

Jobs for the boys and the girls: promoting a smart, successful and equal Scotland

The final report of the Scottish component
of the EOC's general formal investigation
into occupational segregation

February 2005

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Women. Men. Different. Equal.
Equal Opportunities Commission Scotland



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The views expressed in this report are those of the authors and do not necessarily represent the views of the Commission or other participating organisations. The Commission is publishing the report as a contribution to the research required to conduct a full investigation into gender segregation within the Scottish Modern Apprenticeship scheme. This will contribute to the GB wide General Formal Investigation into occupational segregation.

This report can be obtained in electronic format from the EOC website or in paper format from the EOC's Helpline as follows:

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Abbreviations

CS	Careers Scotland
CEHR	Commission for Equality and Human Rights
DfES	Department for Education and Skills
DTI	Department of Trade and Industry
DWP	Department for Work and Pensions
EES	European Employment Strategy
EOC	Equal Opportunities Commission
ERI	Employment Research Institute
ESF	European Social Fund
FE	Further Education
GFI	General Formal Investigation
GIA	Gender Impact Assessment
HE	Higher Education
HIE	Highlands and Islands Enterprise
IT	Information Technology
ICT	Information and Communications Technology
LA	Local Authority
LEC	Local Enterprise Company
LLSC	Local Learning and Skills Council
MA	Modern Apprentice/ship
NEET	Not in Education, Employment or Training
NTO	National Training Organisation
OGSI	Occupational Gender Segregation Index
PSE	Personal Social Education
SBS	Small Business Service
SCQF	Scottish Credit and Qualifications Framework
SCRE	Scottish Centre for Research in Education
SEEDA	South East England Development Agency
SEnt	Scottish Enterprise
SEMTA	Science, Engineering and Manufacturing Technologies Alliance
SIP	Social Inclusion Partnership
SME	Small or Medium Enterprise
SSA	Sector Skills Agreement
SSAS	Sector Skills Alliance Scotland
SSC	Sector Skills Council
SSDA	Sector Skills Development Agency
SSLS	Scottish School Leavers Survey
STUC	Scottish Trades' Union Congress

1. Executive Summary

The Equal Opportunities Commission (EOC) has completed its general formal investigation (GFI) into the occupational segregation of women and men in Britain. Occupational segregation describes the concentration of men and women in different occupations. It is a characteristic of all modern labour markets and is a key issue for Governments, employers and individuals. However, despite being a common trend, the impact of occupational segregation on the economy, business and individuals is not yet widely recognised.

The segregation of women and men into different types of employment has a damaging effect on the economy by failing to make the most efficient use of the potential workforce and holding back increased productivity. Furthermore, it is contributing to the gender pay gap and restricting the career opportunities and choices of British people.

A central objective of the GFI was to explore issues of occupational segregation within the Modern Apprenticeship (MA) programme. The MA is the key Government programme for vocational education and training, therefore for a significant number of school leavers it is their entry point into the labour market. As the primary vocational training programme the MA is an alternative education and training choice as opposed to further academic education. In addition, the MA is being used as a tool to achieve a higher level of skill throughout the workforce and increase economic performance and productivity levels. Therefore, the MA itself could be used as a vehicle to challenge occupational segregation as part of its contribution to improving productivity. However, the MA programme currently mirrors existing occupational segregation in the labour market with female participation in Scotland, although increasing since its introduction in 1994, concentrated in traditionally 'female' frameworks such as childcare, hairdressing and customer services.

Gender stereotypical assumptions about 'appropriate' jobs for women and men begin in children at an early age. Careers advice and parental guidance are the prime influencing factors determining career choice after compulsory education. School leaver destination statistics for Scotland show the different choices made by boys and girls and highlight how the choices made at school leaving age impact upon participation rates within the MA programme. More female than male school leavers go onto further education and a larger proportion of male school leavers choose the MA as the route into their chosen career. Male MAs are also heavily concentrated within the frameworks in the male dominated sectors such as construction, motor vehicle, engineering, electro-technical and plumbing. This is important because while gender stereotyping persists, males with low levels of academic achievement have the option to train in industrial sectors with relatively high wages. In contrast, the most popular MA frameworks for females with low levels of academic achievement are business administration, hairdressing and childcare. This has a significant impact on the future earnings of young women with low levels of educational attainment, as they continue their careers in low paid, female dominated sectors of the labour market.

The segregation of men and women into specific occupations and the concentration of women in low paid and low status occupations is a major contributor to the gender pay gap, currently standing at 15% for full time employees in Scotland. This pay gap is not only unfair but is also economically inefficient because it impacts negatively on

productivity growth. Increasing the supply of suitably qualified candidates for work across all sectors and introducing measures to facilitate the recruitment and retention of employees of both sexes will contribute significantly to tackling the problem of gender based occupational segregation. Furthermore, an improved gender balance in the workplace will effectively serve to challenge traditional practices and cultures, therefore providing a positive working environment for both women and men.

The investigation focused on five sectors, four severely segregated by gender. Construction, engineering and plumbing are all traditionally male dominated sectors and almost all childcare workers are female. The participation of men and women in the MA frameworks within these four sectors displays the same high levels of gender segregation.

In Scotland the sectors with the highest numbers of hard-to-fill and skill shortage vacancies¹ are those within the skilled trades occupations, including construction, engineering and plumbing (Futureskills Scotland, 2005).

There has been a growth in the demand for childcare workers in recent years with the increase in the proportion of families with both parents in full-time employment. However, in Scotland one in five childcare workers do not have any formal qualifications, and the main reason given for hard-to-fill vacancies was a lack of candidates with the required qualifications and experience (Scottish Executive, 2004).

The fifth sector examined within the GFI was information and communication technology (ICT). More than half of Scottish employers (61%) believe their IT staff require additional skills and there has been a marked increase in the number of hard-to-fill executive level IT posts (E-Skills 2003).

The investigation has made the important link between sector specific skill deficiencies and the under-representation of women or men in these sectors. Promoting these occupations as viable career options for women and men is one way of addressing hard-to-fill vacancies while encouraging gender equality in a wider sense.

The GFI covers England, Wales and Scotland, reflecting the different institutional structures and modes of delivery for education and learning across the three countries. In Scotland, responsibility for education and training is devolved to the Scottish Parliament and Executive. The implementation of the MA programme at the local level is part of the economic development and regeneration remit of the Local Enterprise Companies (LECs) via funding from the national statutory agencies, Scottish Enterprise and Highlands and Islands Enterprise. The different policy and delivery agents in Scotland, as well as differences in the labour market and economy, led to the development of a separate study with specific focus on the delivery of the MA programme in Scotland.

¹ Hard-to-fill vacancies are vacancies which an employer judges to be hard to fill for any reason. A skill shortage vacancy is a specific type of hard-to-fill vacancy that occurs when applicants lack the required skills, qualifications or experience for the job. Skill shortages do not occur where the employer judges the vacancy is hard-to-fill because there are not enough applicants for the post or where candidates are perceived to lack the right motivation or attitude. Futureskills Scotland (2005)

A team from the Division of Business Economics and Enterprise at Glasgow Caledonian University undertook the research for the Scottish component of the GFI. From the outset an external advisory group was established, made up of representatives from key stakeholders involved in the delivery of the MA programme in Scotland. The knowledge and experience of those participating on the advisory group provided invaluable guidance and support throughout the investigation.

As with the English and Welsh research, in Scotland the research was conducted in three phases. The launch of this document represents the start of the final phase of the GFI. Findings and recommendations from the research in phases one and two of the GFI have been published by the EOC Scotland as separate documents and have been summarised for inclusion in this report. In addition, four pieces of research have been conducted to supplement the key findings and explore related issues as they emerged. The results of these have not previously been published and are contained in this report with detailed consideration in appendices 2, 3 and 4.

The first phase of research in the investigation focused on clarifying the distinct nature of the delivery mechanisms in Scotland and identifying the extent of gender segregation in the MA programme. Drawing on evidence from document analysis, elite interviews and a detailed survey of Local Enterprise Companies (LECs), the key findings were:

- The evidence indicates marked and systematic segregation by gender in all selected occupational sectors, with the exception of ICT
- Men overwhelmingly dominate the 'traditional' apprenticeship frameworks
- Both the Scottish Executive and Scottish Enterprise consider the programme to be a successful brand, in terms of both delivering skills to the existing workforce and as a recruitment tool. However, it could be argued that its 'success' is linked to the existing entrenchment of the apprenticeship concept. This indicates that 'traditional' frameworks, at least from a historical perspective, are pre-disposed to deliver successful apprenticeships
- The LECs consider the success of the MA programme primarily in terms of developing and increasing the level of intermediate skills in the existing workforce
- The most common method of incorporating equality considerations within the MA programme was via the Scottish Quality Management System (SQMS) and standard network policy.

Building on the evidence gathered in phase one, research under phase two sought to identify both the actual and perceived barriers to tackling occupational segregation in the MA programme. The evidence base consisted of the results from a survey of over 200 Glasgow based employers, with 63 responses (representing a 27% response rate), and the transcripts from four focus groups involving individual MAs, employers and employers' representatives. Evidence collected at the focus group discussions gave a qualitative indication of the existence of barriers that atypical apprentices had encountered both in making their career choices and in employment. Similarly, from their extensive knowledge of the industry, employers' representatives and employers themselves provided an explanation of the barriers they believed to exist preventing them from recruiting non-traditional candidates. These included:

- The current funding mechanism, which prioritises the 'Government guarantee group' of 16-18 year olds, makes it more difficult for employers to recruit older MAs

- A lack of 'parity of esteem' between vocational training and further and higher education
- The negative attitudes of friends, family and employers, particularly towards women were identified as barriers to overcome before entering atypical work
- In the childcare sector the negative attitudes and assumptions of childcare purchasers acted as a barrier to the recruitment of men into the occupation, as well as the low pay in the sector.
- Barriers to change encountered while in work such as masculine culture and the negative attitudes of spouses acted against women working in male dominated environments.
- All participants agreed that tackling occupational segregation was an important issue particularly in terms of the contribution it would make to Scottish economic performance and the improvement of the working lives of those making non-traditional career choices.

Developing a greater understanding of the links between career choices, occupational segregation and the skills and pay gaps necessitates engagement with a wide range of partners. Evidence gathered from the investigation and the assistance of the external advisory group has provided essential information about issues relating to the gender stereotyping of career choices and how this impacts on the delivery and operation of the MA programme. It is hoped the engagement and support of relevant strategic partners in the investigation will ensure the findings and recommendations from the GFI will feed directly into government strategies, such as 'Smart, Successful Scotland', 'Learning Through Life', 'Determined to Succeed' and 'Early Years' strategies. If adopted this would ensure that the promotion of gender equality features as a key measure of success in implementing such strategies.

The evidence from this eighteen-month investigation highlights the negative effects of occupational segregation on the Scottish economy and offers recommendations outlining what needs to change.

The key recommendations of the EOC Scotland are:

1. A national strategy should be developed for Scotland, driven by a high-level alliance across Government and linked to key economic and skills strategies, to ensure a consistent approach from all relevant parties to tackling gender segregation in training and work. The Scottish Executive should lead this work. The strategies should incorporate effective incentives for leveraging real change and provide the framework for acting on the recommendations of both phases of this investigation.
2. As part of the Scottish Executive's ongoing review and evaluation of the MA programme action should be taken to address the systemic barriers to taking on atypical recruits.
3. All relevant data, including information on pay rates for MAs should be available in the public domain in a readily accessible format.
4. Future directions in promoting industries to atypical candidates should capitalise on the existing expertise and experience of the Sector Skills Councils (and Careers Scotland) that are active in this area. Promoting positive action through the Sector Skills Agreements could be one way to achieve this aim.
5. The development of Sector Skills Agreements offers an opportunity for individual sectors to identify whether gender based occupational segregation is a problem

and to take remedial action to tackle it. Therefore, in order to inform any action being considered to fill skills gaps and/or attract atypical recruits, the relevant stakeholders should consider including within the Sector Skills Agreements a gender breakdown of labour market data including those participating in learning and training programmes

6. Actions to promote desegregation by gender should be seen as the collective responsibility of all key policy makers, not just SSCs or other agencies with a marketing remit.
7. LECs, in partnership with the relevant SSCs, should become more pro-active in ensuring employers are aware of the efficiency losses of occupational segregation
8. In conjunction with the relevant SSCs, LECs should become more involved in circulating best practice in an attempt to encourage initiatives designed to promote non-stereotypical career choice through the MA programme
9. Through consultation with Scottish Enterprise, it is suggested that training providers be required to provide qualitative feedback about the actions they have taken in the area of gender equality in the previous reporting period, thus making more use of the 'contractual management process'

The diverse nature of the barriers to addressing occupational segregation by gender are such that any actions to promote the recruitment of atypical candidates require a strategic approach involving all relevant stakeholder agencies. The findings and recommendations from the GFI can support the development of both new and creative solutions to encourage greater participation in the MA programme by under-represented groups and an improved gender balance across the MA frameworks. However, the adoption of a strategic, co-ordinated and structured approach to tackling occupational segregation in Scotland is required. The development and implementation of a national strategy is a key strategic measure towards supporting jobs for the boys and the girls and creating a truly smart, successful and equal Scotland.

2. About this study

2.1 Background to the GFI

As part of the Equal Opportunities Commission's (EOC) statutory duty to promote equality of opportunity between men and women it is empowered to conduct formal investigations under Section 57 (1) of the Sex Discrimination Act 1975. In September 2003, in accordance with this remit, the EOC began its general formal investigation (GFI) into the segregation of women and men in training at work, with a specific focus on the Modern Apprenticeship (MA) programme. The terms of reference of the GFI are contained in Appendix 1.

The main reason for the investigation was to explore issues of gender segregation within the MA programme, focusing on five sectors identified as experiencing shortages of trained staff: construction, engineering, plumbing, information and communications technology (ICT) and childcare. The investigation focussed on the MA programme because it is viewed as the key government funded vocational training programme and for many young people it is their first point of entry into the labour market.

The investigation covers England, Wales and Scotland, reflecting the different institutional structures and modes of delivery for education and learning across the three countries. Responsibility for education and training are devolved to the Scottish Parliament and as a result, evidence gathered in England and Wales may not be directly applicable to Scotland. In light of this it was considered essential that a separate study be undertaken with a specific focus on the MA programme in Scotland. In partnership with EOC Scotland, a team from the Division of Business Economics and Enterprise at Glasgow Caledonian University secured additional funding from the European Social Fund (ESF) to support the EOC's GFI in Scotland. In addition, an external advisory group was established involving relevant stakeholders, including employers and industry organisations, government bodies responsible for the delivery of the MA programme and key agencies involved in education and training for young people, to advise on all aspects of the investigation and to support the delivery and terms of reference of the GFI.

2.2 The Scottish Study

In developing the Scottish study, preliminary research into the operational nature of the MA programme in Scotland was undertaken to identify any evidence of occupational segregation (see Thomson et al, 2004a). The research found that while women's participation in MAs in Scotland has been steadily increasing since the programme was introduced in 1994, participation rates remain significantly short of women's overall economic activity rates in the labour market. Furthermore, patterns of participation indicated the existence of gender based occupational segregation similar to that found in the wider labour market. Evidence was found of a gender split between the 'traditional' (male dominated) and 'non-traditional' (female dominated) frameworks. The 'traditional' frameworks, such as engineering and plumbing, cover occupations where the apprenticeship mode of vocational training has an established tradition. The 'non-traditional' frameworks are largely based in service sector occupations where the notion of training through an apprenticeship is relatively new. In addition to the gender

differences the age profile in the 'non-traditional' sectors was found to be higher, with significantly more participants starting when they are over the age of 18.

In Scotland the 'traditional' MA sectors are generally accessed by male school leavers and so reflect the established male dominated participation rates in these sectors. Female MAs remain concentrated in the service sector, specifically administrative and 'caring' occupations. This profile is similar to that found in England and Wales. However, evidence emerged of an interesting divergence between England and Scotland in the ranking of the most popular frameworks. The data indicated that the 'traditional' frameworks proved to be a more popular option for Scottish recruits than for their English counterparts.

In terms of the delivery mechanisms in Scotland, the research found the 'traditional' frameworks benefited from guaranteed funding due to the fact that the programme prioritises funding towards those within the 'Government guarantee' group. Therefore, funding is secure for those in the 16-18 age group and the research found that this age group are most likely to access the traditional frameworks are most likely to be accessed by this age group. In addition, the enterprise agencies prioritise funding towards occupational areas that meet economic development priorities and contribute to specific Government industrial strategies. The different participation rates between the traditional and non-traditional areas may reduce over time if MAs continue to expand in non-traditional areas. However, the current situation indicates that the delivery of the MA programme in Scotland may be resulting in an unintended gender biased allocation of resources within the MA programme and this is contributing to the persisting segregation of men and women in specific occupations.

The information obtained from the preliminary research allowed for a strategic and structured approach to the GFI. The investigation was divided into three phases to examine fully the current delivery and implementation of the MA programme in Scotland and reports from phases one and two have been published.² Phase one looked at the delivery and implementation of the MA programme from the perspective of the key policy makers and delivery agents. This involved detailed interviews with senior officials from the Scottish Executive, Scottish Enterprise and Careers Scotland. In addition, a detailed survey was sent to all Local Enterprise Companies (LECs) to obtain both quantitative and qualitative information about the delivery of the MA in practice. Phase two focused on the experiences of the stakeholders directly involved in the operation of the MA programme. This included interviews and focus groups with atypical³ MAs and representatives from employers' organisations, Sector Skills Councils (SSC) and employers themselves. A central theme throughout the research in phase two was to identify any barriers to non-stereotyped participation in the MA programme.

The final phase of the GFI brought together existing research and projects in Scotland aimed at exploring the issue of gender segregation in education, training and work.

² Phase One findings are detailed in two separate documents. *Occupational segregation, gender equality and the Modern Apprenticeships scheme in Scotland*, published August 2004, reports on interviews with key policy makers, relevant stakeholders and providers. *Modern apprenticeships and gender equality: a local perspective*, published November 2004 represents part two of Phase One and details the findings from a survey of all 22 Local Enterprise Companies in Scotland. *Identifying Barriers to Change*, (2005 forthcoming) presents the findings from Phase Two of the study. This report details the findings from qualitative research involving a series of focus group discussions with MAs, employers and organisations representing employers in the relevant sectors.

³ The term 'atypical' refers to a candidate in the minority gender.

This allowed for an analysis of what is currently being done in Scotland to tackle occupational segregation ensuring the final report of the investigation was up-to-date with current initiatives in Scotland thereby avoiding potential repetition. To support the production of the final report a launch seminar, directed at policy makers in the areas of education and vocational training, will be held to promote the findings and recommendations. Following the seminar, work will be undertaken by the EOC to take forward the recommendations in partnership with the Scottish Executive and other related organisations. In addition, an interactive website with a target audience of 11-15 year olds will be launched, offering advice and information aimed at challenging gender based assumptions of career choice. In Scotland, it is hoped this resource will be of use to career advice organisations and work will be undertaken to promote its use and further development.

3. Identifying the reasons for gender stereotypical career choices in Scotland

Gender based occupational segregation is an enduring feature of all modern labour markets. The term 'occupational segregation' broadly describes how certain occupations are viewed by society as being more appropriate for men or for women based on traditional ideas about the innate capabilities of either gender. For example, the notion that women are better suited to childcare than construction. This section will explore the main sources of and reasons for gender stereotyping in career choices in Scotland.

3.1 Sources of Gender Stereotyping

In Scotland school leaver destination statistics show that, even after 30 years of equal opportunities legislation, young people continue to make traditional career choices based on their gender (ERI 2004). The belief that some occupations are more appropriate for men or for women most often stem from stereotypical attitudes and assumptions that are formed in children from a young age. Children then grow up to make career choices based on these attitudes and assumptions. For a comprehensive review of research and theoretical literature examining the issue of choice in post-compulsory education see Payne (2003).

In January 2004 the Employment Research Institute (ERI) at Napier University published the results of a research project into gender stereotyping and careers choice. This study, funded by Careers Scotland, was conducted in partnership with the City of Edinburgh Council, Edinburgh Learning, West Lothian Council and Scottish Enterprise Edinburgh. The objective was to explore the factors influencing gender stereotyping of the careers preferences of school pupils aged 13 to 15 in years S2 and S3. The findings from the study suggest that:

- Although over 80% of pupils identified many occupations that were suitable for both men and women (including Teacher, Manager and Doctor), other jobs remained persistently gender stereotyped (including Engineer, Plumber and Nurse).
- Girls are significantly less stereotyping of occupations than boys.
- Those pupils who are less academically able in Maths and English are more likely to gender stereotype occupations.
- Gender stereotyping did not appear to be correlated to ethnic background or proxy measures of socio-economic class.
- Stereotypical assumptions about the 'appropriateness' of jobs for men and women were based on beliefs about the 'natural' characteristics and abilities of both genders. However, some stereotyped jobs were based on existing patterns of segregation i.e. more men or women already doing those jobs.

In terms of careers advice and external influences on careers choices, parental guidance was seen as being instrumental to future career choices where mothers were important for girls and fathers had more influence over their sons. Crucially, informal networks were found to be more important than formal mechanisms of advice. Generally pupils were found to be positive about the advice they had received from

whichever relevant source. Many pupils had used the Internet in supplementing existing advice and one to one or group guidance.

Recommendations arising from this research indicated that initiatives aimed at preventing the gender stereotyping of career choice need to address the reasons why girls and boys continue to stereotype women and men in general and into particular occupations. The main reason given for stereotyping relates to the attribution of particular characteristics and aptitudes to either gender and the subsequent 'assignment' of jobs to one sex or the other. The ERI study also highlighted the importance of role models when making initial careers choices. Other key recommendations included capitalising on existing use of the Internet and parental influence as potential sources of non-stereotypical advice and guidance.

Concentrating on slightly older pupils in S4 (aged 15-16) research undertaken by the Scottish Centre for Research in Education (SCRE) in 2003 examined gender equality in work experience placements. The project aimed to explore the extent to which work experience placements for pupils in Scotland reflected traditional notions of gender. Key findings from this project suggested schools faced significant barriers to arranging work placements that in turn impacted upon the choices made by girls and boys. The most significant of which was local labour market conditions serving to restrict the range of placements available. This was particularly the case in rural areas, the manufacturing sector, the professional sector and trades in traditional male areas such as garages and engineering. Other employment areas experiencing difficulties in recruitment included graphic design, medical placements, journalism, music and architecture. Health and safety regulations, the rising cost of insurance and the 'duty of care' requirement further curtailed schools' ability to cater to individual pupils' choices of placement.

Other relevant findings from this research are:

- Schools actively encourage non-traditional options, however, one third of work placement organisers stated employers reinforce gender stereotypes.
- Most staff believed that pupils themselves reinforce the gender bias in the choices they make.
- Parents reinforce traditional choices.

However, early signs of change were also identified in that it was becoming easier for girls to go into non-traditional areas and there was an increase in the number of boys doing primary school, classroom assistant and nursery placements.

The SCRE research concluded that work experience is only one aspect of the way young people learn about the world of work. However, it is a highly valued aspect that remains gender differentiated. As such, actions to promote desegregation at school level could present as key drivers of change in post-compulsory training routes such as the MA.

3.2 Gender equality and destinations post compulsory education

When examining gender segregation, it is important to consider the MA programme in the context of other options available to young people on leaving school. Careers Scotland produces comprehensive destination statistics outlining the destinations of all school leavers from Scottish Local Authority Secondary Schools. The most recent

available data is 'Scottish School Leavers Destination Report 2002-2003'. Relevant data, disaggregated by gender, is outlined in Table 1.

TABLE 1: Scottish Destination Statistics

Destination	Scotland	Male	Female
Higher Education	31%	45%	55%
Further Education	21%	45%	55%
Training	5%	60%	40%
Employment	23%	60%	40%
Unemployed - seeking employment or training	12%	60%	40%
Unemployed - not seeking employment or training	4%	47%	53%
Unknown Destinations	4%	51%	49%

Source: <http://www.careers-scotland.org.uk/careersscotland/web/site/News/ArchiveNewsgroups/ArchiveGeneral/0706sld.asp>

The report indicates that in Scotland in 2002-2003:

- 31% of school leavers go on to HE
- 21% of school leavers go on to FE
- 23% of school leavers go on to employment, including MAs
- 5% of school leavers go on to training without employment.

The relevant gender dimensions are as follows:

- 35% of females enter HE compared with 27% of males
- 19% of females enter employment compared with 27% of male leavers.

From initial consideration of this data it would appear that the higher proportion of females entering HE and the proportion of male leavers entering employment (including MAs) being higher than women, restricts the pool of women available to enter the MA programme. This may explain, to a limited extent, the low participation rates for females in the MA programme.

Other relevant research includes a series of studies based on the Scottish School Leavers Surveys (SSLS) carried out by the Centre for Educational Sociology based at the University of Edinburgh, commissioned by the Scottish Executive and published between 1998 and 2003. This body of research reported on issues including Gender and Low Achievement (Biggart 2000), Young People Not in Education, Employment or Training (NEET) (Raffe 2003) and Participation in Science, Engineering and Technology (Croxford 2003).

The main points from Biggart (2000) relevant to this investigation are:

- The proportion of low-attainers at Ordinary or Standard Grade has more than halved since the 1970s. It has declined more amongst women than amongst men.

- Only a minority of low-attaining S4 leavers are female, but when trying to find employment the consequences of low attainment for young women are more severe than for young men
- Training reduces the risk of unemployment for young men; for young women personal characteristics appear to be more important

Raffe (2003) found that despite better average qualifications and higher participation in education, young women remained NEET for longer and indeed the gender gap opened up as the cohort grew older. This is explained partly by gender imbalance in those who engage in unpaid full time domestic work or a combination of domestic and part time employment.

Croxford (2003) found that:

- Gender and attainment were the main factors that influenced difference in choice of science and technology subjects
- After taking account of attainment and science qualifications, females were less likely than males to study mathematics, informatics or engineering

Recent statistical evidence pertaining to school attainment in Scotland also shows:

- In 2001/02 a higher proportion of females than males leaving publicly funded schools achieved passes at all Scottish Credit and Qualifications Framework (SCQF) Levels.
- Cumulative attainment is greater for females than males in all stages and in all categories. However, their achievement in Technological Studies, Information Systems and Woodworking Skills is much less than that of boys (Scottish Executive 2003b).

The evidence provided by these studies, school leavers' destination figures and the statistical picture of female attainment suggest that girls are doing somewhat better than boys at school. This may explain why they are opting to go on to HE/FE after school, rather than accessing vocational training, perhaps through the MA programme. According to the SSLS, in 2003 boys were also more likely to be leaving because they had been offered a MA or Skillseekers placement (29% compared with 11% of girls).

This could explain disproportionately lower female participation rates in the MA programme. However, it does not explain why female MAs are concentrated in relatively few occupational sectors. The lack of 'parity of esteem' between academic education and the MA training route can be seen in the widespread perception that vocational training is for those 'not clever enough' to go on to HE or FE. This perception, in conjunction with schools' performance indicators, has led to an apparent 'push' of individuals into academic modes of learning at the expense of the MA. If pupils with low academic achievement are being channelled into MAs as an alternative to further academic education, then it could be deduced that low achieving girls are becoming concentrated in traditionally female occupations such as childcare. These jobs are low status and require low levels of formal skills when compared with traditionally male sectors such as construction. Female concentration in low skilled employment is a major factor contributing to the current gender pay and skills gap in Scotland in that low skilled or unskilled occupations command lower wages. Under conditions of gender stereotyping, low achieving males have the option to train in industrial sectors with

relatively high wages; the options to low achieving girls are limited and, for them, choices based on gender stereotypes will result in low paid and low status jobs. Furthermore, Biggart (2000) concluded that Scottish low-attaining young women face a much higher risk of unemployment than similarly qualified young men and that “the longer term consequences of low attainment for young women seemed particularly severe” (Biggart, 2000 p5). The same author later concluded that

“Low attaining males have benefited from sheltered entry points within particular segments [of the youth labour market], whereas low attaining females, although fewer in number, appear to be sidelined by employers in favour of adult women and better-qualified school leavers” (Biggart 2002, p145).

Statistical evidence from the SSLS relating to pay rates reinforces the inferior position of female school leavers not going on to FE or HE. It was found:

- Women in jobs, including training programmes, had an average weekly income that is £35 less than their male counterparts (females - £80, males - £115).
- Women in non-training jobs had an average weekly income that is £19 less than their male counterparts (females - £131, males - £150).
- Female MAs are paid £1 less per hour than male MAs (females - £2.55 per hour, males £3.55) (Scottish Executive 2004b).

While it is clear that more women than men chose to continue academic education, the consequences for those who do not in terms of earnings and future prospects is highly differentiated by gender. The large pay differential between men and women in the MA programme is largely attributable to occupational segregation. Encouraging women to choose occupations not traditionally associated with their gender, in industries that are experiencing skills shortages, appears to be one way to address the consequences of low achievement for women as they do not benefit from the ‘sheltered entry point’ of MA employment as much as men. The MA programme could serve as an effective vehicle to challenge and address the problems associated with occupational segregation through its marketing to schools, individual candidates and potential employers.

4. The economic impact of occupational segregation in Scotland

Occupational segregation based on gender stereotyping can negatively affect how men and women view themselves and each other. More importantly, it has a negative effect on women's income, status and access to economic resources. In the wider economy, gender segregation in employment and training is cause for concern for a number of reasons; segregation into different areas of work remains a key factor contributing to the gender gap in earnings; it constricts labour market participation and productivity and contributes to continuing skills deficits in the UK. Hence, occupational segregation must be addressed not just in terms of social justice but also in terms of its negative consequences for economic efficiency.

“Occupational segregation is a major market distortion that impacts on both women's earning potential and economic efficiency. It is one of the key causes of the pay gap” (DWP 2003, p29)

Based on hourly earnings (which excludes overtime), the current gender pay gap for full time workers is 16%; that is, women's earnings are 84% of men's. For part-time workers this figure rises to 37% (EOC 2004, p11). Recent research suggests that occupational segregation accounts for 18% of the gender pay gap as a direct result of the lower wages that 'women's work' commands (Olsen and Walby 2004).

In productivity terms, occupational segregation represents significant labour market rigidity in the UK economy. British productivity lags behind the US and other countries such as Germany and France (Walby and Olsen 2002, p9). Productivity is one of the key indicators of competitiveness, which in turn is the main driver of economic growth. Hence if economic growth is to be achieved, Britain's productive capacity must be enhanced. Economic growth is currently a key feature of the Executive's priorities for the Scottish economy (see Scottish Executive 2001). The main causes of low productivity have been identified as skills deficits and rigidities in the labour market (Walby and Olsen 2002, p9). There is a significant skills gap between men and women – women have fewer educational qualifications than men on average (*Ibid*) although younger women are now beginning to 'catch up'. The concentration of women and men in certain occupations is an example of market failure in that the market does not necessarily allocate the most appropriate worker to any given job vacancy under conditions of gender stereotyping.

This problem is apparent in specific occupational areas that are currently experiencing skills shortages. In Scotland, some of the most gender segregated occupations considered in this investigation are also those most in need of qualified workers. For example, in construction, around 60% of hard-to-fill vacancies were due to skill-shortage vacancies in 2003 (CITB-ConstructionSkills Scotland 2004).

Actions to increase the number of women entering traditionally male dominated careers would appear to be one way to enlarge the pool of qualified candidates for Scottish businesses facing skills shortages, as well as having a positive impact on the current gender pay gap. Similarly, as men enter the traditionally female dominated sectors such as childcare it is anticipated that the gap between women and men's earnings will decrease over time. Overall, the benefits of addressing occupational segregation at the training level include increased productivity and enhanced economic efficiency as well

as widening the career choices available for young people and promoting gender equality in Scotland.

5.The policy context

The economic benefits of tackling occupational segregation have been recognised at all levels of government by the Scottish Executive, the UK government and the European Union (EU). This section discusses how measures to tackle gender-based occupational segregation fit into the political commitments and policy priorities of the Scottish Executive and the EU.

5.1 The Scottish context: A Smart Successful Scotland?

The Scottish Executive has two key strategies outlining its vision for a competitive economy and highly skilled workforce. 'A Smart Successful Scotland' (Scottish Executive 2001) lays out the policy direction and remit of the enterprise agencies, an important part being to help people gain the knowledge and skills they will need for tomorrow's jobs. The lifelong learning strategy, 'Learning through Life' (Scottish Executive 2003a) is about ensuring that everybody can access the best possible learning opportunities to bridge the opportunity gap, the skills gap and the productivity gap. These strategies set out the direction of work to be undertaken by the related Scottish institutions and therefore are crucial policy documents through which to promote initiatives that will tackle gender segregation in training and work in Scotland. The enterprise networks are responsible for delivering the objectives laid out by the Scottish Executive in 'A Smart Successful Scotland'. There are three key priorities:

- Growing Business
- Global Connections
- Learning and Skills

Learning and skills is the area of highest importance in relation to the occupational segregation investigation. As a key vocational labour market programme, the MA represents a significant first point of entry into the formal labour market for many individuals. While it is successful in providing vocation training, unless the issue of segregation is tackled, the programme will not realise its full potential in terms of both its participants and the Scottish economy.

The lifelong learning strategy sets out the Scottish Executive's five year strategy for lifelong learning and the link between learning and a successful Scottish economy and society. The strategy is based around the achievement of five 'people-centred' objectives aimed at bridging the opportunity gap between those in work and those who are not and the productivity gap between Scotland and the successful economies of the world.

In November 2004, as part of the ongoing evaluation of the Smart Successful Scotland strategy, the Scottish Executive published a revised version of their enterprise strategy (Scottish Executive 2004c). This updated strategy acknowledges the importance of education, skills and learning opportunities for all and the need for a real partnership approach in providing the framework required to achieve higher and sustained levels of productivity. However, there is no specific reference to the importance of taking action to break the barriers to achieving gender equality in access to education, learning and work. In particular, there is no acknowledgement that this is an important contributory

step towards creating the Scottish Executive's vision of sustained economic growth. This is a crucial point given that the Scottish Executive published the Equality Strategy in November 2000 outlining its strategy for mainstreaming equality:

“...the Executive must make sure that equality issues are considered in the formulation, design and delivery of policy/legislation/services. This approach will make sure that equality is considered in the development of policy from the start and is not a ‘bolt-on’ at the end of the process”. (Scottish Executive 2000, p17)

Other government strategies that could be supported by an integral consideration of gender equality include Determined to Succeed (Scottish Executive 2002) and the Early Years Strategy (Scottish Executive 2003c). ‘Determined to Succeed’ is about fostering an enterprise culture in the new Scotland through encouraging enterprise and entrepreneurial activity in education. The Early Years Strategy is a multi-dimensional strategy aiming to enhance the services provided to young children (from pre-birth to 5). Two of its key objectives are to reduce the barriers to employment, especially to lone parents and, building on the Childcare Strategy, to increase to the numbers of places for pre-school care. In order to achieve this goal, the childcare sector would benefit from the increased pool of qualified labour that could be created by encouraging men into this traditionally female dominated occupation.

The importance given by the Scottish Executive to the MA programme in promoting vocational training and skills as a means to achieving economic growth and increased productivity can be seen in the recently published Building a Better Scotland (Scottish Executive 2004a). The spending proposals for 2005-2008 show the MA programme and Get Ready for Work to have £175.9 million funding support for 2005-2006 (Scottish Executive 2004a, p11). In addition, within this document under the heading of ‘How portfolios contribute to promoting equality’ there is a stated commitment to increasing the number of women doing MAs. While this objective may improve the overall gender balance within the MA participation rates, it fails to adequately recognise the extent of gender segregation within the MA programme and wider labour market. Furthermore, the lack of strategic action aimed at tackling occupational segregation will restrict the ability of the Communities Minister to achieve the objective of “taking action to reduce the gender pay gap and promote gender equality” (Scottish Executive 2004a).

5.2 The European Context

In recent years, the promotion of gender equality particularly as it relates to employment has become an increasing concern in the EU. A specific focus had been on the encouragement of greater investment by the member states and business in vocational education and training. Gender equality and vocational education and training featured strongly in the European Employment Strategy (EES), which emerged towards the end of 1997. The EES consisted of four pillars:

- Improving employability in which vocational education and training would play a central role.
- Encouraging entrepreneurship.
- Improving adaptability of workers and businesses to changing technology and markets partly through the provision of better training and the promotion of lifelong learning.

- Equal opportunities in particular tackling gender gaps in employment and pay and reconciling work and family life.

Although the EES was aspirational and did not actually commit the member states to carry out any specific policies or action it did result in the establishment of a number of targets and goals including a target of achieving a female employment rate of 60% by 2010. This target was set in 2001 when the female employment rate in the EU stood at 54.3%. By 2003 it had increased marginally to 55%.

In 2003 the EES (see EC 2004) was updated and again prominence was given to gender equality and the promotion of vocational education and training. Indeed, in terms of gender equality the 2003 EES argued that in order to tackle the problems of gender gaps in pay, employment and unemployment a gender mainstreaming approach was necessary where the differential impact of policies on men and women is systematically and adequately accounted for.

“Member states will through an integrated approach combining gender mainstreaming and specific policy actions, encourage female labour market participation and achieve a substantial reduction in gender gaps in employment rates, unemployment rates and pay by 2010... In particular, with a view to its elimination, policies will aim to achieve by 2010 a substantial reduction in the gender pay gap in each member state, through a multi-faceted approach addressing the underlying factors of the gender pay gap, including sectoral and occupational segregation, education and training, job classifications and pay systems, awareness raising and transparency.” (Council of the European Union; Council decision of the 22 July 2003, p25, 2003/578/EC)

The desire to increase female participation in the labour market is not seen as just an issue of gender equality but rather as a means of improving economic efficiency and the overall performance of the EU economy.

“Wage formation structures often have an in-built bias against women that can act as a disincentive. The considerable gender pay gap, which persists in most member states (around 16 percentage points in the EU on average) can also act as a disincentive for many women to enter the labour market or to move from part-time to full-time work. In this respect, stricter enforcement of non-discrimination legislation is needed, but also a wider range of measures involving the social partners to address the roots of the problem, looking at wage classification systems, seniority-based wage structures and sectoral and occupational segregation, as well as the availability of different working arrangements and of childcare and eldercare. These measures, in addition to reducing inequality in pay between women and men, would also contribute to raising female labour market participation.” (Kok 2004, p40)

In term of vocational education and training the 2003 EES reiterated the crucial role of training and skills development as drivers of employment and economic growth. A number of targets to be achieved by 2010 were also set out including

- At least 85% of 22 year olds in the EU should have completed upper secondary education.

- Participation in lifelong learning should have reached 12.5% of the 25-64 age group.
- The number of graduates in mathematics, science and technology should increase by 15% whilst there should be a decrease in the gender imbalance in these areas.

It is clear then that in order to achieve the goals set out by the EES, to transform the EU into the most competitive and dynamic economy in the world with high rates of economic growth and social cohesion, considerable emphasis has been placed on promoting both an increase in vocational education and training and achieving greater levels of gender equality in the labour market. As the Kok report indicates, the EU is still a long way off achieving the ambitious targets it has set itself particularly in the area of gender equality in the labour market.

Scotland and the rest of the UK are not unique in terms of experiencing occupational segregation in its apprenticeship programme. Throughout the EU it appears that in those countries with work based apprenticeship programmes it is still a male dominated training route. Although there has been an increase in female participation in apprenticeship training this is due to the development of non-traditional apprenticeship programmes particularly in the service sector. Even Germany, which is often regarded as the gold standard of apprenticeship training, has been afflicted by the problem of occupational gender segregation.

“Gender issues have been debated for 25 years in German vocational educational training and labour market policy. From the outset, one focus was the problem of female under representation in traditional male-dominated occupations and the negative effects of gender divisions in occupations, between occupations and the different fields of employment. There has been little obvious progress.” (Dietzen 2002 p54-55)

Even in the knowledge-based industries upon which the EU hopes to transform the economic and employment performance of the European economy gender segregation is apparent. Since 1997 only 14% of apprentices in the IT sector in Germany were female (*Ibid* p47).

If Scotland is to meet the strategic challenges presented by the Lisbon Strategy for Growth and Employment (Kok 2004), as well as fulfilling the Executive’s objectives for ‘A Smart, Successful Scotland’, it is considered essential that occupational segregation within the Scottish MA is understood and addressed in a pro-active manner.

5.3 A public sector duty on gender equality

The Bill to introduce the Commission for Equality and Human Rights (CEHR) outlines a duty on public bodies to promote gender equality. This duty will require service providers and public sector employers to design employment and services with the different needs of women and men in mind. This does not mean introducing quotas for women, however, it will require public bodies to set their own gender equality goals in the design and delivery of their services, and in the way they employ and develop their workforce.

Employers and organisations will already have Equal Opportunities or Equality and Diversity Policies and will be familiar with meeting requirements under the Race

Relations Amendment Act. The same methodology will apply - data collection and disaggregation, consultation with relevant stakeholders and monitoring systems that capture progress in implementation. One of the key tools will be Gender Impact Assessment (GIA). This involves an assessment of policies and practices to see whether they will affect women and men differently. Once a differential impact is identified, public bodies will have to adapt or change these policies/practices to make sure that any discriminatory effects are addressed and neutralised.

A distinctive feature of the new duty will be a focus on outcomes for women and men - recognising that equality strategies must also have an implementation or action plan to address objectives around gender equality. An example of these objectives might be closing the pay gap or tackling gender segregation in the labour market. Public bodies will have to demonstrate how their mainstream policies have integrated gender equality considerations. Enforcement of the duty will be the responsibility of the CEHR.

From the requirements of the public sector duty, coupled with the increasing emphasis placed upon the development of skills and economic growth, it is clear that something needs to be done to encourage the desegregation of men and women in the labour market. As the investigation has indicated the reasons for occupational segregation are many and varied. Therefore there is no straightforward solution to this problem.

6. Putting policy into practice

While the emphasis of labour market policies is around promoting skills and employability, there are a number of initiatives in Scotland around career choice that actively encourage young people to look at a variety of careers. Initial examination of the overall trend reveals that there is a lack of a strategic approach and a concentration of activity in some areas with little activity throughout the country. Crucially, many of these initiatives do not tackle gender based occupational segregation in an explicit and pro-active manner, examples of such initiatives are listed in Appendix 7. However, there are a number of projects currently operating to promote male and female participation in occupations not traditionally associated with their gender. From the point of view of the EOC, the concern is to ensure that gender is a core consideration and part of mainstream analysis, policy formulation and implementation. If this is not done, many training schemes and programmes will perpetuate gender based occupational segregation and will compound the gender pay gap, fail to address skill shortages and ultimately, reduce productivity.

6.1 Individual projects in ICT, construction, plumbing, engineering and childcare

In the IT sector, Reid Kerr College and Falkirk College all have projects designed to help women overcome the barriers to vocational training by providing them with opportunities in IT, Management, Business and Construction Craft and Management. Reid Kerr's 'Addressing the Gender Agenda' concentrates on supporting the inclusion of women in IT, Business and Management (and self-employment) through flexible access and online learning, underpinned by one to one support. The project 'Women into Advanced IT' offered by Falkirk College delivers flexible training to unemployed and economically inactive women including returners to the labour market. It offers support and skills development for those wishing to gain qualifications at technician level in IT and ICT applications in response to a growing need for these skills in the local economy. 'Routes to ICT for Women' at Falkirk Women's Technology Centre offers vocational and pre-vocational training for women to gain higher paid jobs through ICT skills development, recognising women's under-representation in the technology industry. Similarly, Fife Women's Technology Centre's 'Women into Technology' project has funding to provide training to women with no experience in technology at risk of exclusion.

In the HE Sector, the 'Women into IT Professions' at The Robert Gordon University provides women with the opportunity to gain higher level (level 5) awards in Professional IT skills, supporting their entry into an industry experiencing skills shortages. Again, significant aftercare support is offered within a flexible learning environment.

E-Skills is the SSC for the IT and telecommunications sector and has developed the Computer Clubs for Girls (CC4G) Initiative for schools in order to make girls more aware of the range of occupations available in the IT sector and increase the number of women entering IT careers. Beginning as a pilot project in England, in partnership with the South East England Development Agency (SEEDA), the project was implemented in Fife in 2004. Clubs are run voluntarily by schools and consist of activities designed to specifically stimulate the interest of girls aged between 10 and 14. In November 2004,

the CC4G project won 'Online Solution of the Year Award' at the 'World of Learning Awards' and national roll out is being considered by the DfES.

Glasgow City Council and Edinburgh City Council are active in the area of promoting occupational desegregation through work placements generally and, specifically, in childcare. Glasgow's two-tiered approach has been to develop a work experience program for school work experience co-ordinators, pupils, work experience administrators and health and safety officers underpinned by the desire to encourage individual school pupils to consider non-traditional careers.

In terms of encouraging men into the care sector and in response to skills shortages in childcare in the local labour market, City of Edinburgh Council's 'Men in Childcare' project aims to increase the numbers of men working in this sector by offering vocational training with significant peer group support. This is delivered in conjunction with a high visibility campaign designed to alter employer and purchaser attitudes to men becoming childcare workers. Kibble Education and Care Centre's 'Men Can Care' project had similar objectives in providing training, support and guidance to men wishing to enter the child and youth care sector. In the voluntary sector, One Plus's project 'Men in Childcare' also aims to promote more male participation in childcare employment by offering vocational training, support and confidence raising activity.

For the traditionally male dominated occupations, some SSCs have also been heavily involved in promoting occupational desegregation as part of their responsibility to industry. In the construction sector, CITB-ConstructionSkills 'Women in Construction' project has aimed to make large companies, SMEs and individuals aware of the benefits of removing gender based barriers to equality of access to employment and training. This has been pursued through improving access to information for women wishing to enter the industry including the online provision of advice on careers and training and equal opportunities guidance for employers. Training opportunities have also been expanded by CITB-ConstructionSkills 'taster courses' whereby female potential recruits are able to experience different occupations in the industry (in an all female environment). This course had been the starting point for at least 3 of the atypical MAs participating in Phase Two focus groups and had been instrumental in making their decision to enter the industry.

Glasgow College of Building and Printing provide training places in 'Construction Craft and Management Skills for Women' targeted at jobless women in Social Inclusion Partnership (SIP) areas in the North and East of Glasgow, aiming to reduce the level of female exclusion in this occupational sector. Beneficiaries of these projects are able to take advantage of childcare support and enhanced flexibility in training hours, allowing for appropriate work life balance and reduction in gender differentiated barriers to training and employment, as well as provision of significant aftercare support.

SummitSkills (the SSC covering plumbing as well as other occupations such as heating and refrigeration) has been active in supporting the Institute of Plumbing's 'Women in Plumbing' Group. The 'Women in Plumbing' Group, established in August 2003, aims to support women already in the industry and to make others aware of the career paths available to them in the industry. This has been implemented through one-day conferences and opportunities for women plumbers to network, a 'Women in Plumbing'

newsletter including information on events and case study profiles of women working in the sector.

Careers Scotland have undertaken academic research on the issue of subject choice and gender stereotyping and are currently working on a project to put into practice the research findings and recommendations. The research provided evidence highlighting that young people in Scotland still receive gender biased information on subject choice and career advice. The current Careers Scotland project, in partnership with West Lothian Council, Edinburgh's Lifelong Learning Partnership and Edinburgh City Council, **Promoting Positive Career Choice** is taking forward the results of their previous Gender Stereotyping in Career Choice research. A key part of the project is to review and revise the current careers advice material, ensuring it is free from gender bias. It is hoped the outcomes from this project will help teachers, parents and careers advisers to work more effectively with young people to allow them to make well-informed choices about their career options. This is a significant step for Careers Scotland and the potential impact it may have should not be underestimated. However, this project is confined to the career advice given to secondary school pupils.

6.2 Sector Skills Agreements

Demonstrating the crucial role of the external advisory group working in partnership with the EOC Scotland, this investigation has identified a key government initiative, which may offer a unique opportunity for individual sectors to take forward action to tackle occupational segregation. Sector Skills Agreements (SSAs) are being developed with the aim of becoming a key tool for SSCs to influence the supply of relevant training and skills and to raise employer commitment to skills. In particular, SSAs will contribute to achieving the four strategic objectives of the Skills for Business Network. These objectives are to deliver:

- A reduction of skills gaps and shortages and anticipation of future needs.
- An improvement in productivity, business and public services productivity.
- Increased opportunities to develop and improve the productivity of everyone in the sector's workforce, including action to address equality.
- An improvement in the quality and relevance of public learning supply.

The process for developing agreements translates into the following five-stage process.

- Stage 1: A sophisticated assessment of sectors' needs to cover the long-term, medium term and short-term, mapping the drivers of change in the sector 5-10 years down the track and determining skill needs.
- Stage 2: A review of the range, nature and employer relevance of current training provision across all the levels.
- Stage 3: An analysis of the main gaps and weaknesses in workforce development, leading to agreed priorities to be addressed.
- Stage 4: A review of the scope for collaborative action – engaging employers to invest in skills development to support improved business performance – and an assessment of what employers are likely to sign up to.
- Stage 5: A final agreement of how the SSC and employers will work with key funding partners and providers to achieve the volume and pattern of training

supply that meets strategic need and student demand within the available funding.

In Scotland the development of SSAs are at an early stage. There are currently four 'pathfinder' SSCs who are developing SSAs with a completion date of March 2005. In January 2005 another group will start the process in some form. Given the nature of the four strategic objectives it appears to be a natural conclusion to suggest the incorporation of some form of gender analysis within the 'agreement'. As part of the data gathering exercise (stage 1) the SSC could, with the assistance of FutureSkills Scotland, SEnt and HIE, include a gender breakdown of the labour market and participation in vocational training programmes in their sector disaggregated by LEC area.

The most important part of the 'agreement' is a commitment between the employers within a sector, brokered by and with their SSC, to undertake collective action to invest in skills, and improve the supply of skills. Within the sector the 'agreement' needs to be signed off at two points. The first point involves the sector identifying the priority issues it wishes to address (stage 3). The second point will require the sector to have identified its contribution to the package of measures finally agreed between all parties (stage 5). If the 'agreement' includes an analysis within stage one of the participation rates by gender and a link to skills shortages or gaps, this will allow the SSC to determine whether it is a priority issue to be addressed. This will enable the SSC, LEC and employers to consider specific initiatives and campaigns to encourage more non-traditional careers (stage 4 and 5). Examples of initiatives could be to encourage more employers to offer non-traditional work experience placements to school pupils or for more direct action providing non-gender specific information about career opportunities in schools, learning centres and job centres. The third point of the 'agreement' is between the sector and the Scottish stakeholders. The completed 'agreement' has to be 'signed up to' by the Scottish Project Board and will ensure that all partners recognise the significance of their commitment. Those involved in the 'signing' process could play a key role in considering the gender breakdown of the sector and encouraging collaborative action where necessary.

The SSAs appear to be a potential route through which co-ordinated action between SSC, LECs and employers, could be taken to both address the gender balance and reduce skills shortages within specific sectors. The SSAs are designed to determine the skills required by employers in individual sectors, however there is no reason why there should not be consideration of the information by gender. The importance of this step should not be underestimated. This information can allow the stakeholders to consider all the potential areas where action can be taken to close skills gaps and shortages and improve productivity. As the findings from the investigation have shown, there are at least four sectors in Scotland that are severely segregated by gender. For employers and industry organisations failing to take action means they are restricting the pool of skilled talent available to them, therefore limiting their potential productivity levels and they are also missing out on the business advantage of having a diverse workforce more representative of a broader customer base.

The evidence found of gender segregation in four of the five sectors examined in the GFI and the lack of co-ordinated strategic action to tackle gender segregation in education, training and work has led to the recommendation that Sector Skills

Agreements are used as a key tool for monitoring, evaluating and considering action required to address gender segregation. This should include a gender breakdown of labour market data and those participating in learning and training programmes. One method of benchmarking the extent of gender segregation within MA frameworks that had been explored as part of this investigation is the development of the Occupational Gender Segregation Index (OSGI). It is recognised that the OSGI is a model that is at an early stage of development and may require further development and refinement. However, it could be used to benchmark the extent of occupational gender segregation in MA frameworks, or groups of frameworks, and enable monitoring of change over time.

On their own, statistics can serve to mask divisions, as is the case in overall participation in MAs. In order to fully evaluate the impact of initiatives from a gender perspective, a range of qualitative and quantitative measures will be important. In that context, the OSGI has the potential to be used as a tool that, in conjunction with other tools or measures, can contribute to evaluating the effectiveness of specific projects or initiatives that include in their aims addressing occupational gender segregation in MAs. The potential also exists for the OSGI to be used at different levels but, in undertaking such analysis, it will always be important that groupings follow sector skills, industrial or occupational classifications to ensure that frameworks are not combined to mask gender segregation.

The evidence from the GFI has shown that there are a wide range of influencing factors causing occupational segregation and therefore the current valuable work being done throughout Scotland emphasises the need for a strategic approach to tackling the issue. Without a strategic approach the good work being done by individual government agencies, sector skills councils and training providers will go unrewarded in that occupational segregation will remain unresolved, continuing to negatively impact on the gender pay gap and Scotland's productivity rates.

7. Occupational segregation and gender equality in the MA programme: the Scottish component of the EOC's General Formal Investigation

The GFI was launched in September 2003 and has consisted of three phases of research. Phase three, began with the launch of this final report and will involve working towards the adoption and implementation of the key recommendations. Other work scheduled to compliment the research on the implementation and delivery of the MA scheme in Scotland will include an OMNIBUS survey of 300 Scottish children aged between 11-15 about their career choices. This will serve to support the launch of a new website, www.works4me.org.uk and raise public awareness of the impact of occupational segregation in Scotland.

The structured research plan allowed for full consideration of the evidence by the EOC and members of the external advisory group as it emerged. Furthermore, the findings from the research conducted in phases one and two have been previously published by the EOC Scotland. This also allowed for a wide consultation with key stakeholders about the impact of the findings and emerging recommendations. The following section presents an outline of the research process and summarises the main findings and recommendations.

7.1 Phase one - methodology

The key objective of phase one was to clarify the distinct nature of the delivery mechanisms associated with the MA programme in Scotland and to identify the extent of gender segregation in the MA programme across all frameworks, but with specific reference to the five selected sectors. Therefore, it was necessary to document the views of relevant stakeholders to provide an 'issue framework' with which to conduct subsequent research. The primary research activity involved elite interviews with key policy makers and stakeholders, a detailed survey of all 22 Local Enterprise Companies (LECs) in Scotland and the development of the Occupational Gender Segregation Index (OGSI).

The relevant stakeholders who were interviewed were:

- Scottish Executive, Enterprise, Transport and Lifelong Learning Department, Transitions to Work division.
- Scottish Enterprise, Skills Development Team
- Careers Scotland, Inclusion and Employability Services

The evidence provided by elite stakeholder representatives provided a deeper understanding of the delivery mechanisms of MAs focussing on issues of funding, strategy and evaluation and helped to inform the development of the national survey of LECs. Elite interviews were based on semi-structured questions, organised into agency specific sub-sections although there was some overlap between agencies in terms of remit: they were conducted with representatives from the Scottish Executive's Enterprise, Transport and Lifelong Learning Department, Scottish Enterprise and Careers Scotland. The research strategy at this stage was to cross reference three key

themes; recording and reporting; delivering skills and equal opportunities and to continue this thematic analysis into the evaluation of the results from the LEC survey.

In Scotland, the LECs are responsible for administering the funding for MAs and are directly involved in a number of aspects of delivery. The main statutory bodies for economic development in Scotland are Scottish Enterprise (SEnt) and Highlands and Islands Enterprise (HIE), individual LECs are responsible to them. SEnt covers 93% of the Scottish population and has twelve LECs; HIE has ten. Twenty-one out of twenty-two LECs responded to the survey giving a near 100% response rate on which to base findings and emergent recommendations. As part of the survey, SEnt and HIE provided detailed data on the MA programme, broken down by gender and LEC area. This data allowed the OGSi to be developed as a means of benchmarking the extent of gender segregation by occupation and as a possible way of tracking change over time.

7.2 Key findings from phase one: elite interviews

Recording and reporting

- SEnt analyse data on MAs on a range of variables disaggregated by gender and LEC area.
- The current funding mechanism prioritises the government target group and thus only guarantees funding for the 16-18 year old age group.
- The concept of 'quality' is the principle criteria by which MA frameworks are evaluated.
- The funding of individual frameworks depends upon 'additionality' and 'best value'.

Delivering skills

- From the perspective of the Scottish Executive and SEnt, the programme is used both as a recruitment tool and to facilitate workforce development.
- The MA programme is considered by employers and delivery agents to be a very good product and successful brand. However, success of the programme is linked to the existing entrenchment of the apprenticeship concept, which would indicate that traditional sectors are pre-disposed to deliver successful MAs.

Equal opportunities

- Men overwhelmingly dominate the traditional apprenticeship sectors therefore the actual operation of the MA programme appears to disproportionately benefit male dominated sectors.
- Gender equality considerations have not been adequately built into the design and delivery of the MA programme.

7.3 Key findings from phase one: LEC survey

Recording and reporting

- The evidence indicates marked and systematic segregation by gender in all occupational areas, with the exception of ICT, where men overwhelmingly dominate the traditional apprenticeship frameworks.

TABLE 2: MA PARTICIPATION IN SCOTLAND (April 2004)*

SECTOR	TOTAL (number)	TOTAL (male)	TOTAL (female)	% <i>FEMALE</i>
Plumbing	1238	1234	4	0.4%
Construction	5848	5807	41	0.7%
Engineering	2084	2034	50	2.4%
ICT	310	156	154	49.7%
Childcare	980	15	965	98.5%

Source: Modern Apprentice Performance Report, Skills Development Teams, SEnt and HIE.

*one framework (the largest) has been chosen to represent each occupational sector.

Delivering skills

- From the perspective of LECs, recruitment of individuals into the MA programme is done mainly through employers, training bodies and the LECs themselves.
- The MA programme is perceived by the LECs as being most successful in both developing and increasing skills in the existing workforce and providing sustainable vocational options for young people but not as successful in increasing rates of participation in paid work.
- The programme was rated 'very attractive' by most LECs from their own perspective and when considering the viewpoint of both training providers and young people.
- In the SEnt area, the majority of LECs saw the primary function of the MA programme as 'improving Scotland's economy'.

Equal opportunities

- In Scotland, with the exception of Caithness and Sutherland, no LECs have targets in relation to equality.
- From results of the LEC survey, it appears that the most common method of building equality considerations into the MA programme was via the Scottish Quality Management System and standard network policy.

It is clear that the MA programme displays marked segregation of men and women into particular occupations. However, it has been necessary to devise a formal method of measuring this segregation in order to compare occupational sectors and, more importantly, to track change over time. In response to this need, an Occupational Gender Segregation Index (OGSI) was developed using the latest available data on MA participation in the Scottish Enterprise area.

7.4 Developing an occupational gender segregation index

It is recognised that the gender imbalance in overall participation in MAs has been improving gradually, but that does not necessarily shed any light on the nature or extent of occupational gender segregation within the programme. This investigation has focused on exploring the nature of gender based segregation *within* the MA frameworks and has identified the need to develop a benchmarking framework to improve transparency of gender segregation within the MA programme and to monitor change over time. For this purpose an occupational gender segregation index (OGSI) has been developed as part of Phase One.

For illustrative purposes, an index has been developed that is based on the most recent statistics available for Scotland, excluding the HIE area. It gives a score for each

framework or group of frameworks according to the extent of gender segregation that exists. The analysis is at the level of the SSCs, reflecting their strategic importance. There is also a need to focus on occupational groups to develop an index that makes more transparent the extent and nature of occupational gender segregation that may be masked by overall participation rates disaggregated by gender. Following consultation with the advisory group for the investigation, the index has been developed using a 10-point scoring system that is applied to whichever gender is dominant. The scoring used in the index is applied as follows:

TABLE 3: The OGSi scoring system

Percentage of participants of dominant gender	Score
100%	10
95-99% “	9
90-94% “	8
85-89% “	7
80-84% “	6
75-79% “	5
70-74% “	4
65-69% “	3
60-64% “	2
55-59% “	1
50-54% “	0

For each sector skills council the frameworks have been grouped together to provide the following information:

- The number of frameworks included for each SSC
- The overall number and proportion of male and female participants
- The dominant gender
- The OGSi score

Overall numbers and participation rates are provided with an overall score for both male and female dominated SSCs and an overall gender segregation score calculated.

7.4.1 Sector Skills Councils - occupational gender segregation scores

For illustrative purposes, MA statistics for April to October 2004 for the SEnt area are analysed below to explore occupational gender segregation at the level of SSCs. The potential application of the OGSi as a tool for benchmarking, monitoring change and evaluating initiatives is then discussed.

Table 4 lists the SSCs using the list of approved frameworks in the Modern Apprenticeships Bulletin 38 (Sector Skills Alliance Scotland, 2004). Where more than one MA framework is delivered by a SSC, the number included is provided in brackets. A small number of individual frameworks have MAs in the SEnt area during the period

covered. Some frameworks are delivered by SSCs in partnership with Sector Skills Alliance Scotland (SSAS), but only those frameworks delivered by SSAS alone are included in the three frameworks listed for SSAS. There are a total of 30 frameworks that involve small numbers of apprenticeships and these have been grouped together in a miscellaneous category. The category includes 13 SSCs covering 19 frameworks and a further 11 frameworks for which no SSC could be identified. This category also includes some frameworks with no MAs in the SEnt area during the period covered.

The SSCs are ranked from the highest concentrations of male apprentices through to the highest concentrations of female apprentices, followed by the miscellaneous frameworks. Table 4 shows that there are 15 male dominated SSCs:

- Three have no female participants and have the highest OGSi score of 10.
- Nine SSCs have a score of 9 with between 95 and 99 per cent male apprenticeships, including the two largest SSCs – Summitskills and CITB-ConstructionSkills.
- The remaining three have scores between 8 and 6, all of them with more than 80 percent male apprentices.

There are only three SSCs in which the numbers of male and female participants are close to being equal:

- E-skills UK and People 1st score 0 on the index, the former with marginally more male than female apprenticeships and the latter larger SSC with marginally more women than men
- ENTO/SSAS also have more female participants and have a score of 1 from the three frameworks they deliver.

There are a further eight SSCs (excluding the miscellaneous category) that have more female than male apprentices. Of that group, three have scores of 2 and 3 with less than two thirds female participants. The remaining five SSCs are strongly female dominated, although none are exclusively female. The miscellaneous group overall also involves more women than men.

7.4.2 Participation versus segregation

This investigation has had a particular focus on five frameworks or groups of frameworks covering construction, engineering, plumbing, information technology and childcare (or early years care and education). They reflect the scoring for SSCs overall:

- The IT framework is delivered by E-skills UK and is the framework that is most balanced in terms of gender with a 50:50 split between male and female MAs.
- The two largest covering construction, that accounts for a fifth of all MAs and Summitskills, that includes plumbing, heating, ventilation and electro-technical apprenticeships are amongst the most male dominated.
- The engineering frameworks are included in three SSCs - SEMTA, Cogent and the Engineering Construction Industry Training Board, the first two of which have responsibility for development of other frameworks – they are marginally less gender segregated but all are still strongly male dominated.

- Along with the framework covering health, the early years care and education SSC is heavily gender segregated with only token numbers of men involved.

These frameworks reflect the overall picture of significant gender segregation. It is worth noting that, overall, there are more male than female dominated SSCs and the average score across the SSCs is 8.3 in the male dominated frameworks and 4.5 in the female dominated frameworks. Although MAs are two thirds male and one third female, there are no SSCs that reflect such a ratio. A two thirds/one third split, evenly distributed across frameworks, would indicate an average score of 2 or 3 in the OGSi. However, the overall score across all the SSCs is 6.7.

The index makes transparent the central concern of this investigation, highlighting the extent of gender segregation within MAs that may be masked by indicators that consider overall participation rates alone. Barriers may exist to recruitment of women into MAs, including the greater likelihood of female school leavers going into FE/HE. However, it is clear from the index that participation is not the only concern that needs to be addressed and much work remains to be done to reduce gender segregation within SSCs and framework.

7.5 Initial recommendations arising from phase one

- A National Strategy to tackle gender segregation in training and work should form part of the key Scottish Executive economic and skills strategies and would complement the work that is currently being done to ensure that employers have the right skills to support the success of their business and individuals have the skills they need to be both employable and personally fulfilled.
- All relevant data (including information on pay rates) should be made available in the public domain. Scottish Enterprise is currently in the process of making participation rate data more easily accessible to the general public.
- The concepts of 'best value' and 'additionality' should be formally defined and the methods of measuring them made transparent.
- Ensure that actions to promote desegregation by gender are seen as a collective responsibility of all key policy makers, not just SSCs or other agencies with a marketing remit.
- LECs, in partnership with the relevant SSCs, should become more pro-active in ensuring employers are aware of the efficiency losses of occupational segregation.
- In conjunction with the relevant SSCs, LECs should become more involved in circulating best practice in an attempt to implement initiatives designed to promote non-stereotypical career choice through MAs.

7.6 Phase two – methodology

The overall aim of this second stage of the research was to investigate further the findings from phase one. This includes specific reference to identifying both actual and perceived barriers to tackling occupational segregation in the Scottish MA programme. The main objectives were to:

- Provide evidence of how delivery mechanisms and operating practices relate to patterns of gender segregation.
- Explore the perceptions of the MA programme from the point of view of employers and atypical apprentices.
- Identify evidence of any best practice that serves to promote occupational desegregation operating amongst employers.

The evidence base consisted of four focus groups involving individual MAs, employers and employers' representatives, a survey of employers in Glasgow (see appendix 2), a focus group with male trainees (see appendix 3) and an elite interview with a representative from Dumfries and Galloway Local Authority (LA) (see appendix 4)⁴. Focus group and interview research was conducted with MAs making non-traditional choices in terms of their gender, employers and employers' representatives in the GFI sectors. Evidence collected at the focus group discussions with MAs gave a qualitative

⁴ The findings from the Men Can Care focus group, employers survey and Dumfries and Galloway Case Study have not previously been published and are hence included in this document as appendices.

indication of the existence of barriers that atypical apprentices had encountered both in making their career choices and in employment. Similarly, from their extensive knowledge of the industry, employers' representatives and employers themselves indicated the barriers to recruitment of non-traditional candidates from their perspective, including those stemming from the operational nature of the MA programme itself.

The survey of employers' confirmed many of the findings from focus group research with employers and employers' representatives. It also gave an indication of some of the reasons why employers do *not* take on MAs. Focus group discussions with male trainees on the Men Can Care project reinforced the findings of discussions with MAs but also provided further insight into the specific motivations of and barriers to male participation in female dominated occupations. An elite interview with a representative from Dumfries and Galloway LA Education and Communications Services allowed an in-depth and geographically specific insight into the operation of the MA programme in relation to the education sector. Dumfries and Galloway was chosen due to its high female participation rates coupled with high levels of occupational segregation.

7.7 Key findings from phase two

Perceptions of the MA programme

- The perception of the value of the MA programme by both employers and employees in Scotland is greatly enhanced by the fact that *all* MAs have employed status. This is significant given that there is confusion and complexity around the situation with regard to MAs elsewhere in the UK where not all apprentices are attached to a job.
- MAs indicated that the programme was proving successful for them, as they were able to 'earn while they learn' and gain valuable job experience. They also felt that this method of learning was greatly increasing their chances of continuing employment with the training employer.
- Employers within the traditional male dominated areas used the programme mainly as a recruitment tool. In childcare the emphasis of the programme was focused both on a method of recruitment as well as for improving the skills of existing workers.
- Overall, employers felt that the programme suited their needs. This was particularly strong in the traditional sectors where an apprenticeship has been and remains the dominant training method.
- Construction and childcare sectors indicated that the MA programme had in fact been a 'lifeline' in dealing with a lack of qualified staff in industries that were becoming increasingly regulated in terms of recruitment.
- Within the childcare labour market there is notable division between the public and private sector in the use of MAs. The private sector made more use of MAs than the public sector.
- The programme was valuable to employers because recruits had more practical skills than those coming directly from FE/HE. In the engineering sector however, the recruitment of MAs was slightly hampered by the fact that more 'quality' candidates went into the sector through the HE route.
- The 'core skills' element was perceived as a positive aspect of the MA programme. This was because core skills are taught in an occupational context particular to each sector but it was felt that it was difficult to achieve this integration in childcare.

Barriers to change in the delivery of the MA

- The funding of the MA programme was identified as a potential barrier to recruitment.
- The lack of 'parity of esteem' between FE/HE and the MA qualification was a barrier to school leaver recruitment in that schools 'push' people into HE/FE and apprenticeships are seen as the 'last resort' for those who may not achieve Highers.
- The limited capacity of FE colleges to train was a barrier to recruitment in all sectors. This was of specific concern in the traditional industries where training often involves large capital outlay. There is also a perceived lack of staff in the traditional sectors, as trades people are not going into lecturing.

Barriers to change before work

- For women in male dominated sectors the negative attitudes of friends, family and peers made it difficult for them to make non-traditional career choices.
- Direct and covert discrimination based on employers' perceptions of the reproductive role of women and the perception that employers will need to adapt their on-site facilities.
- The 'purchaser' barrier in childcare limited the recruitment of men because parents' perceptions of male childcare workers could be negative.
- In childcare, low pay posed a significant barrier to recruitment.

Barriers to change at work

- Co-workers were described as often doubting the abilities of women in traditional industries meaning that atypical candidates often had to work 'twice as hard' as their male counterparts.
- Masculine workplace culture often led to the exclusion of women at work.
- The negative attitudes of spouses and partners were identified as a barrier to women working in all male environments.

Identifying the need for change

- All participants agreed that tackling occupational segregation would be positive for the Scottish labour market.
- During discussions with both employers and apprentices, a strong business case for occupational desegregation emerged.
- Apprentices also described how having more female peers and role models at work would enhance their working lives, as the only other women many of them came into contact with were cleaners and administrative staff.
- Introducing more male role models in the lives of children through occupational desegregation in childcare also presented as a desirable outcome in terms of challenging perceptions of gender stereotypical jobs at a young age.
- It was identified that extending the role of 'hands-on', occupational 'tasters' would be one way to encourage the recruitment of atypical candidates.
- Less segregation itself would help in that role models would become more visible and might encourage people to think of careers they might not have otherwise considered.
- Overall, the diverse nature of barriers to addressing occupational segregation by gender are such that any actions to promote the recruitment of atypical candidates would require a strategic approach involving all relevant stakeholder agencies.

7.8 Initial recommendations arising from research under phase two

- The need for a National Strategy to tackle gender segregation in training and work as part of the Scottish Executive's economic and skills strategies has been re-iterated. This should include consideration of the wider issue of 'parity of esteem' between academic and vocational learning in schools.
- Stakeholder agencies should examine the links between the MA programme and the FE sector and revisit funding issues with respect to prioritising specific predefined target groups.
- Future directions in promoting industries to atypical candidates should capitalise on the existing expertise and experience of the SSCs and Careers Scotland that are active in this area.

8. Final recommendations and implementation

Gender based occupational segregation is not unique to the MA programme in Scotland. However, the findings of the GFI have highlighted that the MA programme is the key vocational training programme in Scotland, as well as one of the Scottish Executive's main vehicles for achieving a highly skilled workforce. The achievement of this objective may be jeopardised by the failure to address the persistent and dramatic under-representation of men in childcare MAs and women in construction, plumbing and engineering sectors. Unless action is taken in the delivery and promotion of the MA, this government funded programme will be contributing to the continuing gender segregation of the wider labour market by failing to lead change that will promote and support employers and individuals undertaking vocational training to pursue atypical career options.

In light of advisory group discussions and additional information provided by key stakeholders, the recommendations made at phases one and two of the investigation have been revised and tailored specifically to the Scottish context in 2005. The following represents the key revised recommendations arising from the Scottish component of the EOC's GFI into occupational segregation in training and work.

- A National Strategy needs to be developed to tackle gender segregation in education, training and work. This should form part of the key Scottish Executive economic and skills strategies and will complement the work that is currently being done to ensure that employers have the right skills to support the success of their business and individuals have the right skills they need to be both employable and personally fulfilled.
- All relevant data, including information on pay rates for MAs should be available in the public domain in a readily accessible format.
- As part of the Scottish Executive's ongoing review and evaluation of the MA programme action should be taken to address the systemic barriers to taking on atypical recruits.
- Future directions in promoting industries to atypical candidates should capitalise on the existing expertise and experience of the SSCs (and Careers Scotland) that are active in this area. Promoting positive action through the SSAs could be one way to achieve this aim.
- The development of Sector Skills Agreements offers an opportunity for specific sectors to identify whether gender based occupational segregation is a problem and to take remedial action to tackle it. Therefore, the relevant stakeholders should consider including within the Sector Skills Agreements a gender breakdown of labour market data and those participating in learning and training programmes to inform any potential action taken.
- Actions to promote desegregation by gender should be seen as the collective responsibility of all key policy makers, not just SSCs or other agencies with a marketing remit.

- LECs, in partnership with the relevant SSCs, should become more pro-active in ensuring employers are aware of the efficiency losses of occupational segregation.
- In conjunction with the relevant SSCs, LECs should become more involved in circulating best practice in an attempt to encourage initiatives designed to promote non-stereotypical career choice through the MA programme.
- After consultation with Scottish Enterprise, it is suggested that training providers be required to provide qualitative feedback about the actions they have taken in the area of gender equality in the previous time period making more use of the 'contractual management process'.

The Scottish Executive has identified increasing the number of women doing MAs as a means of promoting equality (see Scottish Executive 2004a, p13). However, the GFI research has found that where women do participate in the MA programme, they are concentrated in low paid occupations (Thomson et al, 2004a and 2004b). Therefore, increasing the overall number of women participating in the MA programme is not going to promote equality of opportunity for women or men in Scotland. Young people should have access to information about and experience of a wide range of occupations to ensure they are not prevented from pursuing their chosen career because of gender based assumptions about the jobs that are suitable for women and men. This will not only allow for equality of opportunity for all but will take steps to reduce the gender pay gap. As more women enter traditionally higher paid male occupations and more men enter traditionally lower paid female occupations more women will receive a wage comparable to men. The pressure for increasing the value given to the work traditionally done by women will rise and the gender pay gap will start to reduce. Maintaining a labour market segregated by gender will allow the pay gap to continue, will promote stereotypes and prejudice and continue to waste the potential of all people in Scotland.

The investigation has found that a key factor determining occupational segregation is the gender specific assumptions and stereotypes made by young people. Action to tackle gender segregation cannot be limited to initiatives within the delivery of the MA programme. To be able to achieve real equality of opportunity in access to education, training and work action also needs to be taken within the education system to raise awareness of the non-gender specific skills, qualifications, personal characteristics and attributes of all occupations. Evidence gathered from the investigation has shown there is a wide-range of organisations that are able to play key roles in challenging gender stereotyped career choice. However, to ensure sustainable change can be achieved, strategic leadership and direction has to come from the Scottish Executive.

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Appendix 1: GFI Terms of Reference

In line with the statutory obligations placed upon the EOC under section 57(1) of the Sex Discrimination Act terms of reference were established to guide and focus the work of the GFI into occupational segregation in training and work. As such eight terms were identified and publicised prior to the launch of the investigation. The terms of reference followed throughout the investigation were:

- To explore and highlight gender segregation in training and work, and the correlation with skills and pay gaps in the UK
- To raise awareness of
 - The extent of gender segregation and the undervaluing of women's work in Modern Apprenticeships
 - The barriers to change
 - How this contributes to the gender pay gap
- To identify the extent and effectiveness of current initiatives at government, skills council, employer and school level to challenge stereotyped training and work choices
- To identify the experiences and support needs of women training and working in non-traditional sectors
- To identify how young people and employers make stereotyped decisions and what would help them consider a wider range of options
- To articulate the business case for change in policies and practices
- To identify any specific race and disability aspects in relation to the above
- To make and publicise widely recommendations and, where possible, guidance on policy and practice at national and local level which can address skills gaps by:
 - Increasing the numbers of young women choosing to enter MAs in sectors currently dominated by men, including construction, plumbing, engineering and ICT
 - Increasing the numbers of young men choosing training in childcare.

Appendix 2: The Employers Survey

The majority of the firms who responded (63%) had employed a MA. In terms of the gender of the MAs the results from the questionnaire reinforce the occupational segregation highlighted earlier in this report. As Table 1 shows plumbing, construction and engineering are almost exclusively male, childcare female whilst the information technology (IT) sector has a more even balance of male and female MAs. The IT results are heavily influenced by the fact that one out of the two MA employers is a large public sector organisation, which offers a variety of MAs in IT and related areas.

TABLE 1: Survey Responses

Sector	Total returns	MA Employer	Total MAs	Female MAs
Plumbing	14 (20%)	9	52	1 (2.0%)
Construction	22 (35%)	12	94	2 (2.1%)
Engineering	8 (20%)	6	257	4 (1.5%)
IT	3 (19%)	2	57	37 (64.9%)
Childcare	16 (36%)	11	32	31 (96.8%)
Total	63 (27%)	40	492	72 (14.6%)

As the figures in Table 2 indicate the size of the organisation appears to be an important factor in determining whether the business will employ MAs. In all of the sectors the average employment size of the MA employer was larger than the average employment of the respondents as a whole, this was particularly noticeable for plumbing, construction, engineering and IT but less so for the childcare sector. Furthermore in the plumbing, construction and engineering sector it was the biggest employer in each of these sectors who had a female MA. These results confirm findings from focus group research where employer's reluctance to hire atypical candidates was described as being more acute for SMEs. This was due to the perception that costs would be incurred in adapting facilities for females and/or supporting their role in reproduction.

TABLE 2: Employment

Sector	Total employment	Average employment	Average employment for MA employer
Plumbing	422	30.1	40.4
Construction	1,412	64.1	105.4
Engineering	3,229	403.6	510.6
IT	5,760	1,920	2,780
Childcare	269	16.8	17.5
Total	11, 092	176.1	261.1

Table 3 indicates the main sources of recruitment of the MAs in the survey. The industry training bodies appear to play an important role in recruitment. This was the main source for half of the respondents and was particularly important in the childcare sector where over 80% of childcare employers identified it as the most important source. In the plumbing and construction sectors other sources which included internal recommendations and unsolicited approaches were seen as important sources of recruitment. The majority of respondents in the survey did not regard the LEC and Careers Scotland as particularly important sources of recruitment.

TABLE 3: Sources of recruitment

Source	Plumbing	Construction	Engineering	IT	Childcare	Total
Directly through advertisement	1	1	3	0	1	6 15%
Through industry training body	3	6	2	0	9	20 50%
Through the Local Enterprise Company	0	2	1	0	1	4 10%
Through Careers Scotland	0	0	1	1	1	3 7.5%
Other	5	5	2	1	2	15 37.5%

The vast majority of the respondents in the survey did not experience any particular problems in terms of recruitment and retention of MAs. The only sector, which appears to have encountered problems in this area is childcare. Nearly half of the respondents in this sector identified recruitment and retention as an issue. The problem for some of the employers in this sector was related to the quality of the candidates they recruited to the MA and a perception that better-qualified and motivated candidates tended to take the FE/HE route if they were pursuing a career in childcare. This perception was also uncovered in focus group discussions where childcare employers in the private sector were said to be more enthusiastic about the MA training route than those in the public sector. Public sector employment in this sector is better paid than in the private sector hence candidates are more likely to follow the established HE/FE entry points. On the whole most of the respondents in the other sectors appeared to be reasonably happy with the quality of the candidates they are recruiting to the MA. However, as evidenced by focus group research, MAs have difficulties 'competing' with the HE route into engineering occupations.

TABLE 4: Experience of Recruitment & Retention Problems

Sector	Yes	No
Plumbing	0	9
Construction	2	10
Engineering	1	5
IT	0	2
Childcare	5	6
Total	8	32

As Table 5 indicates most of the firms in the survey have experienced the successful completion of an MA in the previous four years, only 25% of the firms who employed an MA had no experience of a successful completion. The second column in Table 5 specifies the number of MAs who have successfully completed their training in each sector and the final column expresses this figure as a percentage of those employed in each sector. In terms of the businesses in this survey the MA appears to be very significant for recruitment into the childcare sector. The number of successful MAs in childcare in the past four years represented 25% of those employed and 12.4% in

plumbing. Although engineering has the highest number of successful completions over the past four years they account for less than 6% of the total employment in that sector. The differences between the sectors and their significance as a proportion of overall employment can partly be explained by the variation in the time taken to complete a MA as well as the public/private split in childcare.

TABLE 5: Number who have successfully completed the MA in last 4 years

Sector	Percentage of companies	Number of MAs	As percentage of Employment
Plumbing	89%	45	12.4%
Construction	50%	58	4.6%
Engineering	100%	183	5.9%
IT	100%	64	1.2%
Childcare	73%	48	25.0%
Total	75%	398	3.8%

On the whole, as Table 6 illustrates, the employers in the survey were very positive about the extent to which the MA had been successful at achieving certain objectives. The three traditional sectors plumbing, construction and engineering were particularly enthusiastic about the contribution of the MA in increasing the level of skills and providing a sustainable vocational employment for young people. However, the childcare sector perceived the MA to be slightly less successful in achieving those objectives. The difference in the perceptions of the childcare sector in comparison with plumbing, construction and engineering may be a reflection of the fact that childcare appears to have experienced more problems in terms of recruitment and retention compared to the other sectors.

Participants in the survey were asked for their opinion on what they thought was the main function of the MA. A small majority of the firms surveyed expressed the view that the main function of the MA was about increasing the level of intermediate skills in the labour market. The majority of firms in plumbing, construction and engineering perceived this to be the main function of the MA. However, the majority of childcare employers believed the main function of the MA was to provide a vocational option for young people. In other words, childcare employers tended to perceive the MA as a recruitment tool whereas the other sectors in the survey tended to see it as being about skills development.

TABLE 6: Employers perceptions of the success of the MA: Percentage of employers rating it very successful or successful in achieving the following objectives

Objectives	Plumbing (9)	Construction (12)	Engineering (6)	IT (2)	Child care (11)	Total (40)
Increasing the level of intermediate skills in the labour market	100 (9)	100 (12)	83 (5)	50 (1)	73 (8)	88
Providing a sustainable vocational option for young people	100 (9)	92 (11)	83 (5)	50 (1)	73 (8)	85
Increasing the rate of participation in paid work	100 (9)	83 (10)	67 (4)	0 (0)	73 (8)	78
Developing skills in the existing workforce	89 (8)	100 (12)	50 (3)	100 (2)	55 (6)	78
Enhancing competitiveness in the local economy	67 (6)	92 (11)	83 (5)	50 (1)	55 (6)	73

In the survey there were 23 businesses that did not employ an MA, they were invited to provide reasons for not using MAs. The most popular reason given by the plumbing, construction and engineering sectors for not engaging a MA was that the business did not require trainees, usually because it was felt the business was too small. In all of the three traditional sectors the businesses that gave this as a reason were considerably smaller in terms of employment size compared to the MA employers in their sector. For example, the average employment size of the plumbing firms who said that they did not need trainees was 3 compared to 40.4 for the plumbing firm who employed MAs. In construction it was 30.7 compared to 105.4 and in engineering the average size was 82.5 compared to 510.6 for the engineering firms who employed an MA. For the childcare sector the main reason given by those firms in the survey who did not employ an MA was that they did not know enough about it. This reiterates the point made within focus group discussions that the established training route in childcare is through FE/HE and that public sector employers prefer this type of candidate. Only one firm indicated that they did not utilise the programme because it was perceived to be too bureaucratic.

TABLE 7: Employers' perceptions of the primary function of the MA

Main function of MA	Plumbing (9)	Construction (12)	Engineering (6)	IT (2)	Childcare (11)	Total (40)
Increasing the level of intermediate skills in the labour market	67% (6)	58% (7)	67% (4)	100% (2)	30% (3)	55%
Providing a sustainable vocational option for young people	33% (3)	33% (4)	33% (2)	0%	60% (6)	38%
Enhancing competitiveness in the local economy	0%	8% (1)	0%	0%	0%	3%
Reducing unemployment amongst young people	0%	0%	0%	0%	9% (1)	3%

TABLE 8: Reasons given by Employers for not employing a MA

Reasons	Plumbing (5)	Construction (9)	Engineering (2)	IT (1)	Child care (5)	Total (23)
The business does not require trainees	60% (3)	44% (4)	100% (2)	0%	25% (1)	43%
Do not know enough about it	40% (2)	11% (1)	0%	0%	75% (4)	30%
MA is too bureaucratic	0%	11% (1)	0%	0%	0%	4%
Other	0%	33% (3)	0%	100% (1)	0%	17%

Summary of Findings from Employers Survey:

- Larger firms are more likely to employ a MA.
- In traditional sectors the largest firms more likely to employ female MA though still very much the minority
- The industry training body is the most important source of recruitment for MAs, closely followed by more informal methods of recruitment.
- Only childcare sector has experienced significant recruitment and retention problems.
- The majority of firms in survey had experience of candidates successfully completing their MA training.
- The MA appears to be significant in terms of its overall contribution to childcare workforce.
- Employers rate the MA as successful in term of increasing skills and providing vocational employment for young people. Childcare employers are not as enthusiastic as other sectors.
- Traditional sectors perceived the primary function of the MA to be about increasing skills. Childcare employers perceived it to be about providing sustainable employment.
- The main reason given in the survey for not employing a MA was because the business did not require trainees due to size. This was the view of the traditional sectors however, childcare employers did not know enough about it.

Appendix 3: Men Can Care: Focus Group Evidence

Male care sector trainees were accessed through the Men Can Care project. This project aims to combat the shortage of men in the child and youth care sector through male only training, work experience and general awareness raising. Based in Kibble Education and Care Centre near Glasgow, the project gave 34 men the chance to train and have work experience in the area, nine of whom were able to participate in research. The trainees participating in this research were not MAs and they were not operating in the traditional childcare sector. However, their perceptions of the barriers to the recruitment of males into this female dominated occupation was directly relevant to the investigation and confirmed many of the insights gained from the primary research conducted in Phase Two. The focus groups found that all of the men participating in this training were embarking on significant career changes mainly from traditionally 'male' sectors such as IT, construction and engineering. The motivations behind moving into the care sector were consistently to experience more 'job satisfaction'.

I wanted to end my working life doing something that I actually enjoyed. (Male trainee, 38)

However, it was also recognised that careers changes were often in response to structural dynamics in the wider economy. In Scotland, the IT and heavy industries have previously been growth industries in terms of employment. However, in recent years the care sector was felt to be better suited to offer employment opportunities. Economic restructuring was also thought to impact on the traditional role of men in the labour market.

The care industry is one of the industries that is growing whereas heavy engineering, manufacturing; that's on the decline. (Male trainee, 41)

We've also discussed... the changing role of masculinity through generations, the first being heavy industry, shipbuilding, coalmining, and that sort of stuff isn't an option. Heavy industry went downhill and IT was the escape route for a lot of guys and that's now going downhill, going overseas a lot of it, so this is kind of a time, certainly in my head anyway, for a re-think in terms of what are the typical job roles that guys are going to be doing. (Male trainee, 38)

As with findings from focus group discussions with female atypical apprentices, the fact that training was attached to a job and involved considerable work experience appealed to male trainees. However, this was often because it was difficult for husbands and fathers to give up waged work to re-train rather than being a motivation in itself. It was also perceived as being a huge 'gamble' in terms of lost earnings – one that would hopefully be offset by the aforementioned 'job satisfaction'.

Male trainees in the care sector also cited family support as being a strong influencing factor in their decision to train. Spouses already working in the child or youth care sector were instrumental in helping men make this decision. In two of the nine cases previous voluntary experience in the area had been influential.

I've been supported by my wife; she's in this field anyway so I get a lot of encouragement and help from her. But the rest of my family think I'm off my head. (Male trainee, 41)

Friends however, were found to be less supportive and often tried to discourage the trainees from making their training decisions. These negative perceptions were based on the lost earnings 'gamble' and the difficulties of the job itself.

Once in the job, trainees described an existing 'macho' work place culture rather than one based on 'feminine' aspects. This was explained as being due to the nature of the specific problems faced by the youngsters in the care centre, where a 'masculine' approach to their care had been fostered by a past reliance on 'tough' measures of discipline. This difference meant that this particular centre might not accurately reflect the newly emerging care sector identified in the MA programme in that it wasn't heavily dependent upon female labour. Indeed, the care provided was perceived to be a specialist type of care distinct from that associated with Early Years provision and required a different set of skills.

I think maybe the pay is slightly better here but there's a fair degree of... difference in the work, I would say. It's not just go in and make sure they're in their bed, there's a big difference... (Male trainee, 35)

In addition to the issue of pay differences, the trainees resisted the notion that 'ability to care' and 'emotional intelligence' were exclusively female characteristics and were proud to be doing jobs that required these aptitudes as well as challenging existing stereotypes about men.

I think another reason is that a lot of us, we're kind of standing up for men in society because the misconception of the stereotypical West of Scotland male; they don't cry and all they like is football and beer and fighting and that's it. But that's not what a man is, a man has a lot more to offer than just those few things. (Male trainee, 29)

In terms of recruiting more men into the child and youth care sectors, findings from this focus group echo those of found in Phase Two of the GFI research. The stigma of negative perceptions and low pay presented as the most significant barriers to desegregating the workforce. One of the participants had described how he had previously considered re-training in Early Years childcare:

About a week or so before I got word I was getting on the course, a friend is a nursery nurse teacher... and she said to me at the time, 'if you don't get the job, I'll get you an application form' to get in as a nursery nurse. And I thought 'hmm, what will people think of me?' That was my immediate thought; 'what will people think of me, going to work with small children?' (Male trainee, 38)

I'll be perfectly honest. Another thing that might scare some men away is that the childcare thing seems notoriously low in pay. I don't think a lot of guys will go and take that job to support a family, same with the elderly, that looks very low paid as well. (Male trainee, 35)

The stigma of being a perceived threat to children was thought to be less in an environment that cared for mainly troubled adolescents boys and might hence be seen as more 'macho' and/or skilled than working in a nursery for example. This was in addition to offering higher remuneration for more 'skilled' and complicated work.

In terms of fostering occupational desegregation, the male participants were very enthusiastic about their project as being an important step towards that goal. Other actions to encourage more men into the care sector were suggested that mirrored the findings from discussions with female atypical MAs. These were raising awareness of the difference aspects of the job through media such as television. One trainee also felt that the care sector offered an alternative to manual occupations to those leaving school with low attainment but acknowledged that public perceptions limited more male participation.

I think sometimes, some men maybe feel like they left school at 16 or something and they don't have enough qualifications, they just went into some kind of job, manual job or something and now, if they do want to go into something like this, they might think that they've not got enough qualifications to do the job, that might be holding some people back. (Male trainee, 29)

The benefits of addressing the gender balance were similar to those revealed by research in Phase Two of the GFI. These were the positive role models created for boys and because boys in care would feel more comfortable discussing certain issues with other males.

... if you don't get the chance to attach to a male role model, quite quickly guys that are there, as we were saying, the only male role model they've had is gang-members and drug-dealers, who knows? But I think the role's different, we agree on that one, the need for difference at nursery up to older. I don't see why guys shouldn't be equally involved. (Male trainee, 38)

Overall, all focus group participants were extremely positive about the impact a career change away from traditional male sectors and into care work had had on their lives.

I worked in ICT for 15 years and not once did I come home and talk about my work and now every night I rabbit away about everything that's going on and what we're learning and I'd never done that in 15 years before so it's done something to me. (Male trainee, 33)

Appendix 4: Case Study - Dumfries and Galloway

As part of GFI research in Phase One, the Dumfries and Galloway area was revealed as having the highest female participation rate in Scotland at 47%. However, closer inspection of the statistics showed female participation in this LEC area was concentrated in traditionally female occupations such as Business Administration, Customer Service and Health and Social Care. The latest available figures (October 2004) show that this proportion has fallen to 42%, but female participation is still the highest in Scotland and remains concentrated in these few occupations, as in all LEC areas. In order to further investigate this situation, a telephone interview was conducted with a member of Dumfries and Galloway Education and Communications Services (Local Authority) staff who is involved in the promotion of MAs in to schools and had knowledge of the situation with specific reference to the area. This research revealed that in terms of the success of the MA programme in that particular geographical area, the programme wasn't particularly well received by the large proportion of SMEs in the area. This was due to the example given of a Joiner training an apprentice only for that apprentice to set up in competition after 'time served.' Therefore, the MAs were perceived to foster future enterprise more often than fill vacancies and skills shortages. This was seen to be a disincentive that was perhaps more severe in the traditional, male dominated sectors which may go some way to explain the high rate of female participation within traditionally female jobs. Furthermore, the dominance of service sector occupations in the local economy supported female apprenticeships in these types of jobs. The Dumfries and Galloway area was described as having a low wage economy, which was thought to encourage individuals to pursue MA training.

We are one of the lowest wage economies in the UK and I suspect it might be seen that getting a qualification through college and an apprenticeship might be a means of getting a reasonably high wage at the end of the day.

The accessibility of college provision for MAs was also seen as an issue specific to the area in that the local college is based in Dumfries (largest population centre) with a major out-centre in Stranraer (second largest population centre) with little provision in the areas 'in between.'

FE provision should be there, I think they attempt to make FE provision available but I think the geography acts against them. And in the east of the area... the tendency is for youngsters actually to go to Carlisle, so they go out with the Scottish system.

In terms of the high level of segregation by gender in this area it was thought to be explained, at least partly, by the conservative nature of the area. Traditional notions of gender were still the 'norm' for most people and this was underpinned by pupils' subject choice at school; boys dominated the technical subjects and girls chose home economics. It was also felt that the community had an impact on choice through reinforcement of stereotypical attitudes and assumptions.

The impact of careers advisors operating in schools was also discussed and it was found that the role of school careers advisors had changed over the last three or so years with the advent of Careers Scotland. The participant's impression was that careers advisors had perhaps taken more of a 'backseat' and that school guidance staff

had taken on more of this type of responsibility. It was also felt that school pupils themselves now have to be more pro-active in seeking careers advice and that where teaching staff intervened it was through Personal Social Education (PSE) program, common to all schools. The impact that careers guidance may have on occupational segregation was acknowledged but described as only one factor amongst many and that traditional attitudes were key reinforcements of the status quo with respect to segregation.

It [careers guidance at school] would be one factor, but only one factor, in trying to change attitudes. But remember attitudes are usually ingrained and very difficult to change. And in Dumfries & Galloway region, it becomes even more ingrained!

In attempting to implement change, it was felt that school would be the first entry point for actions to tackle occupational segregation and that this was already underway to a certain extent. It was also felt that the ability to change young peoples perceptions through education in school had been somewhat 'proved' by the success of anti-smoking initiatives and healthy eating campaigns, but that other sectors had also to be 'on board' for change.

I think if you start early enough, in the primary and now pre-school... you'll begin to make the changes. It will be there if you get the message across provided that FE and employers do the same.

Similar to the evidence from Phase Two of the GFI, it was felt that employers may be discouraged from employing atypical candidates due to difficulties of assimilating them into existing workplace culture, 'upsetting' other employees or adapting facilities.

Overall, occupational segregation in the Dumfries and Galloway area was seen as a problem in some ways but that personal preference underpinned occupational segregation to an extent. From this perspective, it was not viewed as problematic for society in general, as there are certain types of jobs that women (and men) are better at.

It is important to address the issues because it is important to allow all of our youngsters, whether they are male, female... the opportunity of getting employment wherever they can. [However] if at the end of the day, having done all that and made sure that aren't any barriers there... and you still have girls going for certain types of jobs and men going for certain types of jobs then I don't think that matters.

However, in conclusion, the high relative participation rate coupled with severe segregation in this LEC area was considered to be something that needed to be investigated and addressed.

We owe them [women] the duty to investigate what's happening. If for some reason there are barriers that exist there, then we need to begin to try and do something about that.

Appendix 5: Career choice initiatives

Career Box – Career Box is described as a comprehensive and coherent programme of career education lessons which involves innovative lessons that engage pupils, thinking and decision making skills, awareness of self and opportunities, preparation for transition and developing an insight into the world of work. The programme helps young people to take ownership for career planning and lifelong learning, hence providing them with knowledge of national and local labour market information as well as an introduction to the world of work.

Make It In Scotland – Targeted at S2 pupils (prior to option choice) this programme aims to raise the profile and image of manufacturing industries in Scotland. It develops awareness of the job opportunities and skills involved in this area and so raises the profile of a range of key sectors across Scotland.

Get Into Enterprise – This programme introduces pupils (from S3 to S6) to the key concepts of enterprise through a series of modules delivered by a trainer, either in classroom setting or an online version of the programme. It involves pupils to taking part in real business activities and encourages them to start their own business either with a partner, a small group or as a sole trader.

Get Into Business – A learning tool, aimed at 18 – 30 year olds in schools and colleges as well as those not engaged in educational establishments, which allows them to move on to self-employment. Main benefits for young people include: enhancing personal enterprising skills, promoting a positive attitude to entrepreneurship, among others.

Secondary Enterprise Challenge – A one-day event aimed at pupils in S3 to S6 to provide them with hands-on enterprise experience in a competitive situation. Encourages young people to be more creative and innovative as well as enhance their awareness of enterprise.

Work Experience – A one week placement for pupils in their final year of compulsory education (S4) which provides them with an insight into working life and environment. There are practical benefits for pupils as they learn about rights and responsibilities in work, health and safety, equal opportunities and how these apply within the working environment. It also allows pupils to apply their skills and knowledge developed in the classroom to a real working environment, thereby improving their understanding of industry.

Excellence In Education Through Business Links – This gives school staff the opportunity to spend an agreed amount of time with a specific company. This comes under the Executive's Enterprise in Education agenda and it offers teachers and schools an opportunity to develop a significant understanding of a current area in the labour market, or business sector activity through planned placements with a minimum duration of two days. This gives teachers a chance to enhance their knowledge and awareness of the labour market.

Paws In Jobland – A CD-ROM resource with complementary worksheets which involves Exploring Jobland; listening to and reading about people and what is involved in their jobs. It is aimed at Primary 6 and 7 pupils as well as Special Educational Needs

(secondary) for Personal Social and Health Education and Career Education work. It's a useful introduction to the world of work.

In addition to the above, there are other projects in development which may also be useful. Examples of these include:

Business Carousel – Targeted at S3 pupils (building on their experiences with the *Make It In Scotland* project), this project invites employers to work with the pupils over the course of a day to provide careers information about their field of work. Pupils are required to work in groups to research, prepare and deliver a presentation. Hence, this increases their awareness of the business sectors, labour market and careers in different sectors.

Basix – This is a Standard Life designed project which consists of a set of workshops aimed at S3 to S6 pupils to prepare them for the world of work, concentrating on things like applying for jobs, interviews and personal success. Pupils are actively encouraged to participate via a series of multi media workshops. The workshops hope to promote positive attitudes to work and enhance a pupil's employability skills.

School To Work (Transition Programme) – Aimed at S4 to S6 pupils, this programme, developed by Scottish Power Learning uses assessment centre methodologies to assess the employability of pupils. Assessments are targeted at more vocationally biased pupils. The programme is designed to provide personal development plans for each pupil, training to improve their core skills and to receive feedback from a business perspective. Moreover, the programme supports career planning and promotes a positive attitude towards the world of work.

Further information on these programmes is available within the Careers Scotland publication as part of the Services to Learning and Guidance Community - *Enterprise in Education: Products & Services*.

E-Mentoring – Presents itself as an innovative way to connect pupils and corporate employees in mentoring relationships. Mentor Place is an IBM initiative aimed at S2 female pupils who attend school in Inverclyde and are interested in a career in science, engineering and technology. The programme began in 2001 and assists pupils in project work and develop their IT skills.

Pict Youth Challenge – producing ICT businesses for the Future is a youth challenge where young people work in team to develop their own innovative ICT related business ideas. The emphasis is to encourage creativity and innovation so that ideas can be commercialised and form the basis of a viable business.

Young Engineers Club – This initiative aims to give interested young people aged between 13 and 18 the chance to interact with various professionals from the engineering field. There are around 177 clubs in Scotland and these often run during lunch hours or after school hours. It presents the chance for pupils to participate in group projects, visit local companies, and so, stimulate their interest in choosing engineering as a career.

Scottish Executive – Currently conducting a review of collaboration between the school and further education sectors as part of their aim to increase and enhance school/college partnerships, and deliver the Executive's Partnership Agreement commitment of enabling 14-16 year old pupils to develop vocational skills and improve employment prospects through undertaking courses in FE colleges as part of their school-based curriculum.

Scottish Executive – The recent publication *Destination of school leavers from Scottish schools: 2003/04* is another area being monitored by the Executive. Statistics are available by gender including figures on school leavers in employment, and on school leavers unemployed seeking (not seeking) work.

Learning and Teaching Scotland - Developing an online resource for staff in schools which covers all aspects of policy and practice in inclusive education. The site, at present, is for staff in schools, but once fully developed, there will be separate sites for family and young people. The aims of this project include: to highlight the underlying principles of inclusion, focus on particular aspects of inclusion and specific needs, provide a forum for discussion for key practitioners to engage on key issues related to inclusive education.

Young Scot – A national youth information agency which aims to provide young people aged 12 to 26 with a mixture of information, ideas and incentives in a variety of materials that enable them to: make informed decisions and choices, turn their ideas into action, take advantage of the opportunities available to young people in Scotland (and the rest of Europe) and have confidence and knowledge to take their place as active citizens in their community. There is also information on education and work available through the 'Young Scots' books.

Appendix 6: Occupational segregation in Great Britain

The investigation covers Scotland, England and Wales and as such has had to reflect the different policy and delivery agents. Research has been carried out in parallel in all three nations. In Scotland the investigation has kept closely with the key remit to look at gender segregation in apprenticeships and training. England, on the other hand, in response to a request from the Secretary of State for Education and Skills, has extended its research to cover wider vocational education and training from age 14. This has meant that phase two of the English research has had a more enhanced and detailed focus on young people's choices.

The research carried out in Scotland, England and Wales produced very similar evidence displaying marked gender segregation in the sectors examined. The major difference here is in relation to participation rates in ICT. In England there is evidence to show that participation is predominantly male, whereas in Scotland there is a more balanced gender split. The crucial differences between the different research projects are that there are different delivery/agency priorities in the different public institutions. Therefore, there have been instances where different recommendations have emerged and/or a different approach to investigating the subject has been required.

The initial recommendations from the analysis of the apprenticeship scheme in England during phase one of the GFI were:

1. A National Strategy should be developed, driven by a high-level alliance across government, to ensure a consistent approach from all relevant parties to tackling gender segregation in training and work. This should incorporate effective incentives for leveraging real change, including targets for measuring progress. It should initially focus on apprenticeships and vocational education but the Government should look more widely, with the EOC and employers, at ways of tackling occupational segregation.
2. The Government's planned overhaul of the MA scheme should include actions that address systemic barriers in the frameworks for atypical recruits. As part of this, the MA scheme should be made more transparent through better data collection and immediate action should be taken to put all existing gender data on MA frameworks and pay in the public domain.

The recommendations to come from the research in England as part of phase two of the GFI were:

1. The Department for Education and Skills should put in place a new national agenda for schools that promotes real opportunity and choice and challenges the myths and stereotypes that form from an early age.
2. The DfES should impose a new strategic focus in work-related learning on widening choice and achieving equality for girls and boys.
3. The DfES should take steps to improve policy, delivery and practice for the new 14-19 vocational options, such as addressing the emerging gender split in the new vocational GCSEs.
4. The DfES should pilot the interventions that girls and boys said would encourage them to choose atypical apprenticeships (see above).

5. A strategic alliance of the Confederation of British Industry, Trades Unions Congress, Learning and Skills Councils, training providers, Sector Skills Councils, SBS and the Apprenticeship Task Force should target employers in the sectors covered by this investigation to promote the business case for training, recruiting and retaining women in non-traditional sectors.
6. Business leaders and major employers should lead by example in modelling better, more flexible employer practices that would help and encourage more women to enter non-traditional sectors.
7. Companies should be required to report on measures taken and progress towards gender equality and maximising human capital as part of their annual reporting. This could be linked to the new operating financial review, and would be a way of improving accountability on gender issues both within and outside the organisation.
8. Pilot schemes should be devised to test the interventions that employers said might encourage them to take on more minority-gender apprentices and workers.
9. Sector Skills Councils and employers should 'rebrand' training and work opportunities in male-dominated sectors in ways that will resonate with both sexes, not just their traditional audience.
10. Learning and Skills Councils, Sector Skills Councils and training providers should work together to improve the support for and delivery and practice of training schemes for atypical trainees.
11. The Office of Government Commerce and the Office of the Deputy Prime Minister's sustainable communities agenda should build challenging segregation into their procurement policy, through the National Procurement Strategy for Local Government and the nine regional centres of procurement excellence.
12. The Treasury's initiative to promote women in enterprise should include a focus on attracting women into the GFI sectors that are experiencing skills shortages. In particular, this should be included in the SBS plan that will detail concrete steps to meet the new women in enterprise target.
13. Government through the Skills Alliance should identify funding and resource support for the development, implementation and delivery of the recommendations as part of an effective national strategy and action plan on occupational segregation.

To reflect the British picture in terms of occupational segregation, a summary report has been produced for Great Britain. This report summarises the main findings from both phase one and phase two, argues the case for change, provides examples of best practice, sets out the recommendations and explains how the investigation will be taken forward throughout Britain.