Intelligence Investment Impact

Gender and skills in a changing economy

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UKCES
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Gender and skills in a changing economy

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Longview

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Views expressed by the author of this Briefing Paper are not necessarily those of the UK Commission for Employment and Skills.

Foreword

The UK Commission for Employment and Skills is a social partnership, led by Commissioners from large and small employers, trade unions and the voluntary sector. Our mission is to raise skill levels to help drive enterprise, create more and better jobs and promote economic growth. Our strategic objectives are to:

- provide outstanding labour market intelligence which helps businesses and people make the best choices for them;
- work with businesses to develop the best market solutions which leverage greater investment in skills;
- maximise the impact of employment and skills policies and employer behaviour to support jobs and growth and secure an internationally competitive skills base.

These strategic objectives are supported by a research programme that provides a robust evidence base for our insights and actions and which draws on good practice and the most innovative thinking. The research programme is underpinned by a number of core principles including the importance of: ensuring **'relevance'** to our most pressing strategic priorities; **'salience'** and effectively translating and sharing the key insights we find; **international benchmarking** and drawing insights from good practice abroad; **high quality** analysis which is leading edge, robust and action orientated; being **responsive** to immediate needs as well as taking a longer term perspective. We also work closely with key partners to ensure a **co-ordinated** approach to research.

Equality and employment is an important and well-researched field. The Youth Inquiry (UK Commission 2011) explored questions around the unemployment, recruitment and employer perspectives of young people. In May 2011, Joseph Rowntree Foundation published 'Poverty and ethnicity: a review of evidence' and is launching a fuller programme of in this area. In order to add value to the existing body of research, the UK Commission has developed a series of Briefing Papers with a focus on equality and skills in a changing economy. The aim of the series is to inform and enable connected thinking about how to enable opportunity in the labour market through skills. Each paper provides commentary and analysis for an equality group or theme, these are:

- Disability and skills in a changing economy;
- Gender and skills in a changing economy;
- Low skills and social disadvantage in a changing economy;
- Older people and skills in a changing economy;
- Spatial inequality and skills in a changing economy.

The research focussed on policy in England as the development of the papers received England only funding. However, in order to give breadth and strength to understanding of a subject area the review of literature and data drew on UK data and, occasionally, devolved policy, though not in the conclusions or implications.

Together the Briefing Papers in this series provide insight and understanding into the skills related challenges, needs and opportunities for individuals who are disadvantaged in the labour market. These outputs are only the beginning of the process and we will be continually looking for mechanisms to share our findings, debate the issues they raise and extend their reach and impact.

We would like to take this opportunity to thank all of the authors for their work in developing these papers and add extended thanks to Chris Hasluck provided a coordination and editorial role across the series of equality papers.

We hope you find this paper useful and informative. The other papers in the series can be accessed on the UK Commission's website www.ukces.org.uk. If you would like to provide any feedback or comments, or have any queries please e-mail info@ukces.org.uk, quoting the report title.

Lesley Giles

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Executive Summary

Introduction

The paper focuses on gender equality in relation to skills. It begins with background information on the current position of women in the labour market and on future prospects, together with contextual and trend information on skills. Skills are understood in terms of formal qualifications, but also uncertificated competences acquired on or off the job.

The paper gives particular attention to two dimensions of the skills issue: the acquisition of skills, and their utilisation. Special emphasis is put on the utilisation issue, with original analysis of skills survey data included. This is needed to redress the over-emphasis on the supply side in much of the policy debate. A third dimension, reward for skills, is dealt with only in passing.

Background: Employment profile

Women's economic activity rates have increased over the last two decades, but have fallen recently and there are signs that women will be affected equally if not more than men by the recession. Women are particularly dependent on public sector employment. In 2009 there were almost twice as many women (approximately 4 million) as men working in the public sector.

Part-time employment is particularly pronounced: 5.2 million women are employed part-time, compared with 1.5 million men. Occupational segregation still persists, for instance, only about 7 per cent of engineering professional are women; as do significant pay gaps, the median hourly pay gap in 2009 was 12.8 per cent.

There is projected jobs growth for women especially in personal services, together with managerial, professional and associate professional occupations. Women report themselves to be both under and over-employed, i.e. to be working both fewer and more hours than they would prefer. Over-employment is particularly significant for those in the age group 25-34.

Skills acquisition

Women are now outperforming men at every level in the education system. For example in 2009 there were 1.41 million women in further and higher education, compared with 1.06 million men. The number of women in the workforce qualified at Level 4 and above (degrees and equivalent) rose by a factor of 2.6 during the last two decades compared to a factor of 2 for men. The proportion of women with no qualifications is now well below that of men.

Once employed, women participate more in training than men in every age group, in all ethnic groups and in all regions. Women also have higher participation rates in training in almost every occupational group except intermediate occupations. However participation rates in training have dropped more steeply than men's in recent years.

The effect of public sector employment in enhancing women's access to training is very pronounced, outweighing other factors such as part-time status. On the other hand it makes women more vulnerable to the public expenditure cuts currently under way.

Female participation rates in general adult learning compare favourably with those of other EU countries, and surpass those of men. Overall, therefore, the acquisition picture is largely positive for women. However to get a balanced picture we need to know more about the duration of the training, and about its application.

Skills utilisation

Acquiring qualifications and skills is one thing; having the opportunity to use them is another. There are important distinctions between a) *over-qualification* and *under-utilisation*; and b) between *'real' over-qualification*, where the person reports that the qualification level they have is not needed either to get or to do the job, and *'formal' over-qualification*, where a qualification was not needed to get the job, but where the holders find that their skills are actually used (Green and Zhu, 2010).

Overall, women's work skills rose faster than men's between 1986 and 2006, thereby narrowing the gender skills gap. There has been a marked convergence between men and women in the presence of advanced equipment and computerised technology at work. By 2006, almost identical proportions of men and women (around four-fifths) reported using advanced technologies in their jobs. Both the overall gender skills gap and the skills gap between women working part-time and those working full-time have narrowed substantially over the last two decades.

Reported over-qualification levels have gone up for both men and women graduates between 1994 and 2006, at roughly the same speed, from 22 per cent to 33 per cent for men, and 23 per cent to 32 per cent for women. But the increase in formal over-qualification has been especially sharp for women from 2001-06.

Over the past two decades under-utilisation of high level qualifications has been a persistent experience for women, but for men it is a more recent phenomenon.

The prevalence of real over-qualification among women part-timers fell at a time when it was moving upwards for other groups such as men and women full-timers.

As for the utilisation of skills, from the data examined there is no strong evidence of gender inequality, i.e. that women currently use their skills and qualifications at work less than men. However this issue needs more in-depth exploration. As the supply of well-qualified women continues to increase, the question of how far women are able to put their skills into practice, and to have them recognised and rewarded, should be in the centre of the policy debate.

Employment

Gender equality in relation to skills needs to be seen in a wider employment context. The role of public sector employment is a crucial factor. At a time of severe retrenchment the impact on women and their skills is expected to be particularly severe, calling for imagination and innovation if the skills of many qualified women are not to be neglected, especially as the supply of highly qualified women continues to increase.

There is a continuing need for proper careers guidance and mentoring, before and during employment, to counter occupational segregation and lower rewards to skill for women. Age is a particularly significant issue in relation to gender and equality, since older women have generally missed out on the growth in women's skills and qualifications. Recognising skills gained through experience is therefore highly relevant.

Issues for policy

Following on the analysis of the current situation, a number of key policy issues for the future are identified:

- The need to sustain the argument for a better balance in the policy debate, concentrating on the utilisation of skills as well as the supply.
- The need to develop greater in-depth understanding of skills utilisation, in different occupational and sectoral contexts, and to keep a strong focus on the structural features which shape a) women's aspirations and b) the extent to which they are able to put their skills to full effect.
- The value of introducing greater flexibility and choice in the education and training system to match changing needs and aspirations.
- The importance of a strengthened knowledge base, especially through gathering and using longitudinal evidence on careers, to track better how skills are acquired, used and rewarded over time.
- More broadly, the need to pay particular attention to innovative policies on the distribution of working time and on work-life balance.

Conclusion

The overall picture is one where women are doing increasingly well compared to men in acquiring qualifications, at all levels. Women take part in training to a greater extent, at every age; women report less under-utilisation of their skills than men; and increases in skill levels has been most significant for part-time women in the last two decades. However much of this general progress derives from women's public sector employment, currently under threat.

Moreover the pay gap continues to exist, and women's skills are not being equally rewarded. The opportunities for deploying their skills do not match what women have to offer. The same is true for men, but arguably to a lesser extent. Given the overall strength of the trend towards women achieving higher qualifications, the key issue remains of whether these talents and training will be better utilised.

Getting a better balance implies a flexible and lifecourse approach to formal and informal learning opportunities, matching these to the variety of points in people's lives when they have specific needs for further acquisition of skills and qualifications.

1 Introduction

This paper focuses on the changing picture in relation to gender and skills in the UK economy. The theme involves skills differences between men and women in three dimensions: in their access to qualifications and skills – the *skills acquisition* dimension[1]; in the extent to which these skills are used – the *skills utilisation* dimension; and the ways in which the skills are or are not rewarded – the *reward to skills* dimension. The main focus here is on the first two of these dimensions: the differences between men and women in the extent to which they gain the skills required in the labour market; and the ways in which women differ from men in the exercise of these skills in the workplace.[2]

The paper deals primarily with issues which relate specifically to women achieving greater equality. This is for historical reasons, since inequalities have over time operated to disadvantage women far more than men, and even now that women have on average higher qualifications, the results in terms of income and professional status have not been commensurate. But the picture is shifting, and a full treatment of the theme of gender and equality should include all those areas where inequalities apply which are deemed unacceptable or even undesirable, for men or women.

1.1 Definitions of skill(s)

According to the UK Commission for Employment and Skills (UK Commission) Skills Almanac: "Skills can be measured in various different ways, including the formal qualifications that individuals hold, the occupation that they undertake, and other aspects of the knowledge, experience and generic and technical competences that they possess (only some of which may be deployed in any job they may currently hold)" (2010, p.116).[3] This paper covers formal qualifications given by recognised education and training providers and to some extent the skills which are exercised without carrying any formal certification.

The definition of skill is continually disputed, and this contested nature is highly relevant to the gender theme. At the conceptual or theoretical level, there are direct connections between skill definition and gender equality.

[1] Skills and qualifications are not the same thing (see section 1.1.for a discussion of definitions).
[2] A substantial part of this paper (see Section 5) is based on original analysis carried out by Professor Alan Felstead of Cardiff University. I am grateful to Alan for this work; he is not responsible for any of the argumentation or conclusions.
[3] An international overview also concludes: "The general concept of skills refers to productive assets of the workforce that are acquired through learning activities. The literature, however, does not concur on a robust and accepted definition and classification of skills beyond this general characterisation" (Toner, 2011, p.11).

Green makes the connection:

> The theory of the social construction of skill provides a telling account of gender discrimination, whereby certain jobs predominantly held by women are conceived as low skilled, which self-justifies the consent to low pay, which then reinforces their perception as low skilled, and not suitable for men, and of lower value than men's work. (Green, 2011, p.12).

Gender stereotyping affects not just the definition, but the acquisition and the utilisation of skills. Channelling women disproportionately away from particular disciplines or failing to remove barriers from some skill areas means an obvious inefficiency: a group with the potential to gain and exercise skills are prevented or impeded from doing so.

1.2 Importance of gender and skill

The paper is driven by a number of factors:

- The general concern of the UK Commission to take forward the issue of equality and employment. As the Foreword explains, this paper is one of a series of papers which address this theme.
- The wider long-running concern about gender equality at work, independently of skill questions. Interlocking factors here are the persistent gap between male and female pay rates; the absence of women from senior positions, in the public and especially the private sectors; the concentration of women in certain industrial sectors, and corresponding absence from other sectors; and the greater proportions of women in part-time employment. Whilst equality in pay should mean just that, equality in relation to the other issues (e.g. occupational concentration) is a matter of what is judged to be an acceptable balance, rather than absolute numerical equality.
- The role of skills in each of these areas is a continuing issue: how far do these inequalities arise because women do not have equal access to skills, or because their skills are unrecognised or under-recognised? These structural factors reduce both the opportunity for women to exercise their skills, and their opportunities for gaining further skills as part of professional development.
- Women now acquire more qualifications than men. At every level in the qualification structure, and in almost every subject, higher proportions of women than men are now achieving awards, a dramatic reversal of the position in little more than a decade or two. Formal educational qualifications are not a perfect proxy for employment skills (as employers frequently complain, and see above on definitions). But assuming that there is at least some relation between the two, this powerful seated trend towards higher levels of female attainment raises important practical questions about how skills are recognised and put into practice in the workplace.

- A gradual but potentially momentous change in the public debate on the nature of the 'skills problem'. Until recently, the debate has been dominated by a widespread assumption that the perceived skills problem in the UK is essentially a supply side matter. This approach reached its apogee with the 2006 Leitch Report, which focused exclusively on driving up the supply of skills, setting extremely ambitious targets for this (Leitch, 2006). Since then, however, there has been a growing awareness that such an approach is lopsided and the relationship between supply and demand is much more complex and variegated (UK Commission, 2009; Keep and Mayhew, 2010; Williams and Wilson, 2010; Payne, 2010). As the supply continues to increase, we need to ask just how much effective use is made of it. This growing awareness of the complexity of the skills issue has prompted a fresh focus on how skills are actually put to use in the workplace; the utilisation debate.

The combination of these last two factors, the long-run turnaround in the gender pattern of qualification acquisition and the dawning awareness of skills utilisation as an issue in contrast to simplistic emphasis on boosting aggregate skill supply, gives this paper its particular thrust. So far, gender has not played much of a part, if any, in the debate on skills utilisation, and this is what we set out to redress in the second half of the paper. Our starting assumption was the fact that women are gaining more and more qualifications, but are still facing barriers in the world of work, meaning that there may be a serious disjunction between the overall stock of skills and their effective utilisation.

Of course the qualifications produced by initial education, at school, college and university, are not geared only to individuals' performance at work. Society still benefits from having a population whose education enables them to participate as citizens, as cultural agents, as parents and family members. But this paper concentrates on the potential tension between the success of women in the educational field and the extent to which the competences they acquire are used or ignored in the world of work.

1.3 Economic activity

Over the long term, women's economic activity rates have grown. There are now some 14.5 million women over 16 who are economically active, compared with 17 million men. 7.5m women are employed full-time, and 5.2 m part-time, compared with 11.1m and 1.5m for men. However the level of activity has recently started to decline.

Table 1.1 Activity rate, employment rate and unemployment rate by gender and age

		Activity Rate (%)			Employment Rate (%)			Unemployment Rate (%)		
		2007	2008	2009	2007	2008	2009	2007	2008	2009
Male										
	16-24	69.6	69.0	67.4	59.0	57.5	53.0	15.2	16.9	21.8
	25-34	92.5	92.4	92.6	88.1	87.3	85.0	4.7	5.5	8.4
	35-49	91.7	91.9	92.1	88.8	88.5	86.9	3.2	3.7	5.7
	50-64	75.0	75.3	75.4	72.7	72.7	71.4	3.5	3.8	5.6
	65+	10.0	10.4	10.8	9.8	10.3	10.4	2.2	1.9	2.8
Female										
	16-24	63.5	63.0	62.3	56.0	55.2	52.9	12.0	12.7	15.4
	25-34	75.6	76.4	76.0	72.0	72.3	70.8	4.7	5.2	6.8
	35-49	78.5	78.9	79.6	75.7	75.9	75.6	3.6	3.8	5.1
	50-64	59.1	59.4	60.0	58.0	58.2	58.4	2.5	2.5	3.2
	65+	4.7	5.0	5.4	4.7	4.9	5.4	1.4	1.8	2.1

Sources: Annual Population Survey (APS).
Statlink: https://www.nomisweb.co.uk/.
Datalink:
https://almanac.ukces.org.uk/employment/C1/C1.3_Employment_Rate_by_Country_Nation_Region_Gender_and_Ethnicity.xls.

Source: UKCES (2011) Table.4.5

In all age groups in the working age population, women have lower activity rates than men (see Table 1.1). The gap is particularly wide between the ages of 25 and 50 where it is around 14 percentage points. For people between the ages of 16 and 24, the gap is narrower, of the order of 6 percentage points. The difference in activity rates between older (over 50) men and women is high, but the figures here are affected by the existing state pension ages. Women over State Pension Age (SPA) have higher activity rates than retired men. Men also have higher employment rates then women although the gaps between men and women are in general narrower than for activity rates. This reflects the fact that women experience lower rates of unemployment than men in all age groups.

Occupational segregation continues to exist. Women represent 15.5 per cent of science, engineering and technical professionals in the UK. Among 468,580 engineering professionals, only 6.9 per cent were women. Among 457,640 ICT professionals, only 14.4 per cent were women (UKRC, 2011). In a 2007 analysis of labour force statistics the UK was found to have the lowest percentage of female professional engineers out of 28 European countries (8.7 per cent) (WISET, 2010).

1.4 Initial qualification levels

One of the most significant social changes in the past decade has been the way women's acquisition of educational qualifications has risen above that of men, at every level and in almost every subject (see Table 1.2). Much of this is a function of changes in school achievement, and in initial higher education, i.e. as young people go more or less straight on from school to college or university.

Table 1.2 Students in further and higher education: by type of course and sex

United Kingdom — Thousands

	Men				Women			
	1970/71	1980/81	1990/91	2007/08	1970/71	1980/81	1990/91	2007/08
Further education								
Full-time	116	154	219	520	95	196	261	534
Part-time	891	697	768	984	630	624	986	1,432
All further education	1,007	851	986	1,503	725	820	1,247	1,966
Higher education								
Undergraduate								
Full-time	241	277	345	574	173	196	319	717
Part-time	127	176	148	255	19	71	106	422
Postgraduate								
Full-time	33	41	50	124	10	21	34	125
Part-time	15	32	46	109	3	13	33	150
All higher education[2]	416	526	588	1,063	205	301	491	1,414

1 Home and overseas students attending further education or higher education institutions. See Appendix, Part 3: Stages of education.
2 Figures for 2007/08 include a small number of higher education students for whom details are not available by level.

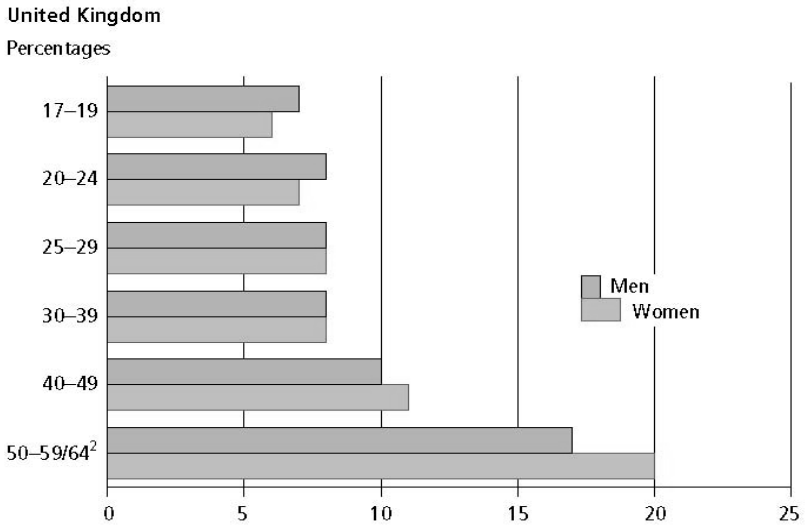
Source: Department for Children, Schools and Families; Department for Business, Innovation and Skills; Welsh Assembly Government; Scottish Government; Northern Ireland Department for Employment and Learning

Source: ONS (2010) Table 3.7

Within higher education, there are some important distinctions. Men still, just, get more first class degrees, but the key dividing line of the 'good' degree, comprising firsts and upper seconds, gives a different picture. In 2007/8, 59 per cent of women got a 'good' degree award, compared with 54 per cent of men. Moreover there are strong signs from the United States that women are more likely than men to enter honours degree programmes, but even more likely to complete them: so that the female/male ratio of current honours graduates is approaching 6:4. This is highly relevant given the current turmoil over HE funding: historically the UK has had very low non-completion rates, but this could be likely to change in the future.

At the other end of the spectrum, the proportion of younger women with no qualifications has dropped well below that of men (see Figure 1.1).

Figure 1.1 No qualifications held: by sex and age, 2009



1 Data are at Q2 (April–June) and are not seasonally adjusted. See Appendix, Part 4: Labour Force Survey.
2 Men aged 50 to 64 and women aged 50 to 59.

Source: Labour Force Survey, Office for National Statistics

Source: ONS (2010) Table 3.19

Trends over the last two decades show more women working in higher level occupations, and the gap between women and men working in these occupations narrowing. In 1984 25 per cent of women worked in such occupations, compared with 35 per cent of men; by 2004 this had risen to 38 per cent for women, compared with 44 per cent for men (Scott *et al.,* 2008, Introduction). Over roughly the same period (1981-2001) the proportion of women in managerial positions rose from 4 per cent to 11 per cent, narrowing the gap with men substantially; and 24.2 per cent of women were in professional jobs, very close to the male figure of 25.6 per cent (Dex, Ward and Joshi, 2008). However, it depends where the line is drawn: top jobs, including board level positions, remain very unequally divided.

In short, women are outperforming men in their attainment of formal qualifications, at all levels. This shift has already fed into the workplace, but the full extent of the change in relative attainment has not yet been felt. These trends throw up interesting questions about the definition of gender equality. For example, to what extent if at all should the equality debate now include male under-achievement? The effect of disparity in initial education operates in a lifecourse perspective too; since we know that those who have been more successful in initial education tend to take part more in lifelong learning, including training, the impetus is building for women to increase their relative advantage.

1.5 Other dimensions

The gender dimension is cross-cut by other dimensions, notably age, class and ethnicity. For example, Indian women are over-represented in health occupations but this does not extend to the lower status and lower paying healthcare and related personal services, whilst Pakistani women are clustered in lower status, lower paying sales assistant jobs (Smeaton *et al*., 2010).

Age also shows significant variation. Labour market participation by older men fell consistently through the last quarter of the 20th century, so men's average retirement age has been below SPA for several decades. By contrast, older women's participation rates have been rising steadily, and their real retirement age has been above their SPA of 60 since the mid 1980s. Older women are subject to discrimination both as women and as older workers (McNair, 2011). Older women have typically missed out on the surge in female qualification levels. Pay gaps between men and women increase with age. Having often suffered discrimination throughout their working lives, older women run the risk of being triply disadvantaged, and this dimension deserves particular attention.

2 The Impact of Economic Change

2.1 Introduction

This section deals with three ways in which current economic trends provide important background features for gender and skills. These are: pay; the concentration of women's employment in the public sector; and issues of under and over-employment.

2.2 Pay

The UK Commission summarises the gender gap on pay thus:

> Despite the fact that women are, under many measures, performing better than men in terms of educational attainment, they are still paid less than men, earning 21 per cent less in median hourly pay for all employees (and 13 per cent less than men when working full time). The gap is smaller for women in their 20s (6–7 per cent in weekly full time earnings at the median) but even here within four years of graduation from university nearly twice as many men have earnings over £30,000 than women....There has however been some improvement in the relative pay position of women – in 1995–6 the median for women was 53 per cent of that of men, in 2006–7 it was 64 per cent – but progress is slow. It should be noted that there is almost as much inequality between well paid and low paid women as there is between the well paid and low paid overall. (UK Commission, 2010a, p24; see also Table 2.1).

Table 2.1 Earnings by gender and age

	Mean weekly wage rate (£)			
	2005	2006	2007	2008
Total	422.8	440.0	453.3	471.9
Ratio of top decile to bottom decile (%)	7.3	7.2	7.0	7.6
Male	524.9	545.0	558.6	580.7
Female	319.5	333.2	343.9	359.3
16-17	97.2	96.9	94.8	98.5
18-21	191.0	194.4	206.6	207.5
22-29	362.2	369.4	381.8	396.2
30-39	472.7	491.7	506.9	525.9
40-49	486.0	508.8	522.6	546.1
50-59	449.7	468.9	480.8	507.3
60+	323.1	351.2	359.6	377.7

Source(s): ONS, ASHE.
Sourcelink: http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=13101
Datalink: https://almanac09.ukces.org.uk/inequality/E1/E1.2_Ave_Weekly_Pay_by_Age_and_Gender.xls

Source: UKCES (2010c) Table 6.6

The Equality and Human Rights Commission (EHRC) identifies the following factors as responsible for the pay gap: propensity for part-time employment; occupational segregation; undervaluing of women's work; and discriminatory pay systems. A survey of large private and voluntary sector organisations showed that in 2009 the average full time overall gender pay gap was 16.4 per cent and the average part time gap 35.3 per cent. There is significant variation across sectors. One of the highest full time pay gaps is in financial and insurance services (37.7 per cent), whilst one of the highest part time pay gaps is in the wholesale and retail trade (49.1 per cent). On age, some comparisons can be made between the private and voluntary combined figures and the figures for the public sector. For example, the full time gender pay gap in the 40-49 age range is 27 per cent in the private/voluntary sector, compared with 17.9 per cent in the public sector (EHRC, 2010).

The same pattern occurs in apprenticeships, where women are over-represented in traditional areas of low pay, low status 'women's work' such as caring and clerical work and retail. They are poorly represented, or in some cases, entirely absent, from well paid apprenticeships such as car manufacturing, engineering and construction (TUC and YWCA, 2010).

However, these figures are not adjusted for differences in skills or qualifications. High skills are generally linked to higher pay, though not consistently and not in any linear fashion. One of the key issues on which rigorous analysis is needed is how far and in what ways the increasing supply of better qualified women will feed through into career seniority and into reducing the gender wage gap; rising qualification and skill levels will not achieve this on their own.

2.3 Public and private sector employment

The distribution of men and women across public and private sectors is very different. The public sector provides more jobs for women, more training and more equal pay. This is of crucial importance when we consider the likely future for public sector employment in the coming years, as the squeeze on public spending takes effect.

In 2009 there were almost twice as many women as men working in the public sector. Just over 2 million public sector employees are men and approximately 4 million are women. These patterns appear reasonably consistent over the decade. The proportion of women employed in the public sector as a percentage of the total female workforce has increased over time. In 1999, 29 per cent of women were employed in the public sector and 71 per cent in the private sector, compared to 33 per cent in the public sector and 67 per cent in the private sector in 2009. For men the proportion employed in each sector has remained fairly static over the same 10 year period (Matthews, 2010).

On pay, the public sector has done more to close the pay gap:

> For all employees, the public sector saw a decrease in the gender pay difference to 21 per cent in 2009 from 27 per cent in 1999, while the gender pay comparison for the private sector decreased by only 3 percentage points to 29 per cent, down from 32 per cent in 1999. (Matthews, 2010, p.34)

The public/private divide is crucially important for skills acquisition. Access to training is generally more available in the public than the private sector. It is for this reason more than any other that women overall have higher participation rates in training than men. It outweighs other factors which point in the opposite direction, such as occupational level and part-time status.

2.4 Under-employment and over-employment

Men and women work different hours. Women work far more part-time, sometimes by choice, sometimes not. They are proportionately both more under-employed (i.e. they would like to work more hours) and over-employed (i.e. they would like to work fewer hours) than men. The fact that more women work part-time has also reduced their access to training and skills development, though this inequality is now diminishing (see Section 4 below). Over-employment also means that women are less likely to have time for any skills development which entails a further commitment of time.

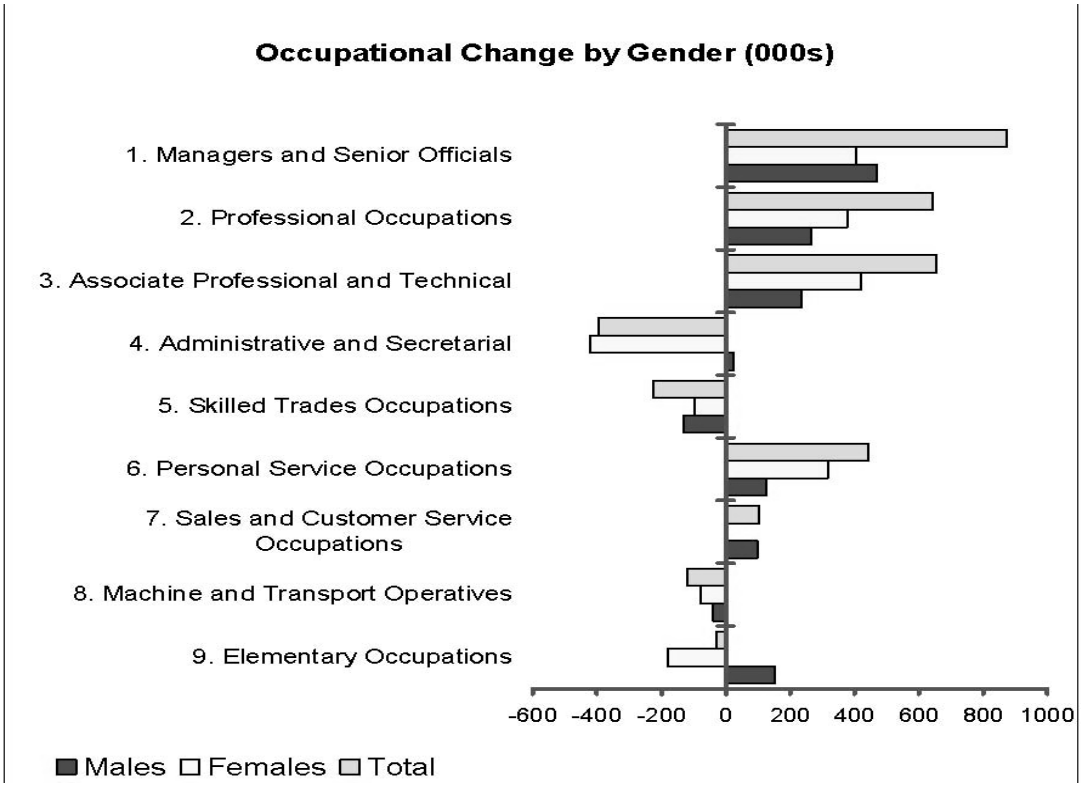
In the first quarter of 2010, there were approximately equal numbers of men and women classified as under-employed (both 1.4 million). The overall under-employment rate for women was higher than for men (10.6 per cent versus 9.3 per cent). However, within both full-time and part-time employment categories, men were actually more likely to be under-employed than women (30.2 per cent versus 18.1 per cent for part-time workers, and 6.5 per cent versus 4.9 per cent for full-time workers) (Tam, 2010).

Of those who were over-employed, 1.35 million were men and 1.4 million were women. The overall over-employment rate was higher for women than for men (10.4 per cent compared to 8.8 per cent); the gender difference in over-employment was apparent in all age groups below 50 years of age regardless of full-time or part-time work status. It was most evident in the age range 25-34, with women around twice as likely as men to be over-employed (Tam, 2010).

2.5 Future employment developments

The UK Commission's *Working Futures* exercise has entailed detailed projections on the likely future shape of employment, and its implications for skill profiles (see Figure 3.1).

Figure 3.1 Occupational Change by gender (000s)



Source: CE/IER estimates, CE projections MDM C81F9A (revision 900), Alluk.xls, (Figures 4.1-4.4) in UKCES (2008) Figure 3.3

However the gender impact of the current recession is likely to be different from previous ones:

> ...in the 1990s recession, the employment rates of men were more adversely affected than the rate for women. This was mostly explained by the concentration of men in industries that were more severely affected such as manufacturing whilst women were concentrated in sectors such as education and health that are more resilient to economic cycles. As more women are now employed than in the past they may feel the effects of the current recession more in absolute terms than they did in either the 1980s and 1990s recessions. (EHRC, 2010, p.15).

In 2009 redundancy rates more than doubled for men and women, to 15.1 and 8.3 per thousand respectively. At sectoral level, women are expected to bear the brunt of the significant job losses projected for administrative, clerical & secretarial occupations.

Felstead *et al.* (2011) analysed the impact of the 2008-09 recession on training. They conclude that "...while men's participation rate declined slowly and steadily from 2002 onwards, the decline for women began only in 2005, but the next two years saw a sharp decline." (p.8). It is a safe prediction that the cuts in public services will impact particularly strongly on women.

3 Skills and Employment: Participation, aspiration and utilisation

3.1 Introduction

We turn now to differences in the acquisition of qualifications and skills between men and women.[4] To get a true picture, the acquisition of workplace skills needs to be set in the broader context of learning, since many people only gain access to work-related skills through broader forms of adult learning, and this tends to be truer of women than men. The chapter begins by outlining the general picture on participation in learning and training, and then turn to specific questions of aspiration and motivation. The 'Paula principle' is introduced to explain why women do not reach their full level of skill utilisation.

3.2 Participation in adult learning and training

The picture on gender and access to post-initial education and training is now broadly favourable to women. It would be misleading to focus only on a narrow definition of vocational training as the sole route to skills acquisition, since participation in adult learning more broadly is often an integral part of learning skills of all kinds, including work-related ones. This is especially the case for women finding their way into or back into work.

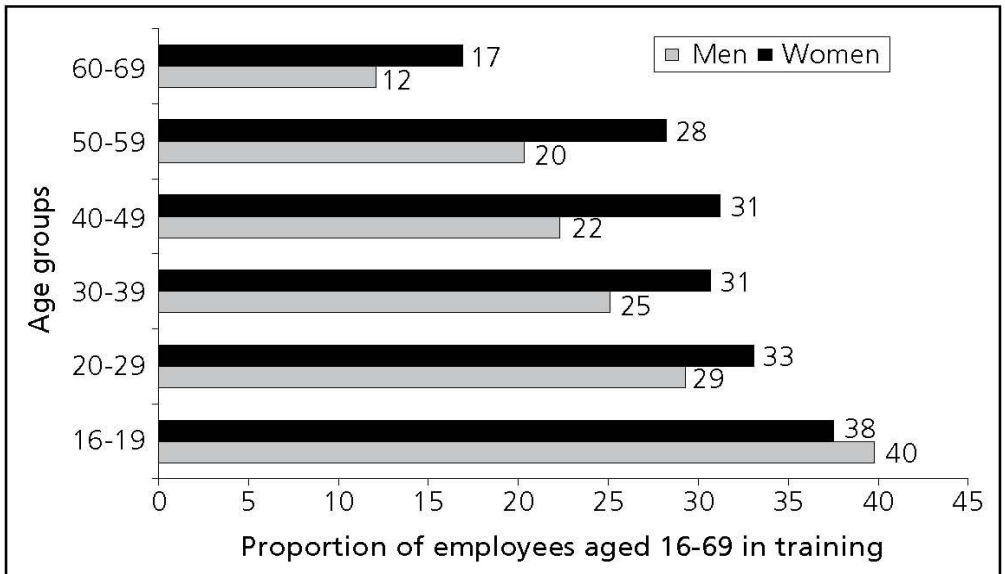
Unpublished analysis by the National Institute of Adult Continuing Education (NIACE) shows that for all age groups, a higher proportion of women take part in some form of adult learning than men. The differences are about 3 per cent for the age-group 25-49, and over 7 per cent for those over 50.[5] Comparison with other EU countries also shows women in the UK doing relatively well in terms of participation rates in lifelong learning, both relative to other countries and relative to men. Average participation rates across EU countries in 2007 were 35.4 per cent for women and 36.1 per cent for men; in Britain the respective figures were 51.3 per cent for 47.2 per cent (Boateng, 2009).

[4] On 'acquisition', I recognise the force of the argument made in Felstead *et al.*'s Praxis paper (2011) that learning skills is not a matter of 'acquiring' them, but the term is appropriate in the context here.
[5] Thanks to Fiona Aldridge for this data.

More specific analysis on who participates in training, and its effects on wages, comes from a recent DWP Research Report (Cheung and McKay, 2010). The main points are summarised below:

- Training participation rates grew until the mid-2000s, and have since declined.
- Women take part more in training than men, across all age groups, in all ethnic groups and in all regions (see Figure 3.1).
- Women have higher participation rates in training in almost every occupational group except intermediate occupations (see Table 3.2).
- The effect of public sector employment is very pronounced, outweighing other factors. Both male and female part-time employees in the public sector have better access to training than full-time employees in the private sector. Women work far more in the public sector, and this largely accounts for their training advantage. It also means that the recent and forthcoming cuts to the public sector have a disproportionate effect on women.
- The best estimates of wage returns to training are of around 4 per cent for men, and 2 per cent for women.

Figure 3.1 Training by gender and age group



Source: LFS 2008 q1-q4, w1 and w5. Weighted by adjusted pwt07[1].
Male: $\chi^2 = 787$, d.f. = 5, $p < .001$; female: $\chi^2 = 300$, d.f. = 5, $p < .001$.

[1] All bivariate analyses with count data are weighted by the adjusted PWT07 (i.e. PWT07/mean (PWT07)). This provides a more realistic chi-square statistic than the initial weights.

Source: Cheung and McKay (2010) Figure 2.1

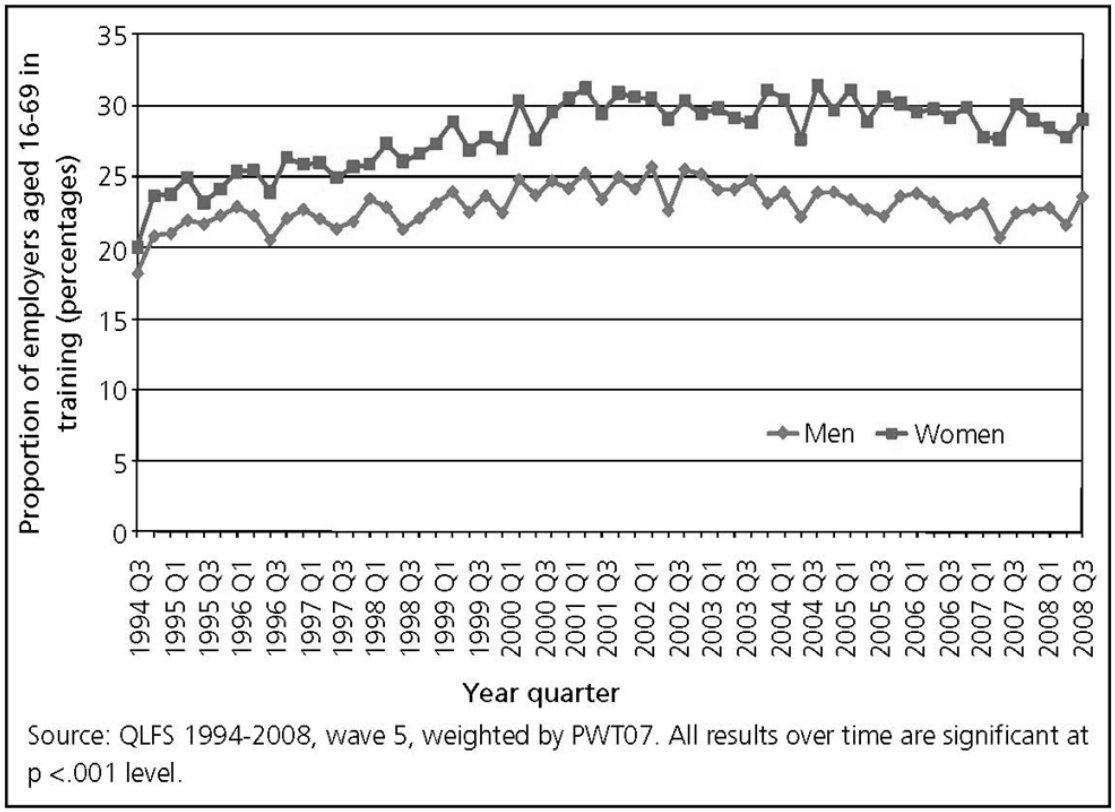
Table 3.1 Proportion of employees in training by qualification and occupation

			Cell percentages
Training in the last three months	**Men**	**Women**	**All**
Highest qualification			
Degree or equivalent	34	42	37
Higher education	29	41	35
GCSE A level	23	31	26
GCSE Grades A-C or equivalent	23	25	24
Other qualifications	17	21	19
No qualifications	8	11	9
N	*46,905*	*40,292*	*87,197*
Occupation			
Higher managerial and professional	31	40	33
Lower managerial and professional	31	39	35
Intermediate occupations	31	24	26
Small employers, own account	8	14	9
Lower supervisory and technical	24	30	26
Semi-routine occupations	18	25	22
Routine occupations	14	13	13
N	*45,890*	*38,716*	*84,606*

Source: LFS 2008 q1-q4, w1 and w5. Weighted by pwt07.
Qualification: male: $\chi^2 = 1445$, d.f. = 5, $p < .001$; female: $\chi^2 = 1748$, d.f. = 5, $p < .001$.
Occupation: male: $\chi^2 = 1945$, d.f. = 6, $p < .001$; female: $\chi^2 = 1531$, d.f. = 6, $p < .001$.

Source: Cheung and McKay (2010) Figure 2.3

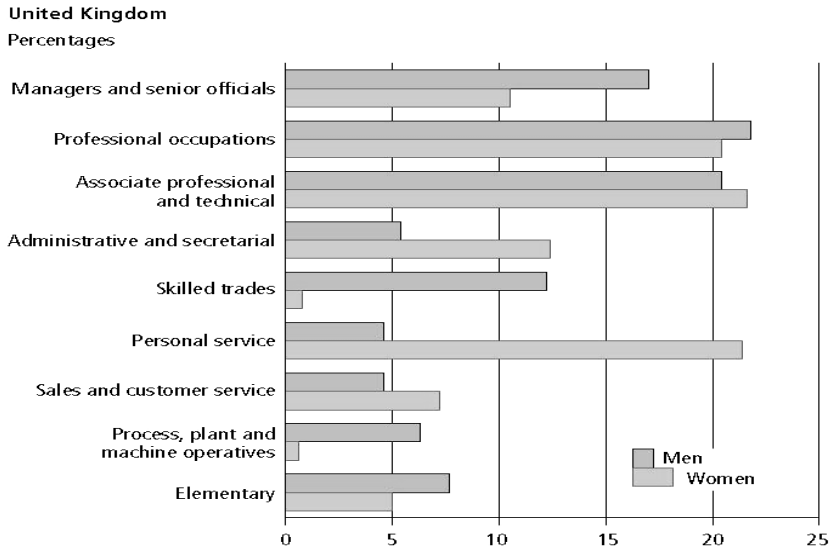
Figure 3.2 Proportion of employees aged 16-69 in training, by gender 1994-2008



Source: Cheung and McKay (2010) Figure 3.4

So the picture on training, a key route to the acquisition of skills, is in aggregate terms quite favourable to women, at least in terms of overall participation rates. However, this is not a stable picture. We have already noted that the cuts in public service employment will impact particularly on women and their access to training. Moreover participation figures on their own are only part of the story. As we have seen, the UK has relatively high participation rates by EU standards. But the *duration* of the training is very low. In other words, quite high proportions of men and women take part in training, but often for relatively short periods of time.[6]

Figure 3.3 Employees receiving job-related training: by sex and occupation, 2009



1 Data are at Q2 (April–June) and are not seasonally adjusted. Men aged 16 to 64 and women aged 16 to 59. See Appendix, Part 4: Labour Force Survey, and Standard Occupational Classification 2000 (SOC2000).

Source: Labour Force Survey, Office for National Statistics

Source: UKCES (2010c) Table 5.14

In 2009, among working age employed men in the UK, those in professional occupations were most likely to receive job-related training whereas among working-age employed women, it was those in associate professional and technical occupations (21.8 per cent and 21.6 per cent respectively of employees). Those least likely to receive job-related training were men working in sales and customer service, and personal service (both 4.6 per cent) and women working as process, plant and machinery operatives (0.6 per cent).

This may have major implications for the gender picture. Figure 3.3 shows that women receive high levels of training in personal service; but we need to know more about the typical length of training in this sector before we can get a true picture of the gender balance. Similarly, we know that training for managerial and professional staff is on average more extensive (i.e. it lasts longer) than for lower occupational grades. Given that women are underrepresented in managerial (though not professional) grades, we might expect this too to have an impact on the overall gender picture.

[6] This is why the NIACE report on *Learning Through Life* combined participation rates and duration in its overall estimates (Schuller and Watson, 2009, Ch. 5).

At an earlier stage, there is evidence that apprenticeships are perpetuating occupational segregation, with implications for future careers and rewards. Since women are concentrated in apprenticeship schemes which last for one year or less and the longer apprenticeship schemes such as engineering and construction (which lead usually to better paid jobs) are predominantly undertaken by men, the number of women on an apprenticeship scheme at any given time will be significantly lower than the number of men (TUC and YWCA, 2010, p.4).

3.3 Aspiration and choice: the Paula principle

On the acquisition dimension women have increased their levels of qualifications rapidly over the last two decades, surpassing men at every level. In work, they are taking part in training more than men, though with considerable variation across sector. We turn now to the actual and potential use of the skills gained. This is a critical question, but one that is far more difficult to investigate than levels of qualification.

We start with a broad generalisation: there are significant differences in the confidence and opportunities women and men have to exploit their skills to the full. The Peter principle was articulated in the following terms by its eponymous originator in 1969: "In a hierarchy every employee tends to rise to his level of incompetence" (Peter and Hull, 1969). The pronoun reflects the period of the pronouncement, but it probably has a sound basis in reality: men are more likely than women to put themselves forward for jobs and promotion, beyond (as well as up to) their point of competence. By contrast the Paula principle, introduced here for the first time, suggests that *women tend to remain at a level below that of their real competence*, because of personal, structural or social factors.[7] Women may make a conscious decision that their skills are best used at the level they are at, not at the one above, even if the latter is a level they could to which seek promotion. Or they may be deterred by a combination of factors. It may mean that highly qualified women do not engage in the competition for senior or other jobs because they do not want the stress that comes with the job. But at all occupational levels the Paula principle points to women lacking the confidence to believe either in their own skills, or in the possibility of their application. It is hard to disentangle the different influences on such decisions and attitudes.

Aspirations and expectations are crucial in the extent to which any individual pursues both the acquisition of skills and the opportunities to put them into effective practice. Aspirations are a function of the interaction between wider structures and norms (of society and of the workplace) and individual histories and personalities. This sounds theoretical; but from the policy angle the fit between aspiration and potential cannot be ignored, particularly from a gender perspective.

[7] I am grateful to Mary Alys and to Suzi Leather for help in reaching this definition.

For all sectors, public and private, the issue of careers information, advice and guidance remains crucial for gender equality. Guidance in schools and colleges needs to make sure that all efforts are made to allow people of either sex to pursue the career that suits them best and brings the best out of their talents and training. The arguments here are wholly familiar. The issue goes beyond formal guidance to more general forms of information and opinion-shaping. It extends into mentoring at work; here too, it is important that mentors of either sex are properly aware of the potential biases which exist (including within the minds of individual women themselves) against some occupations and some aspirations. If we relate this to the adjustment processes described above, it will be important that aspirations are not unfairly depressed by the decline in employment opportunities. It is easy to imagine that women will adjust their aspirations down more quickly than men do.

3.4 Utilisation, employment and qualifications

Direct systematic evidence on the validity of the Paula principle is lacking, so we turn here to the best available relevant information on utilisation. Measurement in this field is difficult but important. As Payne says: **"**There is no denying that the measurement and evaluation of skill utilisation constitutes a major challenge...The prize, however, is a rich one" (Payne, 2010, p. 21).

Green and Zhu (2010) make two important distinctions:

a) *over-qualification* (where the qualification or degree is above that needed to *get* a particular job, i.e. in the case of graduates the job does not need a level 4 qualification); and (where the individual has skills beyond those needed actually to *do* the job in question); and

b) *'real' over-qualification*, where the person reports that the qualification level they have is not needed either to get or to do the job, and *'formal' over-qualification*, where a degree was not needed to get the job, but where the graduates find that their graduate skills are actually used.

Focusing on graduate employment Green and Zhu's analysis shows an increasing level of over-qualification, but not an increasing level of under-utilisation. Reported over-qualification levels have gone up for both men and women graduates between 1994 and 2006, at roughly the same speed, from 22 per cent to 33 per cent for men, and 23 per cent to 32 per cent for women. But the increase in formal over-qualification has been especially sharp for women from 2001-06. Real over-qualification is, not surprisingly, a major source of dissatisfaction, for both sexes.

This work is important, both for the way it introduces relevant analytical categories and for the results. Inevitably it raises questions as well as answering them. For instance, one could hypothesise that both men and women adjust their expectations in the light of their perceptions of what is generally regarded as 'graduate' work, which changes as the supply of graduates increases. Or, particularly relevant for us, it may be that women are more modest in their perceptions of whether their skills are actually being used, and so are less likely to report under-utilisation, or real over-qualification.

Felstead *et al.* (2007) surveyed changes in skill patterns at work over two decades, 1986-2006. Amongst their findings is much that is relevant to the gender question, which they summarise as follows:

- There has been a marked convergence between men and women in the presence of advanced equipment and computerised technology at work. In 1986 there was a gender gap of 13 percentage points. This fell to five points in 1992 and by 2001 the gap had disappeared, with women at least as likely to be using such equipment as men. In 2006, almost identical proportions of men and women (around four-fifths) reported using advanced technologies in their jobs.
- Among women, an important distinction needs to be drawn between full-time and part-time work. All the measures of broad skills, most of the generic skills measures, and the importance of on-going learning are at lower levels for female part-time workers than for either men or female full-time workers.
- Although these distinctions remain in 2006, both the overall gender skills gap and the skills gap between women working part-time and those working full-time have narrowed substantially over the last two decades. Over the last two decades, women's broad work skills have risen faster than men's, thereby serving to narrow the gender skills gap.

The analysis reports in detail on the key trend of convergence, between male and female skill levels, and within females between full and part-time workers. These are highly significant trends for the equality theme. The skill level of women's jobs has risen faster than men's, narrowing the gap between the skills of men's and women's jobs. Between 1986 and 2006 the proportion of jobs requiring no qualifications declined from 48 per cent to 27 per cent for women, and from 31 per cent to 28 per cent for men. "Female part-timers have, on the whole, been the main beneficiaries of these trends... The skill level of women's jobs has risen faster than men's, thereby serving to narrow the gap between the skills of men's and women's jobs... and to narrow the (albeit still significant) inequalities that exist between women who are in part-time and full-time jobs" (Felstead *et al.,* 2007, p.57).

The overall message from this research is broadly positive on the rise in skills demanded and used at work, and for the way women's work is catching up in its requirements for learning as part of the job:

> The proportions [of women] strongly agreeing to the statement 'my job requires that I keep learning new things' has consistently moved upward during the 1992-2006 period – rising from 26 per cent in 1992 to 30 per cent in 2001 and then to 35 per cent 2006. The gender gap of those agreeing or strongly agreeing with the statement has narrowed from 9 percentage points in 1992 to 2 percentage points in 2006. In addition, the gap between women who work part-time and those who work full-time has halved from 22 percentage points in 1992 to 11 percentage points in 2006. (Felstead et al., 2007, p.70).

However there is an important further dimension. Perhaps counter-intuitively, although skills are positively associated with a feeling of control at work, the general rise in skill levels has been not accompanied by a rise in perceived levels of control. Here, in contrast to the aspects discussed above, the position of part-timers has not improved:

> Between 1986 and 2001 there was a marked decline in task discretion for both men and women. Since 2001 there has been no further change in employee task discretion. In all years the level of job control exercised by women in full-time jobs was substantially greater than that exercised by women in part-time jobs. Moreover, there was an increased polarisation of the quality of jobs in this respect between 1992 and 2001, when the level of task discretion declined faster for part-timers than for full-timers. Over the last five years the trend has been somewhat reversed. (Ibid, p.124).

To sum up, we have seen that women participate in almost every respect more highly in education and training. But we have introduced the Paula principle to explain why this higher participation does not seem to be changing the occupational hierarchy as might be expected under a gender-neutral meritocracy. There is a real danger that the improvements in qualification and skill levels represented by women's improved educational achievements will not have the impact it should do in the workplace.

4 Role of Employers

4.1 Introduction

The role of employers in providing training has long been an issue. A wide range of barriers to optimal training by employers has been identified (UK Commission, 2010a, p.58). Of these a number are particularly relevant to the gender theme, looking forward: short-termism, shortcomings in the education of managers, imperfect information and inadequate access to appropriate training. It is not clear what progress is likely to be made in overcoming these barriers. However, if employers can take a longer view, managers may be better trained to realise the skills of all their staff, information improved on the potential of female workers and a more suitable range of training provided to meet the specific needs of women, the overall picture would change substantially.

Employers are obliged to pay some attention to gender and skills, since women now form so much higher a proportion of the high-skilled. It makes sense for them to be interested in the link between flexibility and skills, and women have traditionally worked much more on contracts which involve part-time and short-term working. But there is now opening up a broader debate on skills utilisation, which poses new challenges to the employment system, and the role of managers in driving up the quality of work.

4.2 Skills utilisation in the workplace

Analysis specifically commissioned for this paper explores in greater depth the issue of skills utilisation: how this differs between men and women, and how the patterns have changed over the last two decades[8]. It is important to note that this analysis focuses on the relationships between levels of qualification and the nature of jobs. This is separate from the argument over whether increasing the numbers of highly qualified people, especially graduates, has other benefits.

The evidence presented in this section is based on original data analysis of the 2006, 2001 and 1997 Skills Surveys in addition to data collected for similar surveys carried out in 1992 and 1986. Unlike the much larger employer skills surveys on which skill shortage and skills gap evidence is based, these individual-level skills surveys gather information from workers themselves.[9]

[8] The analysis in this section and the next was carried out by Professor Alan Felstead of Cardiff University specifically for this project.

[9] Evidence from all five surveys is used to derive a 'qualification demand and supply balance sheet'. Using evidence drawn from the relevant Labour Force Survey, estimates of the qualification levels of the economically active are derived. Data from the relevant one of the five surveys are used to estimate the number of jobs requiring a particular level of qualification on entry. These proportions are, then, grossed up to provide national estimates. To these estimates are added the number of vacancies as estimated by the Vacancies Survey (or Job Centre reports) for the relevant months of the survey. The total number of estimated vacancies is apportioned according to the qualifications requirements reported by new recruits to the relevant Skills Survey. This produces two columns of data – one estimates total

In 2006, there were 1.2 million more degree-holders (supply) than there were jobs requiring these qualifications (demand). Supply also exceeded demand at lower qualification levels: at Level 3 supply outstripped demand by 2.2m; at Level 2 by 1.9m and at Level 1 by 0.3m. As a result, in 2006, there were many more low qualification jobs than there were low qualified people to carry them out; the gap was 4.9m.[10] This situation arose, not because the numbers of jobs that do not require any qualifications rose, but because the number of people holding no qualifications fell substantially.

Overall, a similar pattern for men and women emerges with accelerations in the supply of qualified workers outstripping the demand by employers. Whereas mismatches for men were concentrated at particular qualification levels, for women they occurred throughout the qualification spectrum. However, there are some more striking gender contrasts.

First there is the much stronger growth in the number of economically active women gaining qualifications during the twenty-year period. For example, the number of women in the workforce qualified at Level 4 and above (that is, degrees and equivalent) rose by a factor of 2.6 during this period compared to a factor of two for men. Similarly, the number of women qualified at Level 3 more than doubled between 1986 and 2006, reaching 2.3 million, whereas for men it barely moved at around 3.9 million. More qualified women, in particular, were entering the labour market, making the possibility of qualification mismatches all the greater.

However, men more than women appear to have experienced the greatest change in qualification mismatch. In 1986 around 640,000 more men were in jobs that in principle required Level 4 or above qualifications than there were men qualified to such a level. In 2006, falling levels of undersupply became an oversupply of 370,000 (see Figure 4.1). For women, the change was less dramatic. In all but one of the data points, there were more Level 4 and above qualified women than they were women working in jobs that required this level of qualification. According to this evidence, then, under-utilisation of high level qualifications has been a persistent experience for women, but for men it is a more recent phenomenon.

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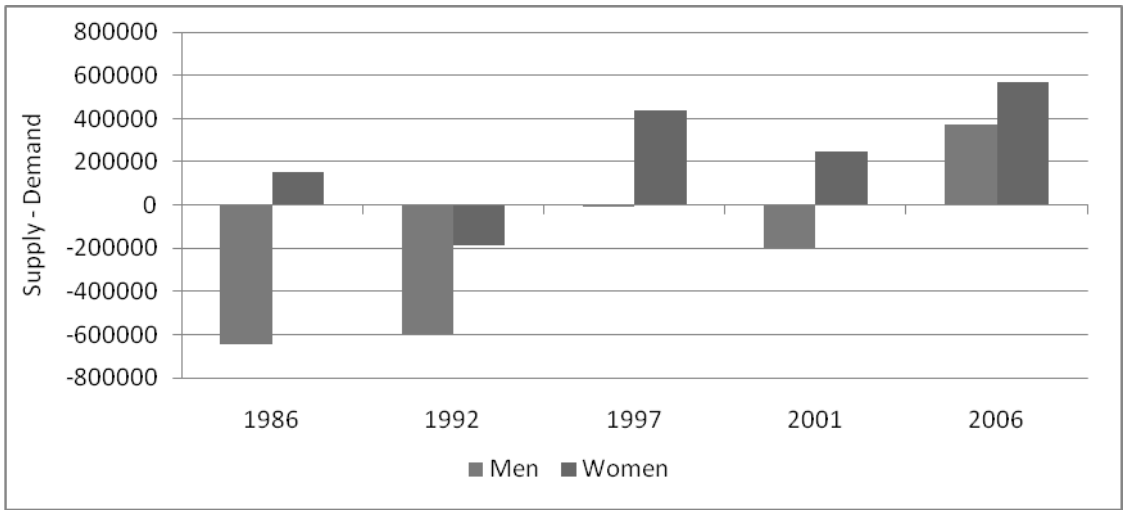
qualification demand, while the other estimates qualification supply. Comparing the columns shows where in the qualification hierarchy demand and supply are broadly equal and where there are deficiencies or excesses in supply.

[10] All figures here are from a complete re-analysis of the data previously presented in Felstead *et al*. (2007). As a result, there is not a one-to-one correspondence between these figures and those published earlier. This is due to a number of factors, including the use of new population weights now supplied with the LFS datasets (from and including 1992 to 2007, see Palmer and Hughes, 2008), analysis based on the entire Skills Survey 2006 dataset (not the core sample only as in Felstead *et al*., 2007), use of new vacancy data and the presentation of unrounded figures.

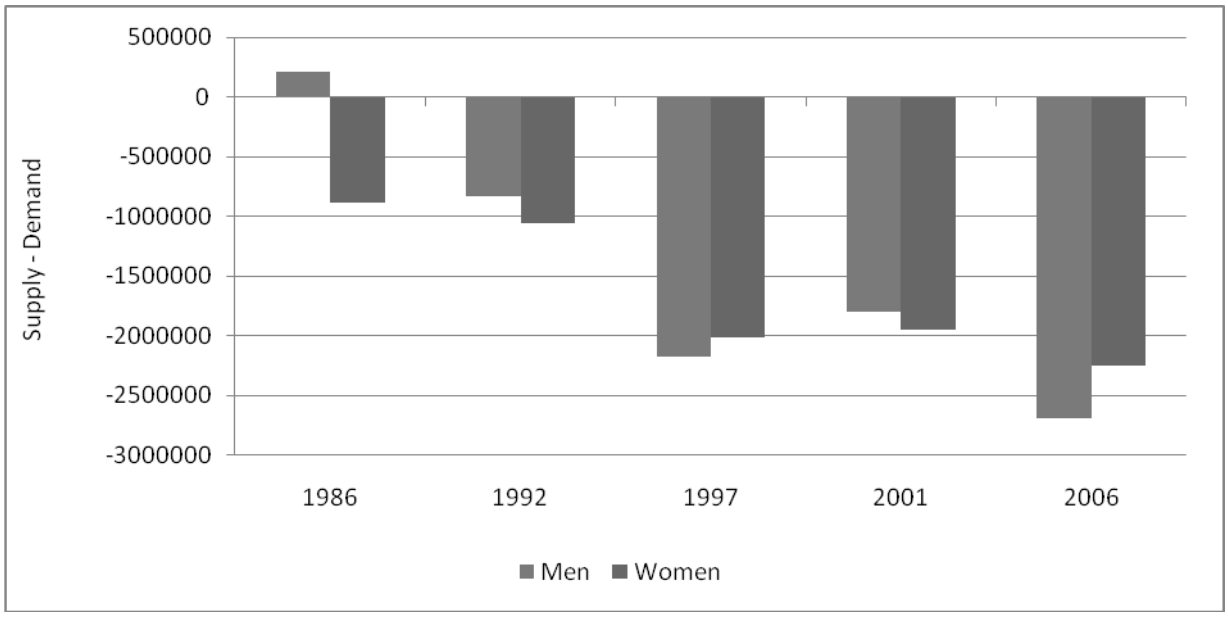
Figure 4.1 Holding Level 4 or above/required Level 4 or above mismatch by gender, 1986-2006



Source: original analysis by Alan Felstead (2010)

Similarly, at the other end of the scale, the mismatch between the number of people with no qualifications and the number of jobs that require no qualifications has grown more sharply for men than for women. During the 1986-2006 period there were similar proportionate reductions in the number of male and female unqualified members of the workforce. However, the number of jobs requiring no qualifications held by women fell by around a quarter (from 4.5 million in 1986 to 3.3 million in 2006) compared to a slight rise for men.

Figure 4.2 No qualifications held/no qualifications required mismatch by gender, 1986-2006



Source: original analysis by Alan Felstead (2010)

Qualification mismatch is important, but only part of the story. We can also examine whether those 'over-qualified' (that is, they have qualifications which exceed the level of qualification formally required for the job) are also unable to use their skills at work effectively. The analysis confirms that qualification mismatch has increased over time. The proportion defined as over-qualified has risen from 30.1 per cent in 1992 to 39.6 per cent in 2006. However, despite this rise the proportion of workers over-qualified *and* over-skilled has remained at around 13 per cent (what Green and Zhu, 2010 refer to as 'real' as opposed to 'formal' over-qualification). Instead, around two-thirds of the over-qualified reported that they were able to use their skills at work despite holding a qualification which exceeded the qualification level entry requirement (i.e. formal over-qualification). This proportion remained more or less constant over the 1992-2006 period.

While the gender differences are marginal, the differences between women full-time and women part-time workers are more striking. In each of the three years, women part-timers were more likely than full-timers to report that they were in jobs for which they were over-qualified. In 2006, nearly half (46.3 per cent) of women part-timers reported that they were over-qualified compared to around a third (35.6 per cent) of women full-timers. However, the prevalence of real over-qualification among women part-timers fell at a time when it was moving upwards for other groups such as men and women full-timers. This gives further support to the finding reported above that the upward movement in skills has been most dramatic for part-time women workers.

Analysis of this kind needs further in-depth exploration. We should stress again that 'qualification levels' give only a partial indication of the skills actually required or exercised. We need more detailed qualitative understanding of how these two relate, and of the process of skill acquisition beyond that of qualifications. Moreover, it is possible that there is a systematic bias in the way men and women respond to questions about how far their skills are used: men may be more likely to estimate their skills as being at a higher level, and so be more likely to report under-utilisation, whilst women will be more inclined to adapt their profile to fit the job. We do not know whether, or to what extent, this bias exists.

Finally, in this paper we have not examined the issue of rewards and returns. In general, econometric calculations tend to show that women earn a higher return to their education generally, though there are some exceptions for particular vocational qualifications such as HND and HNCs where men earn a higher return (Blundell, Dearden and Sianesi, 2005). This too needs further unpacking, especially in relation to occupations.

4.3 Issues for employers

It is important to emphasise that we have, in the analysis above, built an aggregate picture from individual responses. There is limited information on how this same story is playing out at the level of individual employers, or of sectors. We can assume that in some sectors and some organisations the adjustment processes just described will occur, or be managed, more smoothly than others, but we do not at present know much about how this is happening. We also cannot know with confidence how the process of adjustment will impact on gender equality in relation to skills.

That said, there are certain areas where employment practice will be relevant to ensuring that the adjustment process does not impact unfavourably on gender equality. The most significant of these is in the management of employment patterns in the public sector. The public sector is the major employer of women; and it is the major provider of training opportunities for women. It is also, currently, under particularly acute pressures to reduce its headcount; the projections for public sector job losses make grim reading. So the first, very stark, challenge is to public sector employers in how they manage this painful process. In addition to all the other pressures that it will bring about, they should be aware of the implications for gender equality. More specifically, they should be aware over the coming years of the numbers of highly qualified women who will be coming in to the labour market, and of those who have recently joined it and are beginning their careers. It is crucial that these women are not prevented from making good and effective use of their qualifications and skills. We refer later to the way in which the public sector can take the lead in devising new patterns of working hours, which would cushion the impact on women and allow full use of skills.

The issue of guidance and information extends into the workplace. As mentoring and coaching grow in significance as recognised means of fostering staff development, the challenge of ensuring properly balanced advice in these relatively informal settings will become more important. There is a significant employer role in encouraging the aspirations of women to acquire skills. Even more important, though, is the need for employers to provide the kinds of support which give women the confidence to exercise those skills, and to seek the career paths and promotion opportunities which will allow them to be fully exploited.

Finally, there has been considerable recent discussion of the notion of ‘high performance working’, where using people’s skills fully is one of the key components (UK Commission, 2010; see also (Toner, 2011). The key components for employers are listed as: reviewing business strategies; moving up the value chain (i.e. by delivering higher value goods and services); raising demand for high skills; reorganising work; and by so doing improving skills utilisation in the workplace and, hence, firm performance. The UK

Commission points out that there are still limited policy levers for taking this forward, but it is clear that the debate on skills utilisation, including the gender dimension, is an important component of wider organisational performance. If the labour market comes to demand a higher level of skills in the future it is clear that better identification and utilisation of the skills already in the labour market may be of growing importance to all.

5 Implications for Policy and the System

5.1 Introduction

We turn now to identify a set of key policy issues in respect of gender and skills. These cover flexibility and choice within the education and training system; occupational choice and the related issue of advice and guidance; various key issues for policy research (including particularly the need for longitudinal research which tracks people over time); and the broader issue of the relationship between skills acquisition and policies on working time.

5.2 Flexibility and choice in the education and training system

Schools, colleges and universities are all very aware of the changes in the educational attainment of females over the last decades, and in the patterns of enrolment. There remains the task of ensuring that both men and women do not have their educational and occupational choices closed off too early, or too narrowly framed. The same applies in respect of training, in and out of the workplace.

A specific aspect here is the training of teachers and trainers themselves, both as role models (i.e. female teachers in areas of traditional male dominance, and vice-versa) and more generally on awareness of gender issues.

It should be noted, interestingly, that in those countries which are generally reckoned to have achieved the greatest level of gender equality, i.e. the Scandinavian countries, occupational segregation has in fact increased, with the proportion of women entering caring services increasing. So there is no mechanical solution to the issue of occupational choice.

The crucial thing is that opportunities for acquiring new skills should be available across the lifecourse, for women and men. This means that even where an initial pathway has been chosen perhaps for the wrong reasons, the opening is there for the individual to change career or occupation. In the past decades, certainly more women than men returned as mature students. That may now be changing, but in any event the system must be flexible enough to accommodate all individuals seeking to change career or job (see Schuller and Watson, 2009, Ch. 7).

5.3 Occupational choice and career progression

Women and men need maximum opportunities to develop their capacities across the lifecourse, in ways which reflect changes in the labour market and in their own personal circumstances. Much has already been said on the need to avoid locking people into career choices which do not properly match their aspirations and capabilities. The focus tends to be on the initial phase; but the same reasoning extends throughout working lives. The UK Commission has carried out extensive projections of sectoral trends and likely changes in the occupational composition of the labour force. This needs to be matched against current and future trends in levels of qualification and skill. For the purposes of this paper, gender is the focal dimension. This needs to be cross-matched with the geographical distribution of employment, and other social aspects, including age and ethnicity, in order for the full potential of the UK's labour force to be realised.

Different occupations make varying demands on qualifications and skills. This is inevitable. But progress has already been made in some areas, such as care services, in setting standards which drive up qualification and skill levels. The extension of licence to practice arrangements will be an important component in doing this. Schemes need to be carefully designed, however, to be of real value, avoiding unnecessary bureaucracy and costs.

One feature which has particular implications for gender equality is the encouragement of individuals to take advantage of career and progression opportunities. These are often shaped by structural features such as the availability of childcare or arrangements for eldercare. But independently of these there are opportunities to make progress in challenging what we have termed the Paula principle: the tendency of women to aspire to lower levels of career progression than their skills allow. This goes beyond issues of advice and guidance to broader cultural attitudes. Supervisor and management training will play a part here.

5.4 Advice and guidance

An all-age Careers Service should pull together the different forms of occupational advice and guidance, and enable both sexes to make more appropriate choices. It is crucial that the staff of the new service are properly acquainted with and trained in gender issues.

Further, we have the possibility of a growth in Individual Learning Accounts, which will also generate demand for better advice and guidance. In a world of increasingly personalised services, support for informed choices will become an integral part of a new consumerism.

One challenge, which demonstrates the interconnectedness of the system, is how far information on the returns to skills acquisition can be built in to advice and guidance. The logic of a more marketised system of higher education is that students and aspirant students will make decisions based on information such as the employment records of different institutions and the income returns to different courses or subjects. Such information is important. However, it is necessarily quite limited: rates of return are simply not that easily attributable other than in quite crude terms. It must be recognised that there may be discouraging effects for women, since the pay gap still means that the returns to them for skills are often lower; in other words, their motivation to participate in learning may be reduced, in so far as they give weight to financial return as a factor.

5.5 Research and information

More research is always needed for the system to function better and three key areas have been identified which are particularly significant for the gender theme.

First, a better grasp of how informal learning helps skill acquisition and utilisation, including how this does or does not differ between men and women. This paper has necessarily concentrated on formal qualifications, recognising the inadequacy of these as a proxy. This is a long-standing issue, and a stronger knowledge base is being gradually developed (e.g. Felstead *et al,* 2010). But much still remains to be understood about how skills are acquired informally, by individuals and groups.

Secondly, we need a wider variety of information on the material and non-material rewards and returns to skills. Men characteristically give a higher priority to training which yields financial rewards, whilst women look to more values-based rewards. We need to understand better how these preferences are shaped; but just as importantly how far they are fulfilled, for different groups.

Thirdly, this paper has set out some of the key trends which are shaping the way gender and skills interact. The evidence presented here has been cross-sectional, though powerful. But if, for example, we are to understand the full impact of pay gaps and occupational segregation, we need to see how this cumulates over time, as has been done in estimates of lifetime earnings. In the case of skills and their application, we need to see more clearly what the different trajectories are: When new skills are acquired what are their effects over time, on the individual and the organisation? What are the key triggers for acquiring new skills? How is this influenced by people's early learning experiences? How do people's approaches to learning new skills change over time? In short, we need a longitudinal and lifecourse perspective.

5.6 Skills and working time

Work-life balance and care issues have always been particularly important for gender equity, and should be high on the employment agenda. This is an issue which will grow in significance because of demographic trends in society overall. With an ageing population, larger numbers of very old people, many of them requiring care, and with fewer public resources, the demands on domestic care-giving will increase. Women tend to take the greater share of this care-giving, and so experience greater pressures when it comes to reconciling the demands of care-giving with careers. Balancing the demands of personal care-giving and skills utilisation at work is a difficult challenge.

This takes us on to a related issue of working time. The debate on gender and skills must be located in the current climate of severe labour market stress: fragility of employment, increasing unemployment and particular threats to public sector jobs. All of this should focus attention on the wider issue of the distribution of employment and working time. In talking about distribution we are emphatically not subscribing to any notion of a fixed amount of employment, but raising questions about how the distribution of employment might be influenced in order to produce overall benefits to individuals and society. The current crisis is grave. But it provides an opportunity for rethinking distributional questions. The evidence is clear that the worst outcome for people is to lose their job, and become disengaged from the labour market whereby opportunities for individuals to exercise their skills decline, and the skills with them. Having no job is far worse than having a part-time job or a job at a lower level than before (Felstead, 2010).

A major issue, therefore, is what kinds of measures might be introduced to bring about a better distribution of jobs. The issue has been around for a long time, especially in the long-hours culture which prevailed in periods of relatively full employment. It now takes on a fresh salience in a period of high unemployment. Spreading work around more equally keeps more people actively in employment and attached to the labour market. At the same time, reduced working time makes it easier for all, men and women, to carry out caring responsibilities, for children and older generations, and to engage in civic activities, however those are defined. It could also be an important part of a move to a lower-carbon economy and lower-carbon lifestyles (Coote, 2009). These are all key issues for the gender agenda.

Looking at this general issue of a better distribution of jobs from a skills perspective opens up opportunities for rethinking the place of training in a new mosaic of time. In one sense this is a very familiar approach: the counter-cyclical use of training at a time when opportunity costs are low. But applying this approach specifically to the gender issue gives it fresh significance. If average working hours are reduced (because of a broader distribution of work) this allows more time for people to engage in learning, directly related to work or not. The funding of this can be a mix of state, employer and private, according to the circumstances of the organisation or sector. In short, our overall argument is that a major challenge is to build learning time into innovative approaches to the reduction in average working times.

6 Conclusion

6.1 Introduction

We conclude by restating the key focus of this paper, the acquisition and utilisation of skills, and its broader context; the case for a strategic approach to lifelong learning in a society undergoing major demographic as well as economic change.

6.2 Acquisition and utilisation of skills

On acquisition, the picture is as follows. Women are increasingly acquiring qualifications at all levels: there are fewer and fewer women with no qualifications, and increasing numbers with qualifications at high levels, and they are out-achieving men at all levels in qualifications gained. Although there is still an imbalance in some subjects, notably engineering and some science, this trend extends across a very broad range of disciplines and professional areas. Formal qualifications cannot be fully identified with skills applicable in the workplace, but there is obviously a strong degree of congruence, in both generic and specific skills. Secondly, once women are in work, in aggregate they have relatively good access to training to develop their skills further. This is largely because women are concentrated in the public sector, where provision of training opportunities is generous relative to the private sector. Thirdly, one of the most significant of divides, between full-timers and part-timers is narrowing, so that the latter are less disadvantaged than they were in access to training. All this is positive from the equality point of view. On the other hand the massive cuts which are occurring in public services will undoubtedly have a greater impact on women's prospects both for employment and for training.

Skills acquisition intersects with other areas of learning. It is important to recognise that the process of acquiring work-related skills is not confined to initial education or work-related training, but is part of a wider process of learning. Many people, especially but not only at the lower skill levels, find their way into the labour market by gaining skills in formal and informal learning contexts which are not at all designed to be work-related. This is particularly true for women who find that skills which they acquire and utilise in domestic or community contexts provide a pathway for employment and further training.

On utilisation, the picture is more ambiguous. Women are more economically active than ever, and being in work gives them the opportunity to exercise their skills. However they are formally over-qualified to a significant extent; about the same extent as men, but with a sharper increase in recent years, reflecting women's steeper rise in overall qualification levels. The gender gap, in the extent to which jobs require continuous learning, has shrunk. Women report less under-utilisation, but this needs deeper examination, since it

is arguable that women will tend more to adapt their aspirations to what is on offer, and have less confidence in asserting their own skill levels. It appears, though, that the gender gap in utilisation levels is diminishing, with women now closer to men in their use of advanced technologies.

The picture is not a simple one. But the implication of this line of argument and of the evidence is that we need to pay far more attention to qualitative aspects of work; to the content of jobs and how far they use the competences which people have. If we do not, we are wasting both talent and training.

We have not dealt in any depth with the third dimension, namely of rewards for skills and qualifications. It appears that returns to qualifications for women with high level qualifications are relatively good, but gender differences in returns often reflect women's choice of sector and occupation (Greenwood, Jenkins and Vignoles, 2007).

6.3 The lifelong learning context

The arguments for a broad system of lifelong learning which unites work-oriented skills with broader learning have been made repeatedly. The rhetoric is often stronger than the reality but demography may just provide the impetus which has been needed to make policy-makers and practitioners, including employers, take a strategic view of learning, and skills within it.

An ageing population means people working longer, through choice and for financial necessity. As working lives become longer we need to recognise that skill acquisition in later years will become increasingly important. Economic activity patterns will change, partly because of the changes in pension arrangements and partly for other reasons. Not only will working lives become longer, they will also be more variegated, with shorter working years, more career interruptions and an increasing variety of work patterns. Learning will find its place in these diverse working routines. It should be clear from this that gender issues are inherent in this assessment of the direction lifelong learning is likely to take. For these diverse temporal patterns are the ones women have characteristically exhibited, as they have combined different activities. Women have usually mixed paid and unpaid employment, caring, leisure, learning and recreation in much more flexible ways than men. If we can reasonably hypothesise that skills will in the future be more commonly learnt in new flexible modes then the system may turn out to be more in tune with these traditionally feminine patterns. But in any case, the tension we have pointed to, of rapid advances by women in acquiring qualifications and skills on the one hand, but rather less rapid progress in their access to occupations which match these, is a challenging one. A more flexible system of lifelong learning will not solve the problem, but it provides a better platform for tackling it.

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