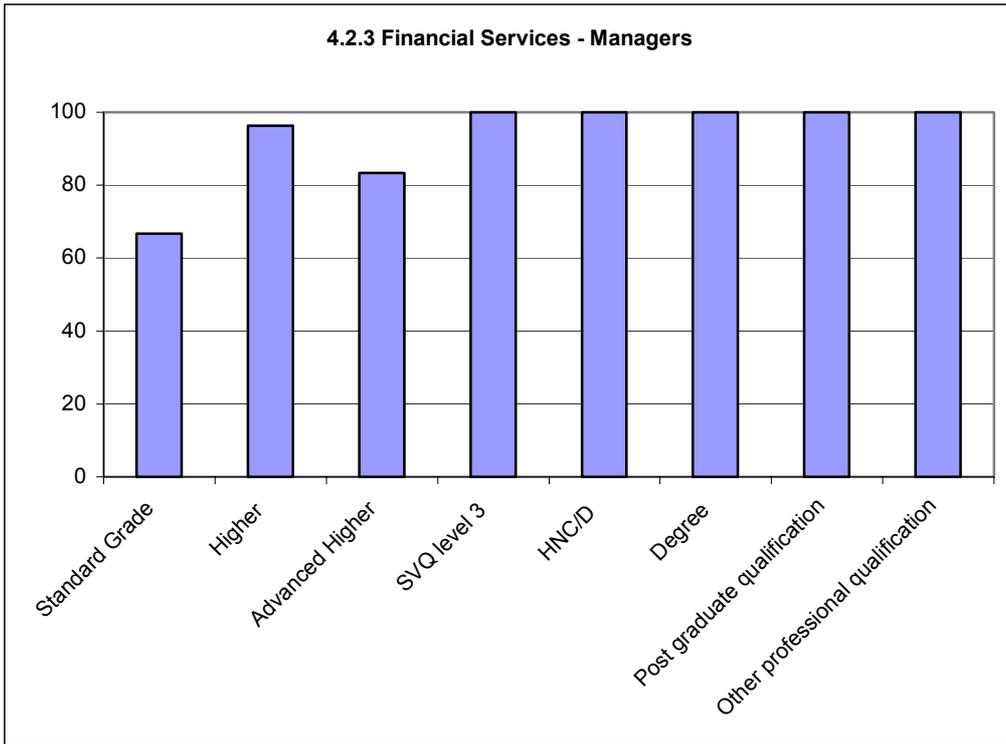




<b>Construction</b>		
<b>Qualification</b>	<b>Percentage of managers</b>	<b>Percentage of employees</b>
None		
Standard Grade	0	0
Intermediate 1	0	
Intermediate 2	0	
Higher	0	0
Advanced Higher		
SVQ level 1		
SVQ level 2	0	17
SVQ level 3	0	17
SVQ level 4	14	0
SVQ level 5	0	
National certificate/course	0	20
HNC/D	6	17
Degree	0	0
Post graduate qualification		
Other professional qualification		0
Any Non-Scottish qualification		

The managers in the construction sector (Figure 4.2.1) were almost entirely unconvinced that academic or workplace qualifications gave any indication of an employee's Core Skills competence. They tended to look for evidence of Core Skills at job interviews as a better guide. The low levels of interest in qualifications as a source of information on Core Skills competence may also be related to the fact that many construction managers appeared to believe that Core Skills are of little importance in the construction industry.

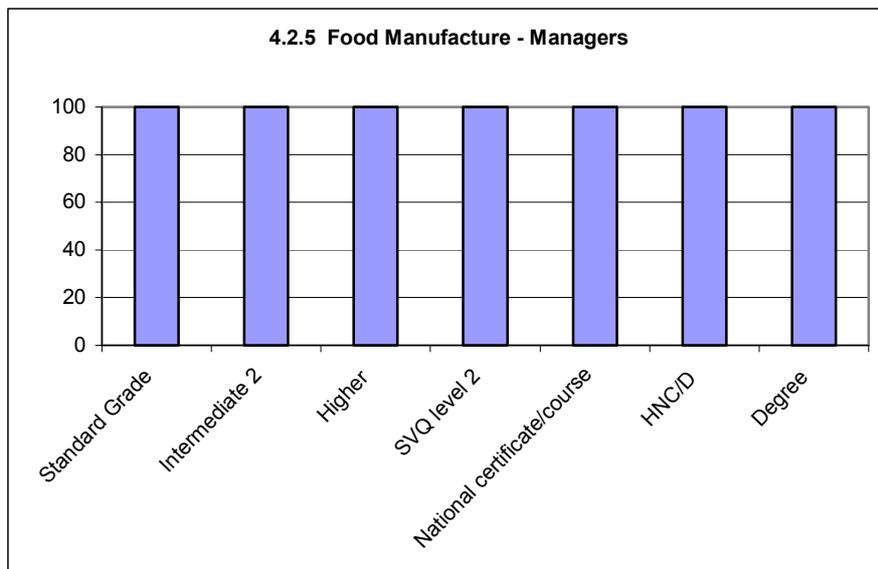
By contrast Figure 4.2.2 shows that around one fifth of the construction employees who had achieved workplace qualifications considered that these had enhanced their Core Skills competence. Like the managers, the employees made no such connection between Core Skills and school/college qualifications.

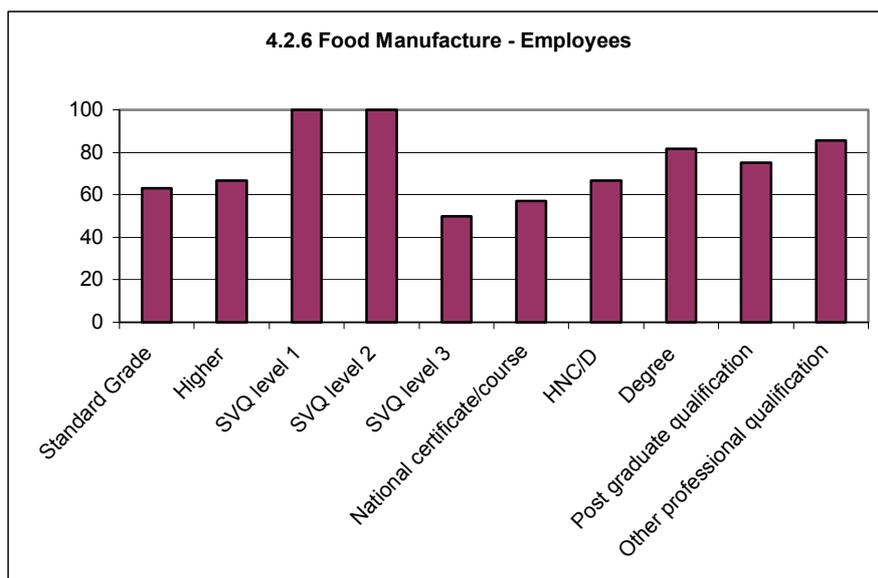


Financial Services		
Qualification	Percentage of managers	Percentage of employees
None		
Standard Grade	67	58
Intermediate 1		
Intermediate 2		
Higher	96	100
Advanced Higher	83	100
SVQ level 1		
SVQ level 2		
SVQ level 3	100	
SVQ level 4		
SVQ level 5		
National certificate/course		
HNC/D	100	100
Degree	100	100
Post graduate qualification	100	100
Other professional qualification	100	100
Any Non-Scottish qualification		

Financial services managers saw all types of qualifications as making a high contribution to employees' Core Skills. (Figure 4.2.3)

Financial services employees agreed with the managers' views. (Figure 4.2.4) However, it is interesting to note that Standard Grades scored consistently lower with the employees. Perhaps this is because in this sector Core Skills competence at high levels is required for all levels of post and the Core Skills delivered through Standard Grades are not sufficiently high. It could also result from the employees' lack of awareness of the integrated Core Skills profiling of Standard Grades.

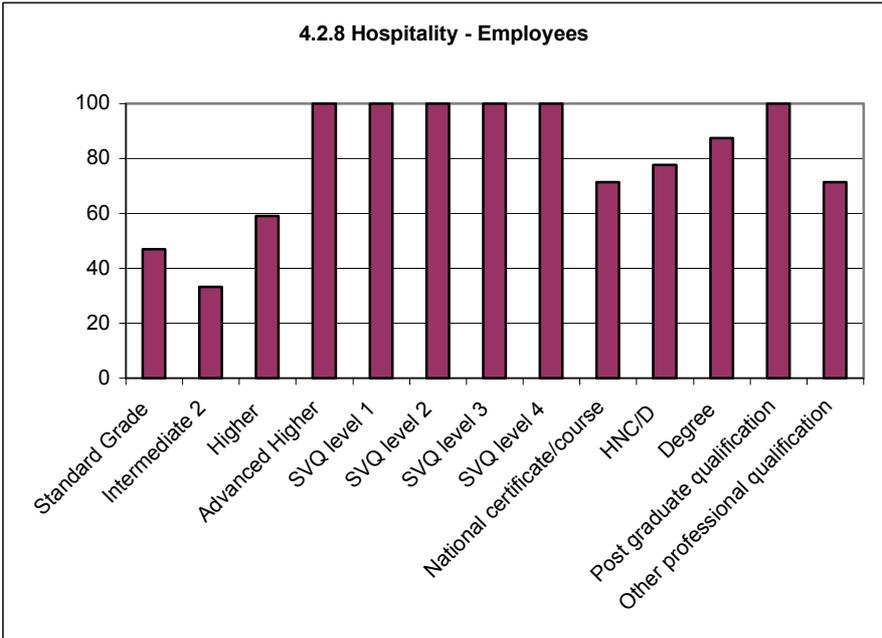




<b>Food Manufacture</b>		
<b>Qualification</b>	<b>Percentage of managers</b>	<b>Percentage of employees</b>
None		
Standard Grade	100	63
Intermediate 1		
Intermediate 2	100	
Higher	100	67
Advanced Higher		
SVQ level 1		100
SVQ level 2	100	100
SVQ level 3		50
SVQ level 4		
SVQ level 5		
National certificate/course	100	57
HNC/D	100	67
Degree	100	82
Post graduate qualification		75
Other professional qualification		86
Any Non-Scottish qualification		

Many of the food manufacture managers had stated that they were not concerned with qualifications. However, when appointing staff, those managers who did look for qualifications were unanimous in seeing a connection between these qualifications and Core Skills competence. (Figure 4.2.5)

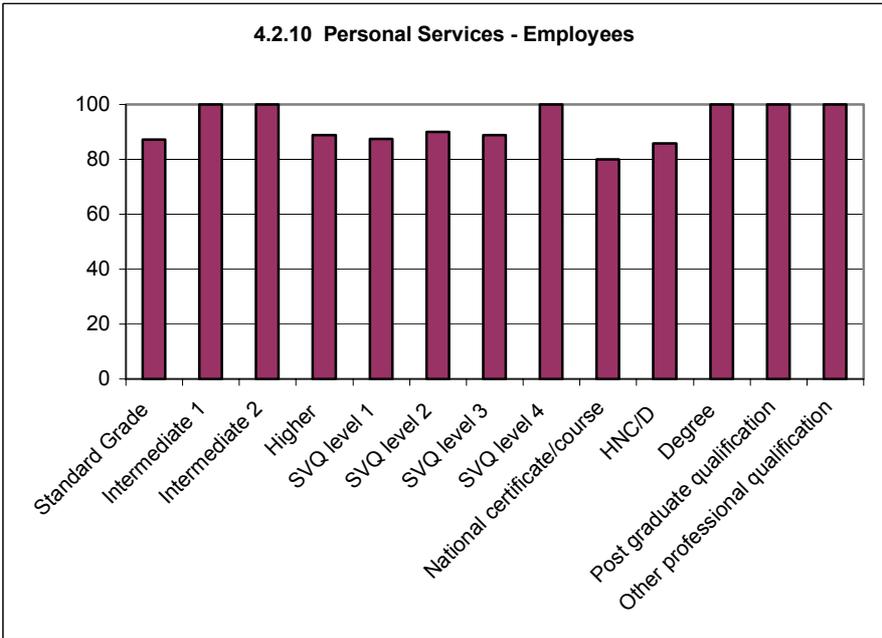
The employees did not give the qualifications such high ratings but, nevertheless, saw a fairly substantial link. (Figure 4.2.6)



<b>Hospitality</b>		
<b>Qualification</b>	<b>Percentage of managers</b>	<b>Percentage of employees</b>
None		
Standard Grade	94	47
Intermediate 1		
Intermediate 2		33
Higher	100	59
Advanced Higher		100
SVQ level 1		100
SVQ level 2		100
SVQ level 3		100
SVQ level 4		100
SVQ level 5		
National certificate/course	100	71
HNC/D	100	78
Degree	100	88
Post graduate qualification		100
Other professional qualification	100	71
Any Non-Scottish qualification		

As with food manufacture, many of the hospitality managers had stated that they were not concerned with qualifications when appointing staff. But again, those managers who did look for qualifications were unanimous in seeing a connection with Core Skills competence. (Figure 4.2.7)

In the hospitality sector the employees scored all of the SVQs at maximum and also saw good linkage between most post-Higher qualifications and Core Skills competence. This is a particularly encouraging finding regarding the hospitality SVQs. (Figure 4.2.8)



Personal Services		
Qualification	Percentage of managers	Percentage of employees
None		
Standard Grade	75	87
Intermediate 1	100	100
Intermediate 2	100	100
Higher	80	89
Advanced Higher	67	
SVQ level 1	100	88
SVQ level 2	100	90
SVQ level 3	100	89
SVQ level 4	100	100
SVQ level 5	100	
National certificate/course	100	80
HNC/D	100	86
Degree	100	100
Post graduate qualification	100	100
Other professional qualification	100	100
Any Non-Scottish qualification		

Figure 4.2.9 shows that personal services is another sector where those managers who sought qualifications considered that these qualifications developed Core Skills competence. It should however be remembered that a significant number of personal services managers placed little value on previous qualifications when recruiting staff.

The personal services employees scored every category of qualification above 80%. (Figure 4.2.10) This is an interesting finding, given the range of academic and workplace qualifications held, many of which would appear to have no immediate applicability to the sector. The consultant reported that employees in this industry generally had a good understanding of what Core Skills were. They were aware that the qualifications which they have achieved equipped them with Core Skills. In their replies the more junior staff focused on Communication and Numeracy at the lower levels, while those with greater responsibility levels also included Communication, Problem Solving, and Working with Others at the higher levels.

## 5 Job role specific Core Skills profiles and Core Skills gaps

This section of the report examines the Core Skills profiles identified by the consultants through the interviews with employees and managers. By means of questioning and examination of work evidence, the consultants established, for each job role:

- ◆ the Core Skill tasks and levels which managers sought from applicants at recruitment (ie the managers' estimate of the Core Skills required for the job role)
- ◆ the Core Skill tasks and levels which the employees actually used in the performance of their work

(Readers not familiar with the detail of SQA Core Skills should refer to the workplace Core Skill Units which can be downloaded from SQA's website: [www.sqa.org.uk](http://www.sqa.org.uk)).

Appendix C presents a summary of the data for each Core Skill and each job role as percentages of the number of responses. In this section, the data from Appendix C has been converted into a Core Skills profile for each job role. These Core Skill profile tables should be interpreted as follows:

- ◆ In each box the first figure represents the **level** of Core Skill:
  - Access 3 is represented by a score of  $1 \pm 0.5$
  - Intermediate 1 is represented by a score of  $2 \pm 0.5$
  - Intermediate 2 is represented by a score of  $3 \pm 0.5$
  - Higher is represented by a score of  $4 \pm 0.5$
- ◆ The second figure (in brackets) in each box is the standard deviation from the Core Skill level score. This measures the degree of coherence among the responses. A standard deviation of 0.5 or higher indicates that the responses were broadly spread across more than one Core Skill level. A standard deviation of 0.25 or less indicates a high level of agreement in the responses.

For those familiar with Scottish Vocational Qualifications, it is useful to remember the equivalence between SVQ levels and SCQF levels.

SVQ level 2	=	SCQF level 5
SVQ level 3	=	SCQF level 6
SVQ level 4	=	SCQF level 8
SVQ level 5	=	SCQF level 11

Jobs at SCQF level 6 equate to SVQ level 3 which is the level of qualification achieved in the modern apprenticeship. In the report the levels of Core Skills specified for each modern apprenticeship are compared with the Core Skills profile derived from the project research. It is interesting to note the discrepancies, given that MA Core Skill levels are based on employer consultation and not on any rigorous numerical

analysis. This would be useful information for SSCs who might wish to carry out research with larger samples of workers at SCQF level 6 in order to establish definitive Core Skills profiles for these jobs.

## 5.1 Construction

Overall, this sector displayed lower than average levels of Core Skills and a high coherence between the employee and manager scores, especially at levels 5, 6 and 8. The low standard deviations are particularly interesting at levels 5 and 6 because at these levels the job roles of the interviewees are varied, eg plasterer, joiner, roofer. This suggests that the same Core Skills are required for construction workers irrespective of the craft skill involved.

<b>Construction — SCQF level 5 (eg General Building Operative)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	1.18 (0.38)	1.00 (0.00)	1.09 (0.29)	Access 3
	Task 2 Writing	1.20 (0.40)	1.00 (0.00)	1.09 (0.29)	
	Task 3 Speaking	1.09 (0.29)	1.00 (0.00)	1.05 (0.21)	
IT	Task 1 Operating the computer	Not used	Not used	Not used	Core Skill not used in this job
	Task 2 Using software	Not used	Not used	Not used	
	Task 3 Finding information	Not used	Not used	Not used	
Numeracy	Task 0 Measuring	1.10 (0.30)	1.10 (0.30)	1.10 (0.30)	Access 3
	Task 1 Understanding charts etc	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 2 Producing charts etc	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Using number skills	1.09 (0.29)	1.09 (0.29)	1.09 (0.29)	
Problem Solving	Task 1 Investigating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	Access 3
	Task 2 Planning and solving	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Checking and evaluating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
Working with Others	Task 0 Analysing and preparing	Not used	Not used	Not used	Access 3
	Task 1 Planning and negotiating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 2 Acting in a group	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Checking and evaluating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	

No level 5 employees in any of the firms were required to use computers as part of their job. Less than half of the sample undertook any writing or produced charts, tables and diagrams. The most used Core Skills were Communication (reading, speaking), Problem Solving and Working with Others.

<b>Construction — SCQF level 6 (eg Joiner, plasterer, roofer, tiler)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	Intermediate 1 (Task 2 at Access 3)
	Task 2 Writing	1.40 (0.49)	1.33 (0.47)	1.36 (0.48)	
	Task 3 Speaking	2.00 (0.00)	1.91 (0.29)	1.96 (0.21)	
IT	Task 1 Operating the computer	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	Intermediate 1
	Task 2 Using software	2.00 (0.00)	1.50 (0.50)	1.67 (0.47)	
	Task 3 Finding information	3.00 (0.00)	1.50 (0.50)	2.00 (0.82)	
Numeracy	Task 0 Measuring	1.91 (0.29)	1.50 (0.50)	1.66 (0.48)	Intermediate 1 (Task 3 at Access 3)
	Task 1 Understanding charts etc	2.09 (0.29)	2.09 (0.29)	2.09 (0.29)	
	Task 2 Producing charts etc	1.44 (0.50)	1.33 (0.47)	1.39 (0.49)	
	Task 3 Using number skills	2.00 (0.42)	2.18 (0.38)	2.09 (0.41)	
Problem Solving	Task 1 Investigating	2.00 (0.00)	1.91 (0.29)	1.96 (0.21)	Intermediate 1
	Task 2 Planning and solving	2.00 (0.00)	1.91 (0.29)	1.96 (0.21)	
	Task 3 Checking and evaluating	1.91 (0.29)	1.91 (0.29)	1.91 (0.29)	
Working with Others	Task 0 Analysing and preparing	3.00 (0.00)	Not used	3.00 (0.00)	Intermediate 1 (Task 0 at Intermediate 2)
	Task 1 Planning and negotiating	2.09 (0.29)	2.00 (0.00)	2.05 (0.21)	
	Task 2 Acting in a group	2.09 (0.29)	1.91 (0.29)	2.00 (0.30)	
	Task 3 Checking and evaluating	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	

As with level 5, no level 6 employees in any of the firms were required to use computers as part of their job. The most used Core Skills were once again Communication (reading, speaking), Problem Solving and Working with Others.

The construction modern apprenticeship specifies that all five Core Skills should be achieved at Access 3. This is clearly below the level which this research suggests is required for the job roles at level 6 and would certainly be completely inadequate for those employees wishing to move on into level 8 posts after the apprenticeship.

<b>Construction — SCQF level 8 (eg Site Manager)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	2.91 (0.29)	3.00 (0.00)	2.96 (0.21)	Intermediate 2
	Task 2 Writing	2.46 (0.65)	2.55 (0.50)	2.51 (0.58)	
	Task 3 Speaking	2.91 (0.29)	2.91 (0.29)	2.91 (0.29)	
IT	Task 1 Operating the computer	2.14 (0.64)	2.38 (0.48)	2.27 (0.57)	Intermediate 1
	Task 2 Using software	2.14 (0.35)	2.38 (0.48)	2.26 (0.44)	
	Task 3 Finding information	2.50 (0.50)	2.38 (0.48)	2.43 (0.49)	
Numeracy	Task 0 Measuring	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	Intermediate 2 (Tasks 0 and 2 at Intermediate 1)
	Task 1 Understanding charts etc	3.00 (0.00)	2.91 (0.29)	2.96 (0.21)	
	Task 2 Producing charts etc	2.20 (0.60)	2.18 (0.57)	2.19 (0.58)	
	Task 3 Using number skills	3.00 (0.00)	3.00 (0.00)	3.00 (0.00)	
Problem Solving	Task 1 Investigating	2.91 (0.29)	3.00 (0.00)	2.96 (0.21)	Intermediate 2
	Task 2 Planning and solving	2.82 (0.38)	3.00 (0.00)	2.91 (0.29)	
	Task 3 Checking and evaluating	2.90 (0.30)	2.91 (0.29)	2.91 (0.29)	
Working with Others	Task 0 Analysing and preparing	3.12 (0.33)	3.09 (0.29)	3.10 (0.31)	Intermediate 2
	Task 1 Planning and negotiating	2.91 (0.29)	3.00 (0.42)	2.96 (0.36)	
	Task 2 Acting in a group	3.00 (0.42)	3.00 (0.42)	3.00 (0.42)	
	Task 3 Checking and evaluating	2.82 (0.38)	2.82 (0.38)	2.82 (0.38)	

At level 8, the IT Core Skill was required for the first time but at a lower level than the other four Core Skills. The standard deviations for IT are higher than for the other Core Skills, suggesting considerable variance in the use of computers across the firms included in the survey. This is also a feature of IT at level 11 (see below). This is borne out by previous 4most plus research conducted for the construction industry, in which it was found that some small businesses were operating without computers and others were simply using computers as word processors.

<b>Construction — SCQF level 11 (eg Company Director)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	3.91 (0.29)	3.82 (0.38)	3.87 (0.34)	Higher (Task 2 at Intermediate 2)
	Task 2 Writing	3.36 (0.48)	3.36 (0.48)	3.36 (0.48)	
	Task 3 Speaking	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
IT	Task 1 Operating the computer	3.41 (0.91)	3.70 (0.46)	3.55 (0.74)	Higher (Task 2 at Intermediate 2)
	Task 2 Using software	3.33 (0.82)	3.50 (0.50)	3.42 (0.67)	
	Task 3 Finding information	3.51 (0.67)	3.60 (0.66)	3.55 (0.67)	
Numeracy	Task 0 Measuring	Not used	2.00 (0.00)	2.00 (0.00)	Higher (Task 0 at Intermediate 1; Task 2 at Intermediate 2)
	Task 1 Understanding charts etc	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	
	Task 2 Producing charts etc	3.40 (0.49)	3.56 (0.68)	3.47 (0.59)	
	Task 3 Using number skills	3.73 (0.44)	3.82 (0.38)	3.78 (0.42)	
Problem Solving	Task 1 Investigating	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 2 Planning and solving	3.82 (0.38)	3.91 (0.29)	3.87 (0.34)	
	Task 3 Checking and evaluating	3.73 (0.44)	3.73 (0.44)	3.73 (0.44)	
Working with Others	Task 0 Analysing and preparing	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 1 Planning and negotiating	3.82 (0.38)	3.91 (0.29)	3.87 (0.34)	
	Task 2 Acting in a group	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	
	Task 3 Checking and evaluating	3.64 (0.64)	3.55 (0.65)	3.60 (0.65)	

The data for level 11 exhibits, for the first time in this sector, higher values for the standard deviations, resulting from between 20–30% of the sampled companies requiring the Core Skills at Intermediate 2, rather than Higher.

## 5.2 Financial Services

Overall, this sector displayed very high levels of Core Skills at all job levels. This is consistent with the high levels of qualifications held by the employees and sought at recruitment by the managers, and is clearly one reason why the managers employ a range of sophisticated methods to estimate applicants' Core Skill competence at initial recruitment.

The results also show a very high coherence between the employee and manager scores at levels 8 and 11. The higher standard deviations at levels 5 and 6 can be explained by the nature of the sector. Financial services is actually a conglomeration of many discrete sectors, eg life and pensions, banking, insurance, investment fund management. Also in each sector there are broadly two functions — front office and back office. Thus depending on the sub sector in which the company operates and whether the employee selected for interview is front or back office staff, the Core Skills required may differ substantially.

A common feature across the jobs at all four levels was that no measuring is required.

<b>Financial Services — SCQF level 5 (eg Contact Centre Representative)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	3.27 (0.44)	3.45 (0.50)	3.36 (0.48)	Intermediate 2
	Task 2 Writing	2.55 (0.50)	2.55 (0.50)	2.55 (0.50)	
	Task 3 Speaking	3.27 (0.61)	3.27 (0.61)	3.27 (0.61)	
IT	Task 1 Operating the computer	3.27 (0.61)	3.18 (0.57)	3.23 (0.60)	Intermediate 2
	Task 2 Using software	3.55 (0.50)	3.55 (0.50)	3.55 (0.50)	
	Task 3 Finding information	3.09 (0.66)	3.18 (0.83)	3.14 (0.75)	
Numeracy	Task 0 Measuring	Not used	Not used	Not used	Intermediate 2 (Task 2 at Intermediate 1)
	Task 1 Understanding charts etc	3.36 (0.48)	3.18 (0.57)	3.27 (0.54)	
	Task 2 Producing charts etc	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	
	Task 3 Using number skills	3.55 (0.50)	3.55 (0.50)	3.55 (0.50)	
Problem Solving	Task 1 Investigating	2.82 (0.38)	2.82 (0.38)	2.82 (0.38)	Intermediate 2
	Task 2 Planning and solving	2.55 (0.50)	2.64 (0.48)	2.60 (0.49)	
	Task 3 Checking and evaluating	2.57 (0.73)	2.57 (0.73)	2.57 (0.73)	
Working with Others	Task 0 Analysing and preparing	4.00 (0.00)	Not used	4.00 (0.00)	Intermediate 1 (Task 0 at Higher)
	Task 1 Planning and negotiating	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	
	Task 2 Acting in a group	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	
	Task 3 Checking and evaluating	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	

For level 5 staff, Working with Others is at a lower level than the other four Core Skills. This is probably because, at this job level, the staff are largely back office personnel dealing with simple discrete clerical tasks, following instructions given by their managers. However, it could also be because the Working with Others Core Skill is a relatively poor reflection of what Working with Others actually means in the context of a level 5 job in financial services. In the context of earlier projects for SQA, 4most plus has commented on a possible need to revise this Unit. The skills which many financial services employers saw as Working with Others are actually more related to the outcomes of the Communication Core Skill.

<b>Financial Services — SCQF level 6 (eg Customer Service Advisor)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Writing	3.64 (0.64)	3.64 (0.48)	3.64 (0.57)	
	Task 3 Speaking	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
IT	Task 1 Operating the computer	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	Higher
	Task 2 Using software	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	
	Task 3 Finding information	3.64 (0.48)	3.64 (0.48)	3.64 (0.48)	
Numeracy	Task 0 Measuring	Not used	Not used	Not used	Higher
	Task 1 Understanding charts etc	3.73 (0.44)	3.73 (0.44)	3.73 (0.44)	
	Task 2 Producing charts etc	3.33 (0.47)	3.67 (0.47)	3.54 (0.50)	
	Task 3 Using number skills	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	
Problem Solving	Task 1 Investigating	3.09 (0.29)	3.00 (0.00)	3.05 (0.21)	Intermediate 2
	Task 2 Planning and solving	3.00 (0.00)	3.00 (0.00)	3.00 (0.00)	
	Task 3 Checking and evaluating	3.00 (0.00)	3.00 (0.00)	3.00 (0.00)	
Working with Others	Task 0 Analysing and preparing	3.50 (0.50)	Not used	3.50 (0.50)	Intermediate 2
	Task 1 Planning and negotiating	3.00 (0.42)	3.00 (0.00)	3.00 (0.30)	
	Task 2 Acting in a group	3.00 (0.42)	3.00 (0.00)	3.00 (0.30)	
	Task 3 Checking and evaluating	3.00 (0.44)	3.00 (0.00)	3.00 (0.31)	

Both of the ‘softer’ Core Skills, Problem Solving and Working with Others, are at a lower level than the other three Core Skills. In relation to Working with Others, the comments applying to the level 5 posts almost certainly apply equally to level 6. With Problem Solving, it might also be the case that the Core Skill outcomes are an inadequate way of expressing the Core Skill as needed by a level 6 employee. More likely is that the sector’s need for a higher level of Communication, Numeracy and IT than Problem Solving and Working with Others accurately reflects the job roles. More research is needed into this particular aspect of Financial Services.

The Insurance and Related Financial Services modern apprenticeship specifies Core Skills at levels:

Communication	Intermediate 2
IT	Access 3
Numeracy	Intermediate 1
Problem Solving	Intermediate 2
Working with Others	Intermediate 1

The Accountancy modern apprenticeship Core Skills are all at Intermediate 2.

In both these apprenticeships, therefore, the Core Skills are below the level which this research suggests is required for the job roles at level 6 and would certainly be completely inadequate for those employees wishing to move on into level 8 posts after the apprenticeship. However as there is no uptake in Scotland, and hardly any take-up elsewhere in the UK, of these modern apprenticeships, this point is largely academic. It would be misleading to conclude that ‘incorrect’ levels of Core Skills in the two modern apprenticeship frameworks are the cause of this low take take-up, which is better explained by the sector’s rejection of SVQs in favour of professional qualifications.

<b>Financial Services — SCQF level 8 (eg Financial Advisor)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Writing	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Speaking	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
IT	Task 1 Operating the computer	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Using software	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Finding information	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Numeracy	Task 0 Measuring	Not used	Not used	Not used	Higher
	Task 1 Understanding charts etc	4.00 (0.00)	3.91 (0.29)	3.96 (0.21)	
	Task 2 Producing charts etc	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
	Task 3 Using number skills	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Problem Solving	Task 1 Investigating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Planning and solving	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Checking and evaluating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Working with Others	Task 0 Analysing and preparing	3.64 (0.48)	4.00 (0.00)	3.82 (0.38)	Higher
	Task 1 Planning and negotiating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 2 Acting in a group	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Checking and evaluating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	

<b>Financial Services — SCQF level 11 (eg Senior Manager)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Writing	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Speaking	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
IT	Task 1 Operating the computer	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Using software	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Finding information	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Numeracy	Task 0 Measuring	Not used	Not used	Not used	Higher
	Task 1 Understanding charts etc	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 2 Producing charts etc	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Using number skills	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Problem Solving	Task 1 Investigating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Planning and solving	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Checking and evaluating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
Working with Others	Task 0 Analysing and preparing	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 1 Planning and negotiating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 2 Acting in a group	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Checking and evaluating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	

For jobs at levels 8 and 11, Core Skills at Higher are required across the board. These two tables exhibit the lowest standard deviations in the research, in most cases with values of 0, implying 100% consistency.

## 5.3 Food and Drink Manufacturing

Overall, this sector displayed a steady increase of Core Skill competence levels with higher levels of job. Broadly speaking, jobs at level 5 require Core Skills at Access 3, level 6 jobs require Core Skills at Intermediate 1, level 8 require Intermediate 2 Core Skills and level 11 require Higher Core Skills.

Food Manufacturing — SCQF level 5 (eg Process Operative)					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	1.11 (0.31)	1.22 (0.41)	1.16 (0.37)	Access 3
	Task 2 Writing	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Speaking	1.18 (0.38)	1.00 (0.00)	1.09 (0.29)	
IT	Task 1 Operating the computer	1.50 (0.50)	1.00 (0.00)	1.33 (0.47)	Access 3
	Task 2 Using software	1.00 (0.00)	Not used	1.00 (0.00)	
	Task 3 Finding information	1.00 (0.00)	Not used	1.00 (0.00)	
Numeracy	Task 0 Measuring	1.20 (0.40)	1.11 (0.31)	1.16 (0.36)	Access 3
	Task 1 Understanding charts etc	2.00 (0.00)	1.00 (0.00)	1.50 (0.50)	
	Task 2 Producing charts etc	Not used	Not used	Not used	
	Task 3 Using number skills	1.09 (0.29)	1.00 (0.00)	1.05 (0.21)	
Problem Solving	Task 1 Investigating	1.38 (0.48)	1.00 (0.00)	1.21 (0.41)	Access 3
	Task 2 Planning and solving	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Checking and evaluating	1.20 (0.40)	1.00 (0.00)	1.11 (0.31)	
Working with Others	Task 0 Analysing and preparing	Not used	Not used	Not used	Access 3
	Task 1 Planning and negotiating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 2 Acting in a group	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Checking and evaluating	1.11 (0.31)	1.00 (0.00)	1.05 (0.22)	

At level 5, there is little evidence of Core Skills being required above Access 3 level. The skill of producing charts and tables is not used. In only one company in the survey did the employee at level 5 use a computer and this was for very basic tasks only.

<b>Food Manufacturing — SCQF level 6 (eg Production Supervisor)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	2.09 (0.66)	1.64 (0.64)	1.86 (0.69)	Intermediate 1
	Task 2 Writing	1.60 (0.49)	1.55 (0.50)	1.58 (0.49)	
	Task 3 Speaking	2.18 (0.57)	2.00 (0.60)	2.09 (0.59)	
IT	Task 1 Operating the computer	2.00 (0.53)	2.00 (0.58)	2.00 (0.55)	Intermediate 1
	Task 2 Using software	1.83 (0.90)	2.00 (0.82)	1.92 (0.86)	
	Task 3 Finding information	1.67 (0.75)	1.67 (0.47)	1.67 (0.62)	
Numeracy	Task 0 Measuring	2.00 (0.00)	1.70 (0.46)	1.85 (0.36)	Intermediate 1 (Task 3 at Access 3)
	Task 1 Understanding charts etc	1.63 (0.70)	1.82 (0.57)	1.74 (0.63)	
	Task 2 Producing charts etc	1.33 (0.47)	1.60 (0.80)	1.50 (0.71)	
	Task 3 Using number skills	1.27 (0.44)	1.27 (0.44)	1.27 (0.44)	
Problem Solving	Task 1 Investigating	2.36 (0.48)	2.27 (0.44)	2.32 (0.46)	Intermediate 1
	Task 2 Planning and solving	2.22 (0.63)	2.00 (0.42)	2.10 (0.54)	
	Task 3 Checking and evaluating	2.22 (0.63)	2.00 (0.42)	2.10 (0.54)	
Working with Others	Task 0 Analysing and preparing	3.00 (0.00)	3.00 (0.00)	3.00 (0.00)	Intermediate 1 (Task 0 at Intermediate 2)
	Task 1 Planning and negotiating	2.18 (0.72)	2.18 (0.38)	2.18 (0.57)	
	Task 2 Acting in a group	2.18 (0.57)	2.18 (0.38)	2.18 (0.49)	
	Task 3 Checking and evaluating	2.18 (0.57)	2.18 (0.38)	2.18 (0.49)	

At level 6, the standard deviations increase, especially in relation to IT. One of the characteristics of this sector is the variety of goods produced and the various regulations applying to these products. The food and drink sector has more than 40 sub-sectors and the 11 participating companies produced very diverse goods. This may have given rise to the deviations at both SCQF level 6 and level 8, where interviewees were predominantly team leaders (level 6) or quality technicians (level 8). However, even where the deviations are larger, there was a consistency in the responses, for all tasks, between the employees and the manager in any one firm.

The Food and Drink Manufacturing Operations modern apprenticeship specifies Core Skills at levels:

Communication	Intermediate 1
IT	Access 3
Numeracy	Access 3
Problem Solving	Intermediate 2
Working with Others	Intermediate 2

Given the high standard deviations in the above table, it would be unwise to comment as to whether there is a mismatch between the project results and the MA Core Skill levels.

<b>Food Manufacturing — SCQF level 8 (eg Quality Controller)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	3.09 (0.29)	3.00 (0.00)	3.05 (0.21)	Intermediate 2
	Task 2 Writing	2.91 (0.51)	2.82 (0.38)	2.87 (0.45)	
	Task 3 Speaking	3.00 (0.42)	3.00 (0.00)	3.00 (0.30)	
IT	Task 1 Operating the computer	2.91 (0.51)	2.73 (0.44)	2.82 (0.49)	Intermediate 2
	Task 2 Using software	2.64 (0.77)	2.64 (0.64)	2.64 (0.71)	
	Task 3 Finding information	2.55 (0.65)	2.46 (0.65)	2.51 (0.66)	
Numeracy	Task 0 Measuring	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	Intermediate 1
	Task 1 Understanding charts etc	2.46 (0.65)	2.46 (0.65)	2.46 (0.65)	
	Task 2 Producing charts etc	2.44 (0.50)	2.56 (0.50)	2.50 (0.50)	
	Task 3 Using number skills	2.55 (0.65)	2.55 (0.65)	2.55 (0.65)	
Problem Solving	Task 1 Investigating	3.00 (0.60)	2.91 (0.51)	2.96 (0.56)	Intermediate 2
	Task 2 Planning and solving	2.91 (0.51)	3.00 (0.42)	2.96 (0.47)	
	Task 3 Checking and evaluating	3.09 (0.51)	3.09 (0.51)	3.09 (0.51)	
Working with Others	Task 0 Analysing and preparing	3.30 (0.46)	3.10 (0.30)	3.20 (0.40)	Intermediate 2
	Task 1 Planning and negotiating	3.09 (0.51)	2.91 (0.29)	3.00 (0.42)	
	Task 2 Acting in a group	2.91 (0.29)	2.82 (0.38)	2.87 (0.34)	
	Task 3 Checking and evaluating	2.82 (0.38)	2.82 (0.38)	2.82 (0.38)	

As with level 6, the level 8 data has high standard deviations (see comments after level 6 data).

<b>Food Manufacturing — SCQF level 11 (eg Senior Manager)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	Higher
	Task 2 Writing	3.55 (0.89)	3.64 (0.64)	3.60 (0.78)	
	Task 3 Speaking	3.82 (0.38)	3.82 (0.38)	3.82 (0.38)	
IT	Task 1 Operating the computer	3.46 (0.65)	3.37 (0.77)	3.42 (0.72)	Intermediate 2
	Task 2 Using software	3.46 (0.65)	3.37 (0.77)	3.42 (0.72)	
	Task 3 Finding information	3.37 (0.88)	3.28 (0.96)	3.33 (0.92)	

Food Manufacturing – SCQF level 11 (eg Senior Manager) continued					
Core Skill		Employee	Manager	Overall	Level
Numeracy	Task 0 Measuring	1.75 (0.43)	1.80 (0.40)	1.78 (0.42)	Intermediate 1/2
	Task 1 Understanding charts etc	2.73 (0.61)	2.64 (0.64)	2.68 (0.63)	
	Task 2 Producing charts etc	2.44 (0.50)	2.44 (0.50)	2.44 (0.50)	
	Task 3 Using number skills	2.64 (0.64)	2.54 (0.65)	2.59 (0.65)	
Problem Solving	Task 1 Investigating	3.82 (0.38)	3.73 (0.44)	3.78 (0.42)	Higher
	Task 2 Planning and solving	3.82 (0.38)	3.73 (0.44)	3.78 (0.42)	
	Task 3 Checking and evaluating	3.91 (0.29)	3.82 (0.38)	3.87 (0.34)	
Working with Others	Task 0 Analysing and preparing	3.91 (0.29)	3.82 (0.38)	3.87 (0.34)	Higher
	Task 1 Planning and negotiating	3.82 (0.38)	3.73 (0.44)	3.78 (0.42)	
	Task 2 Acting in a group	3.82 (0.38)	3.73 (0.44)	3.78 (0.42)	
	Task 3 Checking and evaluating	3.82 (0.38)	3.73 (0.44)	3.78 (0.42)	

There is a good consensus that Communication (reading, speaking), Problem Solving and Working with Others are all required at Higher. The highest standard deviations relate to IT, suggesting varying levels of computer use in the companies. In 20% of the companies, writing was at Intermediate 2. This may be explained by the fact that most of the companies surveyed were large employers with good admin support. As with many manufacturing companies, senior managers tend to delegate IT tasks.

## 5.4 Hospitality

Like food and drink manufacturing, the hospitality sector displayed a steady increase of Core Skill competence levels with higher levels of job. Broadly speaking, jobs at level 5 require Core Skills at Access 3, level 6 jobs require Core Skills at Intermediate 1, level 8 require Intermediate 2 Core Skills and level 11 require Higher Core Skills. The exception was Numeracy which for jobs at levels 6, 8 and 11 was one level lower than the other Core Skills.

This sector also displayed a slight tendency for employees to rate the Core Skills required in the job at a higher level than was sought by the managers at recruitment. It could be that hotel training programmes develop employees' Core Skills post-recruitment in a specific work setting.

<b>Hospitality — SCQF level 5 (eg Porter)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	Access 3
	Task 2 Writing	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Speaking	1.36 (0.48)	1.18 (0.38)	1.27 (0.44)	
IT	Task 1 Operating the computer	1.75 (0.43)	1.33 (0.47)	1.64 (0.48)	Access 3
	Task 2 Using software	1.17 (0.37)	1.00 (0.00)	1.13 (0.33)	
	Task 3 Finding information	1.29 (0.45)	1.00 (0.00)	1.20 (0.40)	
Numeracy	Task 0 Measuring	1.33 (0.47)	1.00 (0.00)	1.20 (0.40)	Access 3
	Task 1 Understanding charts etc	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 2 Producing charts etc	1.00 (0.00)	Not used	1.00 (0.00)	
	Task 3 Using number skills	1.09 (0.29)	1.00 (0.00)	1.05 (0.21)	
Problem Solving	Task 1 Investigating	1.30 (0.46)	1.30 (0.46)	1.30 (0.46)	Access 3
	Task 2 Planning and solving	1.20 (0.40)	1.00 (0.00)	1.17 (0.37)	
	Task 3 Checking and evaluating	1.12 (0.33)	1.00 (0.00)	1.09 (0.29)	
Working with Others	Task 0 Analysing and preparing	Not used	Not used	Not used	Access 3
	Task 1 Planning and negotiating	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 2 Acting in a group	1.09 (0.29)	1.00 (0.00)	1.05 (0.21)	
	Task 3 Checking and evaluating	1.10 (0.30)	1.00 (0.00)	1.05 (0.23)	

At level 5, all Core Skills are required at Access 3. The skill of producing charts, tables and diagrams appears barely relevant at this level.

<b>Hospitality — SCQF level 6 (eg Chef)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	1.55 (0.50)	1.73 (0.44)	1.64 (0.48)	Intermediate 1 (Task 2 at Access 3)
	Task 2 Writing	1.33 (0.47)	1.33 (0.47)	1.33 (0.47)	
	Task 3 Speaking	1.73 (0.44)	1.91 (0.51)	1.82 (0.49)	
IT	Task 1 Operating the computer	2.00 (0.82)	2.00 (0.00)	2.00 (0.53)	Intermediate 1
	Task 2 Using software	2.00 (0.82)	2.00 (0.00)	2.00 (0.53)	
	Task 3 Finding information	2.00 (0.82)	1.75 (0.43)	1.86 (0.64)	

<b>Hospitality — SCQF level 6 (eg Chef)</b>					
Core Skill		Employee	Manager	Overall	Level
Numeracy	Task 0 Measuring	1.70 (0.46)	1.63 (0.48)	1.67 (0.47)	Access 3 (Task 0 at Intermediate 1)
	Task 1 Understanding charts etc	1.38 (0.48)	1.71 (0.45)	1.53 (0.50)	
	Task 2 Producing charts etc	1.00 (0.00)	1.50 (0.50)	1.25 (0.43)	
	Task 3 Using number skills	1.30 (0.46)	1.45 (0.50)	1.38 (0.48)	
Problem Solving	Task 1 Investigating	1.91 (0.66)	2.00 (0.42)	1.96 (0.56)	Intermediate 1
	Task 2 Planning and solving	2.29 (0.45)	2.14 (0.35)	2.21 (0.41)	
	Task 3 Checking and evaluating	1.88 (0.33)	2.00 (0.00)	1.93 (0.26)	
Working with Others	Task 0 Analysing and preparing	3.00 (0.00)	3.00 (0.00)	3.00 (0.00)	Intermediate 1
	Task 1 Planning and negotiating	1.73 (0.61)	1.82 (0.57)	1.78 (0.60)	
	Task 2 Acting in a group	1.73 (0.61)	1.82 (0.57)	1.78 (0.60)	
	Task 3 Checking and evaluating	2.00 (0.60)	1.82 (0.57)	1.91 (0.59)	

At level 6 the standard deviations are high. Generalising, around 50% of employees and managers placed the Core Skill levels at Intermediate 1, with approximately 25% at Access 3 and 25% at Intermediate 2. Whilst all of the employees interviewed at this level were chefs, the hierarchical structure of kitchens in large hotels led to a variation in roles of those interviewed. This, together with the varied length of experience of these employees, probably meant that one or two of the true job levels were actually at level 5 or 8, even though all interviewees had been selected by the managers as performing a level 6 job.

The Hospitality modern apprenticeship specifies Core Skills at levels:

Communication	Intermediate 1
IT	Access 3
Numeracy	Access 3
Problem Solving	Intermediate 2
Working with Others	Intermediate 2

These levels only match with the level 6 profile for Communication.

<b>Hospitality — SCQF level 8 (eg Front of House Manager)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	2.64 (0.48)	2.82 (0.38)	2.73 (0.44)	Intermediate 2
	Task 2 Writing	2.46 (0.65)	2.55 (0.65)	2.51 (0.66)	
	Task 3 Speaking	2.91 (0.29)	2.91 (0.29)	2.91 (0.29)	
IT	Task 1 Operating the computer	3.09 (0.51)	2.91 (0.66)	3.00 (0.60)	Intermediate 2
	Task 2 Using software	3.00 (0.42)	2.82 (0.57)	2.91 (0.51)	
	Task 3 Finding information	2.91 (0.51)	2.82 (0.57)	2.87 (0.54)	
Numeracy	Task 0 Measuring	Not used	2.00 (0.00)	2.00 (0.00)	Intermediate 1
	Task 1 Understanding charts etc	2.44 (0.50)	2.20 (0.40)	2.31 (0.46)	
	Task 2 Producing charts etc	2.17 (0.37)	2.00 (0.00)	2.11 (0.31)	
	Task 3 Using number skills	2.00 (0.60)	2.27 (0.44)	2.14 (0.54)	
Problem Solving	Task 1 Investigating	3.27 (0.44)	3.09 (0.29)	3.18 (0.38)	Intermediate 2
	Task 2 Planning and solving	3.09 (0.29)	3.09 (0.29)	3.09 (0.29)	
	Task 3 Checking and evaluating	3.36 (0.48)	3.09 (0.29)	3.23 (0.42)	
Working with Others	Task 0 Analysing and preparing	3.18 (0.38)	3.18 (0.38)	3.18 (0.38)	Intermediate 2
	Task 1 Planning and negotiating	3.27 (0.44)	3.18 (0.38)	3.23 (0.42)	
	Task 2 Acting in a group	3.18 (0.38)	3.18 (0.38)	3.18 (0.38)	
	Task 3 Checking and evaluating	3.27 (0.44)	3.18 (0.38)	3.23 (0.42)	

Standard deviations are high for Communication, IT and Numeracy and this reflects the varying roles of the employees at this level. Deviations are lower for Problem Solving and Working with Others. It should be noted that several of the front of house managers interviewed often deputised for the duty manager. When involved in this, they had to perform tasks above their normal level of responsibility.

Hospitality — SCQF level 11 (eg Hotel Manager)					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 2 Writing	3.73 (0.61)	3.73 (0.61)	3.73 (0.61)	
	Task 3 Speaking	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
IT	Task 1 Operating the computer	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	Higher
	Task 2 Using software	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
	Task 3 Finding information	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
Numeracy	Task 0 Measuring	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	Cannot be determined from data
	Task 1 Understanding charts etc	2.72 (0.86)	2.72 (0.86)	2.72 (0.86)	
	Task 2 Producing charts etc	2.38 (0.86)	2.55 (0.83)	2.47 (0.85)	
	Task 3 Using number skills	2.91 (0.90)	2.91 (0.90)	2.91 (0.90)	
Problem Solving	Task 1 Investigating	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 2 Planning and solving	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
	Task 3 Checking and evaluating	3.91 (0.29)	4.00 (0.00)	3.96 (0.21)	
Working with Others	Task 0 Analysing and preparing	Not used	3.55 (0.50)	3.55 (0.50)	Higher
	Task 1 Planning and negotiating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 2 Acting in a group	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	
	Task 3 Checking and evaluating	4.00 (0.00)	4.00 (0.00)	4.00 (0.00)	

The scores for Numeracy are interesting as they demonstrate wide variations across the 11 companies in the sample. Over 50% of the companies actually require Numeracy only at Intermediate 1, 20% at Intermediate 2 and 30% at Higher. About 50% of the hotels in the sample were part of large international chains, with good IT information, such as producing numerical data, numbers and charts. This was key to the roles of senior managers in these establishments. The other 50% were either smaller chains or independent, where numerical information was considered less important.

## 5.5 Personal Services

All the firms visited in the personal services sector were hairdressing salons and so the interviewees at each level were in identical job roles — level 5 Salon Assistant/ Training Stylist, level 6 Stylist, level 8 Salon Manager, level 11 Proprietor/Director. It is therefore interesting that some fairly large standard deviations occur at various points in the data tables. Some of these deviations may reflect different work practices in different salons. Another explanation arises from the differing job roles at level 8, where the work of the salon manager could range from being the most senior stylist, still working at a chair in the salon, through to a completely

administrative manager, essentially assisting the owner in all aspects of business.

Even at the other levels, a degree of variation existed, dependent largely on the size and type of the salon. Practices could be quite different from salon to salon, both in the responsibility allowed to each person, and what was expected of them.

It could be misleading to assume that the sample in this survey is typical of the personal service workforce generally, especially as only 11 companies were sampled. In hairdressing the great majority (83%) of hairdressers and barbers have less than 10 employees, including the owner/manager, with 65% of these having fewer than five. The requirements of this research to have one member of staff at each of SCQF levels 5, 6, 8 and 11 meant that only larger salons could be recruited. If the research were repeated for smaller salons, the profiles might be different.

<b>Personal Services — SCQF level 5 (eg Trainee Stylist)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	1.09 (0.29)	1.18 (0.38)	1.14 (0.34)	Access 3
	Task 2 Writing	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
	Task 3 Speaking	1.36 (0.48)	1.64 (0.48)	1.50 (0.50)	
IT	Task 1 Operating the computer	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	Access 3
	Task 2 Using software	Not used	1.00 (0.00)	1.00 (0.00)	
	Task 3 Finding information	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
Numeracy	Task 0 Measuring	1.55 (0.50)	1.45 (0.50)	1.50 (0.50)	Access 3
	Task 1 Understanding charts etc	1.33 (0.47)	1.20 (0.40)	1.25 (0.43)	
	Task 2 Producing charts etc	Not used	Not used	Not used	
	Task 3 Using number skills	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	
Problem Solving	Task 1 Investigating	1.25 (0.43)	1.00 (0.00)	1.11 (0.31)	Access 3
	Task 2 Planning and solving	1.50 (0.50)	1.00 (0.00)	1.17 (0.37)	
	Task 3 Checking and evaluating	1.50 (0.50)	1.00 (0.00)	1.25 (0.43)	
Working with Others	Task 0 Analysing and preparing	Not used	Not used	Not used	Access 3
	Task 1 Planning and negotiating	1.12 (0.33)	1.12 (0.33)	1.12 (0.33)	
	Task 2 Acting in a group	1.60 (0.49)	1.27 (0.44)	1.43 (0.49)	
	Task 3 Checking and evaluating	1.63 (0.48)	1.43 (0.49)	1.53 (0.50)	

Only two companies in the survey required IT skills for level 5 staff and these were at Access 3. No level 5 staff were required to produce charts, tables or diagrams.

Personal Services — SCQF level 6 (eg Stylist)					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading and understanding	2.27 (0.75)	1.72 (0.86)	1.99 (0.85)	Task 1 at Intermediate 1
	Task 2 Writing	1.11 (0.31)	1.00 (0.00)	1.05 (0.23)	Task 2 at Acc 3
	Task 3 Speaking	2.64 (0.48)	2.91 (0.29)	2.78 (0.42)	Task 3 at Intermediate 2
IT	Task 1 Operating the computer	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	Access 3
	Task 2 Using software	Not used	Not used	Not used	
	Task 3 Finding information	1.20 (0.40)	1.80 (0.40)	1.50 (0.50)	
Numeracy	Task 0 Measuring	1.82 (0.38)	1.73 (0.44)	1.78 (0.42)	Tasks 1 and 2 at Intermediate 1
	Task 1 Understanding charts etc	1.67 (0.47)	1.50 (0.50)	1.58 (0.49)	
	Task 2 Producing charts etc	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	Tasks 3 and 4 at Access 3
	Task 3 Using number skills	1.09 (0.29)	1.18 (0.38)	1.14 (0.34)	
Problem Solving	Task 1 Investigating	2.00 (0.00)	1.91 (0.29)	1.95 (0.21)	Intermediate 1
	Task 2 Planning and solving	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	
	Task 3 Checking and evaluating	2.00 (0.00)	2.00 (0.00)	2.00 (0.00)	
Working with Others	Task 0 Analysing and preparing	3.33 (0.47)	3.17 (0.37)	3.25 (0.43)	Intermediate 2
	Task 1 Planning and negotiating	2.73 (1.05)	2.90 (0.70)	2.81 (0.91)	
	Task 2 Acting in a group	2.82 (0.94)	2.82 (0.72)	2.82 (0.83)	
	Task 3 Checking and evaluating	3.00 (0.77)	2.82 (0.72)	2.90 (0.75)	

At level 6, the Core Skill of Communication displays a pattern which is not shown in any other data table. Each of the three tasks is required at a different level. For the stylist operating at SCQF level 6, the main requirement for Communication was for the spoken medium, consulting with clients and other staff on fairly complex technical issues. At this level, reading and understanding had an importance, as stylists needed to keep up-to-date with developments in products and technical procedures to explain these to more junior staff, and sometimes to deliver a presentation or demonstration. However, stylists had little requirement to produce written text of their own. For Numeracy the four tasks are equally split between Access 3 and Intermediate 1.

The Hairdressing modern apprenticeship specifies Core Skills at levels:

Communication	Intermediate 1
IT	Access 3
Numeracy	Access 3
Problem solving	Intermediate 1
Working with Others	Intermediate 1

This underestimates the degree of competence required in Working with Others.

<b>Personal Services — SCQF level 8 (eg Salon Manager)</b>					
Core Skill		Employee	Manager	Overall	Level
Communication	Task 1 Reading & understanding	3.73 (0.61)	3.55 (0.65)	3.64 (0.64)	Intermediate 2 (Task 2 at Intermediate 1)
	Task 2 Writing	3.00 (0.95)	3.10 (0.83)	3.05 (0.90)	
	Task 3 Speaking	3.73 (0.44)	3.82 (0.38)	3.78 (0.42)	
IT	Task 1 Operating the computer	2.55 (0.83)	2.75 (0.83)	2.64 (0.83)	Intermediate 2 (Task 2 at Intermediate 1)
	Task 2 Using software	1.77 (1.22)	2.25 (1.09)	1.99 (1.19)	
	Task 3 Finding information	2.78 (0.63)	2.63 (0.48)	2.71 (0.57)	
Numeracy	Task 0 Measuring	2.00 (0.00)	1.88 (0.33)	1.93 (0.25)	Intermediate 2 (Tasks 0 and 3 at Intermediate 1)
	Task 1 Understanding charts etc	2.50 (0.50)	2.56 (0.50)	2.53 (0.50)	
	Task 2 Producing charts etc	3.00 (0.00)	2.75 (0.43)	2.86 (0.35)	
	Task 3 Using number skills	2.00 (0.85)	1.91 (0.66)	1.95 (0.77)	
Problem Solving	Task 1 Investigating	3.18 (0.72)	3.00 (0.74)	3.09 (0.73)	Intermediate 2
	Task 2 Planning and solving	3.18 (0.72)	3.00 (0.74)	3.09 (0.73)	
	Task 3 Checking and evaluating	3.18 (0.72)	3.00 (0.74)	3.09 (0.73)	
Working with Others	Task 0 Analysing and preparing	4.00 (0.00)	3.90 (0.30)	3.95 (0.22)	Higher
	Task 1 Planning and negotiating	3.82 (0.57)	3.91 (0.29)	3.87 (0.45)	
	Task 2 Acting in a group	3.82 (0.57)	3.91 (0.29)	3.87 (0.45)	
	Task 3 Checking and evaluating	3.82 (0.57)	3.91 (0.29)	3.87 (0.45)	

Again at level 8, there is a pattern of different Core Skill tasks at different levels in Communication, IT and Numeracy. The differences reflect the variety of functions of staff at this level in salons with different staffing profiles and business practices. The standard deviations for Problem Solving are high, resulting from a split across three Core Skill levels — 25% at Intermediate 1, 50% at Intermediate 1 and 25% at Higher. Again the difference reflects the degree to which the owner/manager allowed the salon manager to take responsibility. Some owners delegated responsibility for Problem Solving; others saw this as an area they should retain — ‘going with the job of ownership’.

<b>Personal Services — SCQF level 11 (eg Managing Director)</b>					
<b>Core Skill</b>		<b>Employee</b>	<b>Manager</b>	<b>Overall</b>	<b>Level</b>
Communication	Task 1 Reading and understanding	3.91 (0.29)	4.00 (0.00)	3.96 (0.21)	Higher
	Task 2 Writing	3.46 (0.78)	3.64 (0.64)	3.55 (0.72)	
	Task 3 Speaking	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
IT	Task 1 Operating the computer	3.00 (0.89)	3.31 (0.90)	3.15 (0.91)	Intermediate 2
	Task 2 Using software	2.30 (1.27)	2.80 (1.33)	2.55 (1.32)	
	Task 3 Finding information	2.80 (0.98)	3.20 (0.75)	3.00 (0.89)	
Numeracy	Task 0 Measuring	1.80 (0.40)	2.00 (0.00)	1.89 (0.31)	Intermediate 2 (Task 0 at Intermediate 1)
	Task 1 Understanding charts etc	3.11 (0.74)	3.40 (0.66)	3.26 (0.71)	
	Task 2 Producing charts etc	2.83 (0.90)	3.38 (0.70)	3.14 (0.83)	
	Task 3 Using number skills	2.63 (0.77)	2.81 (0.93)	2.72 (0.86)	
Problem Solving	Task 1 Investigating	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 2 Planning and solving	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
	Task 3 Checking and evaluating	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	
Working with Others	Task 0 Analysing and preparing	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	Higher
	Task 1 Planning and negotiating	3.90 (0.30)	3.91 (0.29)	3.91 (0.29)	
	Task 2 Acting in a group	3.89 (0.31)	3.91 (0.29)	3.90 (0.30)	
	Task 3 Checking and evaluating	3.91 (0.29)	3.91 (0.29)	3.91 (0.29)	

The task of Using Number Skills shows a high standard deviation — approximately one third of companies opted for each of Intermediate 1, Intermediate 2 and Higher levels. Some owner/managers were engaged in advanced number work themselves; some delegated, either down to their salon manager/assistant manager or to their accountant. This variation did not necessarily bear any relation to the size of the salon. It depended on the policy of the individual owner/manager.

The consultant reported that there was a big variation in IT activity, with some salons mainly using IT for customer records, while others undertook quite a lot of specific industry search work, or used the computer for financial purposes.

# 6 Evaluation of methodology

## 6.1 Interviews

All of the project data was collected through the visits of 4most plus personnel to companies, during which they interviewed selected staff. This worked well and it should be emphasised that it would be impossible to carry out this exercise by means of postal or telephone questionnaires because of the sophisticated nature of the information being gathered. Face-to-face interviews also allow the interviewer to gauge more accurately the interviewee's understanding of the question posed. The methodology is, however, completely reliant upon using interviewers who have an in-depth knowledge of the Core Skills competences and who can quickly assess through questioning and from examination of work products the Core Skill tasks and levels involved.

The project experience is that a company visit will occupy a maximum of three hours, with five interviews lasting up to 30 minutes each. This time is sufficient for experienced interviewers to gather the data required and is not too great an imposition on the companies involved.

## 6.2 Research tools

There were no problems in using the data gathering instruments (see Appendix A for copies). The tools have been simplified for use in the toolkit which is an output from the project. This simplification was possible because users of the toolkit will only be concerned with gathering data to compile Core Skills profiles, whereas the original project tools were designed to allow 4most plus to record information on wider aspects of Core Skills competence and qualifications.

## 6.3 Extension of the methodology to IT, Problem Solving and Working with Others

One objective of the project was to test whether the original methodology, devised for written Communication and Numeracy only, would extend to the other Core Skills. As anticipated, the methodology and tools were immediately applicable to Information Technology where the performance criteria are extremely specific and where work evidence, such as computer printouts, provide a researcher with direct evidence of tasks undertaken and levels of competence required.

The 4most plus interviewers reported little difficulty in extending the methodology to the softer Core Skills of Problem Solving and Working with Others. Essentially they followed the same type of approach as with Communication and Numeracy. They might ask questions such as 'What is the most complex problem which you have had to solve in this job?' or 'Tell me about the kind of problems or difficulties you face in the course

of the work that you have described'. From the replies it was possible for the skilled interviewer to follow up to find how many factors influence these problems, how the solutions are devised and implemented and what, if anything is done with the feedback. Similarly, discussions of Communication could lead into the area of Working with Others, determining whether this amounts to teamwork or simply sharing of information. Teamwork could then be explored in terms of frequency, roles, objectives and significance.

In these ways the methodology transferred to the softer Core Skills without difficulty. It should be emphasised once more, however, that the reliability of the data depends on using researchers who have in-depth knowledge and understanding of the Core Skills.

## **6.4 Data analysis**

The data was scored manually onto specially designed score sheets. Although this was unproblematic, it was also extremely time consuming. Anyone considering replicating this project with large sample sizes should consider using an electronic data input system which would permit consultants to enter the data directly onto a laptop during the interview. This data would then be aggregated centrally. However, the design of such an electronic system has considerable cost implications which could not be justified in an experimental pilot project with small samples such as the present one.

Data analysis systems using Excel were designed specifically for this project. Subsequently an analysis system using Delphi software has been designed for the toolkit. This system is more user friendly than Excel. It allows a researcher to insert the scored data onto the template and to automatically generate Core Skill profiles in a similar format to those in Section 5 of this report.

## **6.5 Core Skill profiles**

The bulk of the data related to the quantification of the Core Skills required for the various job roles investigated. In the previous road haulage project this had been successfully achieved for the Core Skills of Communication (reading, writing) and Numeracy for a job role at SCQF level 5. In that project the two Core Skills had been investigated to Core Skill Performance Criterion level with a sample of 130 employees and 30 managers for one job role.

For the present project the data was collected to Task level for five Core Skills for 20 job roles from 11 employees and 11 managers per job role. In these smaller samples for each job role, the answers of one respondent can have a correspondingly higher impact on the final results. However, as the project aimed to test the methodology rather than to produce definitive Core Skills profiles for each job, these smaller samples are acceptable. To have used a sample equivalent in size to that of the road haulage project or to investigate to PC level would have increased the amount of data

collected to proportions which would have been unmanageable within the constraints of this pilot project.

As shown in Section 5, it has been possible to construct meaningful Core Skill profiles for all of the Core Skills for jobs at all four levels in each of the five sectors. It is important not to attach too much significance to the actual profiles in section 5. The project was attempting to test the methodology for producing profiles (and in this it has been successful): with the small sample sizes involved in this pilot, it would be foolhardy to claim that the actual profiles derived from the data are fully representative of the jobs involved.

Another important point is that for Core Skills profiles to have any meaning they must relate to a specific job role, not just to a job role in a sector at a particular level. This was demonstrated by the financial services profiles at levels 5 and 6, where the interviewees' jobs were extremely varied and thus the standard deviations in the profiles were high. To use the methodology successfully therefore, future research should focus on specific jobs.

The research has not shown a high degree of consistency between the Core Skill levels specified in modern apprenticeships and the project's Core Skill profiles for the equivalent job at level 6. 4most plus has had considerable experience of mapping Core Skills in MAs and their experience suggests that the definition of Core Skill levels in MAs has been very hit or miss in many sectors, often being governed by a sector's wish not to deliver and assess the Core Skills separately. Determining Core Skill requirements for modern apprenticeships would be an important application of the project methodology.

## 6.6 Skills gaps

Data was collected regarding:

- ◆ the Core Skills actually used by employees in the course of their work
- and
- ◆ the Core Skills sought by managers when recruiting staff to these job roles

By comparing the employee and manager data in the profiles in Section 5 and the tables in Appendix D, it is possible to identify discrepancies between 1 and 2 above. Any such discrepancy could suggest a potential skills gap, ie if the managers seek Core Skills at a level below that which the employees demonstrate is required for the job.

This methodology could be used to examine skills gaps in a more rigorous way. For instance, it could be used to compare:

- ◆ the Core Skills which applicants for a job actually possess (as opposed to what managers seek)

and

- ◆ the Core Skills actually required for the job

If the first of these were consistently less than the second, this would indicate a real skills gap. It would be possible then to use this methodology to investigate issues such as Core Skill competence of new entrants to the workforce subdivided into school leavers, further and higher education leavers — issues explored in FutureSkills Scotland employer surveys.

# 7 Implications for SQA Core Skills framework

The project consultants found the SQA Core Skills framework was an appropriate tool with which to measure the Core Skill competences displayed by the employees interviewed for the research and the competences desired by their managers. This in itself indicates that overall the Core Skills framework is appropriate for use in the workplace in respect of both levels and competence. The language of the workplace Core Skill Units is appropriate and both employees and managers were able to identify with the words and content, subject to some explanation from or translation by the interviewer.

## 7.1 Units

In the case of construction jobs at SCQF level 5 the consultant found that the complete Core Skill of IT was absent. This, however, does not indicate that IT should not be included in the Core Skills framework; rather it describes the limitations of these particular job roles. As IT becomes more widespread, it is possible that if the project research were repeated in a few years' time, there would be fewer construction jobs where IT was not required.

## 7.2 Tasks

Similarly the research found some instances where complete Core Skill tasks were absent from the profile for a particular job. Figure 7.2.1 shows the number of jobs where all 11 employees or all 11 managers stated that the Core Skill task was not required. These tasks were in the Core Skills of IT, Numeracy and Working with Others.

<b>Figure 7.2.1 Core Skill task entirely absent</b>	<b>Employees</b>	<b>Managers</b>
Information Technology — Using software	2	2
Information Technology — Finding information	0	1
Numeracy — Measuring	5	4
Numeracy — Producing charts and tables	1	1
Working with Others — Analysing and preparing	3	5

(Numbers are from a maximum of 20 jobs).

It should be noted that all but one of the omissions of 'Measuring' relate to the financial services sector. Measuring is a Core Skill task only at Access 3 and Intermediate 1. The competence relates to the ability to read a scale. At Intermediate 2 and Higher level the scale reading is subsumed into the 'Interpreting charts, tables and diagrams' task. When the Core Skills framework is revised, it would be beneficial to rationalise these two tasks into one at all four levels.

In Working with Others 'Analysing and Preparing' is a Core Skill task at Intermediate 2 and Higher only and so it is not surprising that some respondents who identified this Core Skill at a lower level stated that this

task was not relevant. ‘Analysing and Preparing’ could be subsumed into the task of ‘Planning and Negotiating’ at all four levels.

## 7.3 Performance Criteria

Although it was not one of the specified outputs from the project, the consultants took the opportunity to identify which Performance Criteria for any Core Skill task were not applicable to the interviewees. Appendix E summarises the data for each of the five Core Skills.

Few of the Performance Criteria recorded significant numbers of omissions. The Performance Criteria which scored the highest number of omissions were:

<b>Information Technology</b>
<ul style="list-style-type: none"> <li>◆ use security measures responsibly and with consideration for the needs of others (26 at Intermediate 1, 19 at Higher)</li> <li>◆ resolve one hardware or software problem (21 at Higher)</li> </ul> <p>These resulted mainly from the Food Manufacturing sector.</p>
<b>Numeracy</b>
<ul style="list-style-type: none"> <li>◆ decide on which operations are needed for a calculation and in which order these should be carried out (25 at Access 3)</li> <li>◆ carry out calculations involving two or more of addition, subtraction, multiplication, division (20 at Access 3)</li> </ul> <p>These resulted mainly from the Personal Services sector.</p>
<b>Working with Others</b>
<ul style="list-style-type: none"> <li>◆ negotiate procedures for carrying out tasks (24 at intermediate 2)</li> </ul> <p>These resulted mainly from the Financial Services sector.</p>

As with omissions of Core Skill tasks, the omissions usually relate to the nature and responsibilities of a job in a particular sector rather than to any intrinsic problem with the Core Skill Performance Criterion as such. However, this information should be borne in mind when SQA revises the Core Skills framework.

## 7.4 Working with Others

The 4most plus interviewer in the Financial Services sector reported that the team working aspect of the current Working with Others Core Skill Unit was not universally applicable in this sector. This may also be the case in other industry sectors. SQA may wish to consider this further.

# 8 Conclusions and recommendations

Section 8.1 groups together all the recommendations arising from the project research.

Sections 8.2 to 8.4 relate the individual recommendations to specific project findings.

## 8.1 Summary of recommendations

### Recommendation 1

SQA should commission:

- ◆ further larger scale research in areas where the methodology would result in statistically valid data in Core Skill related areas where more such information is required

(Recommendations 2 and 3 provide examples of such research).

- ◆ the development of an electronic data scoring system as a front end to the draft toolkit from the project
- ◆ the design and delivery of training to researchers wishing to use the toolkit

### Recommendation 2

SQA should discuss with the Modern Apprenticeship Implementation Group (MAIG) the use of the project methodology as a rigorous means of establishing the Core Skill levels appropriate to the job roles in modern apprenticeships.

### Recommendation 3

SQA should undertake further Core Skills profiling using the project methodology in order to compare the Core Skills required in a job role with the Core Skills implicit in the corresponding SVQ.

### Recommendation 4

SQA should take steps to raise employer knowledge and understanding of the SQA Core Skills profile and the workplace Core Skill Units.

### **Recommendation 5**

SQA should commission rigorous research into the transferability of Core Skills competence from the academic to the workplace environment.

### **Recommendation 6**

SQA should take steps to encourage the use of workplace Core Skills Units as a method of certificating Core Skills competence developed through work experience and/or workplace training.

### **Recommendation 7**

SQA should research the potential for extending the Core Skills framework to encompass employability skills.

## **8.2 Validating the methodology for assessment of Core Skills competence**

The main aim of the project was to develop, test and refine the original 4most plus methodology for assessing Core Skills competence in the workforce. This involved extending the methodology to encompass the Core Skills of Information Technology, Problem Solving and Working with Others and applying it in a range of industry sectors and for jobs at four SCQF levels.

The project established that the methodology:

- ◆ can be extended from Communication and Numeracy to the remaining three Core Skills
- ◆ provides a sound means by which:
  - Core Skills profiles for specific jobs may be established
  - skills gaps within any industry sector (in relation to Core Skills) can be quantified

The research has broadly validated the content and format of the SQA Core Skills framework and its expression in the workplace Core Skill Units. It has highlighted a few minor issues where particular Performance Criteria might be adapted to increase the effectiveness of the workplace Units.

The project produced:

- ◆ a draft toolkit which could be used by researchers with in-depth knowledge of Core Skills. This toolkit permits the data from interviews with individuals to be aggregated electronically to give Core Skill profiles for specific jobs

It must be emphasised that both the methodology and the toolkit will only produce valid results if they are used by researchers with wide experience

and in-depth knowledge of the SQA Core Skills Units and framework. In addition, researchers using the toolkit will require training in its use. It is advisable for SQA to limit use of any such toolkit to researchers who have undergone the approved training.

Any future research involving the toolkit will inevitably involve much larger samples than have been used in this methodology-testing project. In the present project the interview data was scored manually before input to the electronic data analysis. This would not be cost effective with large samples. An electronic scoring program would therefore have to be developed. This would permit researchers to enter data directly onto a laptop and all scoring and analysis would be done automatically.

### **Recommendation 1**

SQA should commission:

- ◆ further larger scale research in areas where the methodology would result in statistically valid data in Core Skill related areas where more such information is required

(Recommendations 2 and 3 below provide examples of such research.)

- ◆ the development of an electronic data scoring system as a front end to the draft toolkit from the project
- ◆ the design and delivery of training to researchers wishing to use the toolkit

## **8.3 Further research with job role specific Core Skills profiles**

The methodology proved a sound means of establishing Core Skills profiles for the jobs at different SCQF levels in the five industry sectors. Some general trends were noted:

- (i) The higher the job level in SCQF terms, the higher the levels of Core Skill competence likely to be required. This applied in all sectors and to all Core Skills.
- (ii) In most cases there was a good consensus between:
  - a) the employees in a particular job role, regarding the levels of Core Skill required that job
  - b) the managers in a sector, regarding the levels of Core Skill required in a specific job
  - c) employees and their managers
- (iii) Where, as in financial services, one SCQF level encompasses a broad variety of jobs, the Core Skills profile for the level is not clearly defined. This shows that the methodology works and

highlights the need to apply it to specific job roles, rather than to jobs at a specific SCQF level.

The project has highlighted two areas where further research using the methodology would bring immediate benefits:

1 Modern Apprenticeships

At SCQF level 6 (which equates to SVQ level 3 and thus to Modern Apprenticeships), the Core Skill profiles in this research do not always relate to the Core Skill requirements specified in the equivalent modern apprenticeship. The methodology provides a useful means of establishing Core Skill levels in MAs in a more systematic and scientific way than has been used to date.

**Recommendation 2**

SQA should discuss with the Modern Apprenticeship Implementation Group (MAIG) the use of the project methodology as a rigorous means of establishing the Core Skill levels appropriate to the job roles in modern apprenticeships.

2 Scottish Vocational Qualifications

It has been suggested in the past by employers that the full range of Core Skills needed in a job are not always implicit in the relevant SVQ. Another use for the methodology would be to establish a Core Skills profile for jobs related to a specific SVQ and to compare this with the Core Skills competence developed implicitly within the qualification. This would provide quantitative data to prove or disprove these assertions and to inform the future Core Skill content of SVQs.

**Recommendation 3**

SQA should undertake further Core Skills profiling using the project methodology in order to compare the Core Skills required in a job role with the Core Skills implicit in the corresponding SVQ.

It should be noted, however, that the establishment of statistically robust Core Skill profiles for either of the applications suggested above would require the use of much larger samples than it has been possible to use within the parameters of this pilot project.

## 8.4 Ancillary information

This project was extensive in its scale and scope and has generated a large amount of quantitative data from which it has been possible to draw conclusions on many aspects of the use, applicability and content of Core Skill competence in the workforce of the five industry sectors included in the research. The main themes which have emerged are summarised in this section of the report.

### **8.4.1 Employer attitudes to Core Skills**

The research demonstrated that managers in four of the five sectors placed a high value on the Core Skills competence of their employees. In financial services, food manufacturing, hospitality and personal services, the companies used a variety of, frequently sophisticated, methods to estimate the Core Skills competence of applicants for job roles at all four of the SCQF levels. Only in the construction sector did managers place less emphasis on Core Skills but, even in this sector, most companies attempted to estimate basic Core Skill competence from previous work experience and/or performance at the interview.

With such effort being made by managers to estimate accurately the applicants' Core Skill competence, it is disappointing to note the low level of use made of the SQA Core Skill profiles gained by the applicants from their school qualifications or of certification of workplace Core Skill Units. Previous research has also highlighted this trend, which results in part from employers' lack of knowledge of Core Skill profiles and workplace Units and partly because employers are dubious about the transferability to the workplace of Core Skills competence gained in an academic environment.

#### **Recommendation 4**

SQA should take steps to raise employer knowledge and understanding of the SQA Core Skills profile and the workplace Core Skill Units.

There are two opposing schools of thought regarding the transferability to the workplace of Core Skills competence demonstrated in an academic environment. Some would argue that the context is irrelevant and that a Core Skill used in school must translate into the workplace. Others, including some of the employers involved in the present research, would totally disagree. This is a major issue, which impacts on the underpinning philosophy of Core Skills certification, and it should be researched rigorously.

A related issue is Standard Grades. It was surprising to find so few managers using Standard Grades as a benchmark for recruitment. Standard Grades were also the qualification where employees made the lowest levels of connection with their own Core Skills development. This may be because in some cases the Core Skills developed through Standard Grades were thought to be too low a level to be useful in the workplace.

#### **Recommendation 5**

SQA should commission rigorous research into the transferability of Core Skills competence from the academic to the workplace environment.

## 8.4.2 Core Skills and qualifications

The research has shown that in most cases both managers and employees do make the connection between qualifications gained and Core Skill competence developed. The construction sector is the exception, possibly as result of the lower levels of understanding of, and interest in, Core Skills in this industry.

A great deal of training is undertaken post-recruitment. Core Skills developed through this work related training tend to be viewed as more relevant than those developed through more academic qualifications. Although this is not apparent from the numerical data, the consultants frequently recorded comments from both managers and employees that work experience was a more effective way of developing Core Skills than any sort of qualification. Core Skills developed through work experience or post-recruitment training could, of course, be certificated via SQA workplace Units.

### **Recommendation 6**

SQA should take steps to encourage the use of workplace Core Skills Units as a method of certificating Core Skills competence developed through work experience and/or workplace training.

In addition, the research showed that employers value what they often refer to as ‘employability skills’ as distinct from Core Skills. This would include such things as enthusiasm, reliability, good timekeeping, perseverance, commitment etc. This is consistent with the findings of Futureskills Scotland’s employer surveys. Employers would clearly welcome certification of these employability skills.

### **Recommendation 7**

SQA should research the potential for extending the Core Skills framework to encompass employability skills.