

Report
Create Equality in Education Project
Skipton Girls' High School

Engineering the Future

National Union of Teachers
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Breaking Free from sex stereotyping

Stereotypes put boys and girls into boxes, men and women into fixed roles and deny individuals equality of opportunity and aspiration. Although men and women now make up half the British workforce, the segregation caused by sex stereotyping continues.

Segregation in the workplace along gender lines has various costs and wastes talent. It limits ambition and means that young people cannot fulfil their potential. Gender stereotyping fuels continued discrimination, because men and women who go it alone and enter non traditional job sectors face restricted opportunities, isolation and often harassment. Some industries with skills shortages are recruiting from a restricted pool. There is a skills shortage in the computer industry for example yet the number of women entering the sector is falling.

Young people are still choosing subjects according to traditional stereotypes which limit their options for the future. 90 per cent of the students taking foundation General National Vocational Qualification Health and Social care in 2001 were female and 81 per cent of those taking IT were male.

The divide continues at 'A' level. 74 per cent of students who took English 'A' level in 2001 were female and 72 per cent of those taking computing 'A' level were male. Segregation therefore continues in the workplace. 96 per cent of those taking engineering apprenticeships are male. 79 per cent of computer analysts and programmers are men and 86 per cent of primary and nursery teachers are women.

This report represents the findings of an investigation at one school in Yorkshire which is actively challenging gender stereotyping.

Chapter 1 **Introduction**

The NUT is currently involved in a research project with three European partners. The product is funded by the European Commission and the aim of the Create Equality in Education project (CREE) is to identify the factors that make a school's equal opportunities activity successful and to raise awareness for anti-discrimination initiatives in schools.

The School

This study was carried out at Skipton Girls' High School. The NUT approached the school in September 2003 and the Head Teacher was enthusiastic about the school taking part in the project. The project received full cooperation and support from the school.

Skipton Girls' High School is an 11-18 selective girls' school located in Skipton, which is a country market town in the Pennines, at the southern base of the Yorkshire Dales, North Yorkshire. Skipton is a small friendly town with a population of around 16,000. It has a castle, cobbled streets and canal boats. It is a picturesque busy market town which receives thousands of tourists every year but it also has a growing industrial sector. The school serves an area that is predominantly rural in character, although a small minority of pupils come from urbanised areas.

Skipton Girls' High currently has 656 students on roll, with 195 students in the sixth form. It is a popular and growing school, and is in fact one of the most successful state schools in the country. It has consistently outstanding 'A' level and GCSE results, particularly in mathematics, sciences and technology. Over 25 per cent of the female students apply each year to degrees in mathematics, sciences, technology and engineering. An OFSTED inspection in 1999 noted that by the end of year 9, standards in English, mathematics and science are very high and well above average. They are also higher than those achieved in most other selective schools.

Characteristics of the School

The school selects its intake and takes about the highest 30 per cent of girls from the area. The school draws its pupils from more than 50 primary schools over a wide area and the overall socio-economic background of pupils is well above average. The overall attainment of pupils before they come to the school is much higher than that achieved by pupils nationally.

The school has no pupils with statements of special educational needs. The OFSTED report of 1999 reported nine pupils in the school from ethnic minority backgrounds. About one per cent of pupils are known to be eligible for free school meals. The proportion is very low by national standards and below average for selective schools. About 98 per cent of pupils at the end of year 11 continue with full time education at 16, either in the school or elsewhere – a very high proportion.

The Project Under Investigation

In March 2003, the senior management team of Skipton Girls' High decided to apply for the status of a 'specialist school', with a bid for specialist status which was centred on engineering (and science, maths and technology).

The Government's 'specialist schools' programme encourages schools to develop a special strength from one of various options including technology, sports, arts, languages, engineering, science, maths and computing and business and enterprise.

The specialist schools programme helps schools, in partnership with private sector sponsors and supported by additional Government funding, to build on their particular strength and to establish distinctive identity through their chosen specialism. All specialist schools must teach a broad and balanced curriculum, meeting the requirements of the national curriculum. Specialist schools are also required to demonstrate a commitment to educational inclusion at the heart of developing their specialist.

Government data shows that all girls schools make up a disproportionately high number of those gaining language specialist status while all boys schools tend to shun arts in favour of sports and maths. There are currently 25 engineering specialist schools. Skipton Girls' High is the only all girls engineering specialist school in the country.

The decision to apply for engineering specialist school status was a major strategic move by the school to address the equal opportunities issue of girls achievement and attainment in ICT, mathematics, science and technology, and to establish a modern, technological culture in the school.

Methodology

The investigation in the school took place in November 2003. During the investigations interviews were carried out with the headteacher, the deputy headteacher, the assistant headteacher, the head of design technology, the head of food technology and coordinator of personal and social education, the head of physics, the senior science technician, the head of mathematics and the head of religious education.

Observation work was undertaken in a Year 7 Personal Social Health education lesson to understand the work of the classroom teachers and their role in promoting the equal opportunities policy of the school.

In order to gather the views of the students in the school, discussion groups of forty five minutes were carried out with several sets of students.

One discussion group was carried out with the head girl and the two deputy head girls, a second discussion group was held with one year 13 student, one year 12 student and two year 11 students. A third discussion group was carried out with one year 8 student, two year 9 students and one year 10 student.

Observation work was also undertaken at an information gathering session organised by the school with academic staff from Lancaster University's engineering department. A group of eight 'A' level students met with the visitors from Lancaster University to discuss the factors influencing choices in university and choices of subject course.

The participants in the discussion groups were selected by the school. A discussion guide was produced for use during the discussion groups. The discussion groups were organised to give pupils an opportunity to talk about gender and equal opportunities, the equal opportunities policies of the school and the school's bid for engineering specialist status.

Due to time constraints, work with parents of the pupils at Skipton Girls could not be undertaken. This is an area which would have provided a further perspective to the research.

Attitudes, Behaviour and Personal Development

During the discussion groups all the students showed high levels of interest when discussing aspects of their work and their subject choices. Behaviour in and around the school appears to be exceptionally good. The students in the discussion groups had very constructive attitudes. The buildings and its grounds are very well respected and the students appear to make very good relationships with peers, teachers and with other adults. Students spoke in a manner which reflected respect for each other's achievements and for the values, lifestyles and beliefs of other people.

Partnership with Parents and the Community

Links with the community are strong and this is a significant feature of the school. These include active collaboration with commerce and industry, and joint activity with many voluntary and service organisations. The school is closely involved with business education partnerships, with the young enterprise initiative and with various technology projects. The school organises its own programmes of work experience and work shadowing for older pupils. These provide a good range of experience in the community. The membership of the governing body represents a wide range of interests and activity.

Chapter 2

Equal Opportunities in Skipton Girls' High School

A commitment to equality of aspiration and to self-confidence is central to the ethos of Skipton Girls' High School. The school has an equal opportunities policy which is unusual in the extent to which it considers the influence of gender and gender related restrictions.

The equal opportunities policy is more than just a policy however. The commitment expressed in the policy, called 'a policy for equalising opportunities', is consistently implemented and promoted in every aspect of school life. Equalities work has been successfully mainstreamed at Skipton Girls' High and the school's decision to enter a bid for engineering specialist school status was a natural strategic step.

The bid for engineering specialist status and the range of activities which the school organises to support the implementation of the new status has developed in a way which equalises opportunities for the female students at Skipton Girls' High and the development of the specialist status cannot be seen in isolation from the central ethos and the ongoing equalities work of the school at every level.

Equal Opportunities Policy

The school has an excellent policy on equal opportunities which it seeks to enforce in every aspect of school life. The policy for equalising opportunities states:

"Our policy is to develop each pupil's intellectual, social and spiritual potential. There is therefore an obligation to ensure that nothing hinders that development, either through any form of discrimination or by lack of active encouragement or facilities.

Pupils and staff should value each other as individuals of worth, respect opinions honestly held and eliminate bias relating to race, culture, disability, gender or sexual orientation.

In a school where subject choice is not limited by gender, it is nevertheless necessary to strive to widen pupils' horizons, to point out the implications of curriculum options, and to actively promote non-traditional career choices.

The choice of books for teaching purposes and for the library, and the content of other resources and displays should contribute to a positive atmosphere in which cultural, racial, gender and other differences are seen as enriching and not divisive.

All areas of the curriculum should contribute, although subjects such as religious education and personal and social education may be especially suitable for addressing issues of prejudice and discrimination. There should also be opportunities for discussion informed periods and the raising of awareness in assembly.

Because of the nature of the school, there is no gender related restriction on choice of subjects for pupils. We attempt to offer a balanced curriculum from the age of 11-18, within the boundaries of the national curriculum.

One way in which girls are helped to think about careers, is the introduction of women visitors and speakers who may act as a role model. Teaching assertiveness techniques for improving self confidence are important in preparing girls for the prejudice, stereotyping and sexism attitude which they may meet outside school.

The North Yorkshire guidelines point out that although single sex schools may be less affected by stereotyping than mixed schools, there is a danger of hidden discrimination. It is still possible to have stereotypes of girls' learning and potential and staff may need to employ a wider variety of teaching and learning styles to motivate and involve all pupils in developing fully.

The school recognises that although it provides ways of dealing with overt prejudice and discrimination it is more difficult to ensure that there is no underlying bias and inequality. If, however, justice and tolerance are seen to be highly valued and positively upheld at all levels of school society, we are surely working towards truly equal opportunity for all".

This equal opportunities policy covers staff, pupils and parents and makes it clear that the support of governors and parents, as well as pupils and staff, teaching and non-teaching, is necessary if the policy is to be effective.

The school has an equal opportunities committee which was formed to represent opinion from various groups in the school, to discuss aspects of the equal opportunities policy and to make suggestions to the senior management team. The policy encourages all pupils and staff to take on a common responsibility to uphold social justice in the school, to treat one another with respect and sensitivity, and to deal appropriately with any forms of discrimination.

Behaviour and Anti-Bullying Policy

A leaflet called *Bullying: What It Is and What You Can Do About It* is handed out to every pupil on arrival at the school. The deputy head and the heads of Key Stage 3 and 4 prepared this leaflet after devising a questionnaire for use throughout the school to ask each student for their views on experiences of bullying and their suggestions for how to challenge bullying behaviour. The results of the anti bullying project were presented by some of the students in an assembly. The way that this leaflet was produced from a whole school activity exemplifies the approach of the staff to engaging the students with all the equal opportunities developments within the school.

Special Educational Needs

The school has a special needs policy which contains the following general statement:

"Skipton Girls High School is a selective school, and consideration of special needs must be seen in that context. Nonetheless, pupils can have physical, psychological, emotional or emotional difficulties which affect their learning. The aims of the special needs policy are that the school should provide a secure and caring environment; that all pupils should feel included, and equal, within the student body, whatever their social, ethnic, or cultural background; that all pupils will be helped to achieve the very best of which they are capable; and that all

pupils will have access to the national curriculum and public examinations and other learning experiences provided by the school”.

Leadership and Staff Involvement

What has driven all the equal opportunities initiatives forward is the commitment of the senior management team and the headteacher. Without the vision of the head teacher and the energy and drive of the staff, activities surrounding the implementation of the engineering specialist status would be far less effective.

Policy and practice related to gender equality are central to the school development plan and the strategies outlined in this research report form an intrinsic part of the school ethos which is reinforced at every opportunity. This is also reinforced to all members of staff who recognise the centrality of counteracting gender stereotyping and prejudice to the school improvement agenda. The school’s high profile in the community is also empowering for pupils, who realise that their achievements are of central importance.

Race Equality

The school has a policy for promoting racial equality which states that *“all girls have an entitlement to the education that best suits their abilities, and enables them to achieve their potential. All girls are entitled to expect that their religious beliefs will be respected”.*

The head teacher has a strong personal commitment to bringing the race equality policy to life and ensuring that students *“gain understanding and respect for religious and moral values, a respect for other groups, races, religions, and an appreciation of the cultural values and creative elements within other communities”.*

The school’s general equal opportunities policy recognises the importance of all parents, staff and members of the wider community being involved in fostering greater knowledge and understanding in pupils of the different cultures and religions in Britain today. It states:

“Pupils must be prepared for life in a multi-cultural country by learning to appreciate the diversity of customs, history, languages and beliefs.

In this school, where at present few pupils come from ethnic minorities, there should be no complacency about general attitudes to race and multi-cultural society. All staff and pupils should be critically aware of, and respond appropriately to, any example of prejudice or racist speech or behaviour.”

The head teacher worked in an inner city technology college previously and she is committed to building relationships with inner city schools so that the students at Skipton Girls’ High experience other cultures and integrate with students from other cultural backgrounds and religions. The school is currently building links with Faversham School in Bradford, which is an all girls school where the majority of the students and teaching staff are Muslim, through visits by teachers from Faversham School, exchange visits and the setting up of a secure website so that the students at the two schools can email.

The head has introduced a new programme of encouraging a variety of form assemblies to ensure that the assemblies are inclusive and not only Christian by encouraging

students from different faiths and religions within the school to lead gatherings and assemblies in the school, or to celebrate festivals such as Ramadan. The students are encouraged by the school to value differences between people, and to actively promote racial harmony within their communities.

Chapter 3

General Findings About Equal Opportunities in Skipton Girls' High School

The investigations found that the school works consistently and very hard to widen its students' horizons, to point out the implications of curriculum choices and to actively promote non traditional career choices. Promoting gender equality is not a peripheral activity.

Observation was carried out in one Year 7 PSHE lesson which used a lesson plan designed by the Equal Opportunities Commission called 'Focus on Gender' which asked 'do women work more than men?' and which set out some facts and figures about the gender pay gap. The caption on the worksheet which the students were using read 'prepare your daughter for working life- give her less pocket money than your son'.

The comments made by the students during this lesson showed how the school uses many different forums to develop the self confidence of the students at an early stage in their secondary school career. There are high levels of awareness of how the school attempts to equalise opportunities. The students' comments reflected a high degree of awareness of the barriers that gender stereotyping, sexist prejudices and caring responsibilities can present to women's careers and life choices. A few of the comments of the Year 7 students, which were generally very analytical and perceptive, are included:-

"if they do the same job and get paid twenty per cent less, then I think something should be done about it."

"the suffragettes fought for the vote and everyone says everything is equal now, but it is not."

"men are not better than women in any way and so if men and women are paid less, then it is just really really unfair."

"more men are in power; that is why it is still sexist and men tend to think they are better."

"if you think about it, we have only ever had one women prime minister, you never see women in elections. I don't really know about politics but I would like to go into it. I am interested if my dad watches the news, then I like to watch it too."

"I think it is good that this is a girls school. I think boys would say that we should go and do the food technology and that they should go and do Design Technology."

"men get the honour, women do the housework."

"most girls grow up thinking that there are some jobs like driving a bus or engineering that is a man's job and that they are meant to work on a till at the supermarket so having these subjects you can do at school makes you more determined."

"women do a lot. Some people's mums go to work and then do all the housework."

In Year 8, students spend three of their PSHE sessions on childcare and the school ensures a focus on the rights and responsibilities of both carers not just the mother, or the primary carer. The school encourages fathers to come into the school to demonstrate bathing the baby in order to counteract the stereotype that all caring responsibilities within the family unit must be carried out by women.

The school teaches assertiveness techniques for improving self confidence and encourages the students to take on positions of responsibility within the school. For example, eight members of Year 12 have recently formed a branch of Young Enterprise, a national education charity that inspires and equips young people to set up and run their own business. These Year 12 students have organised the production of a 'what's-on' magazine called IDentity, which is aimed at every generation but written from a young persons point of view. The students worked with local businesses to generate advertising revenue and the first issue has recently been published.

The school does not solely focus on achieving good examination results. It actively seeks to promote equality of opportunity by encouraging strength in sciences design and technology as well as in English and languages. In a recent competition to design and manufacture a model formula one racing car, the school's team gained an award for 'best engineered car' and 'fastest lap' in the first round of the competition.

The Royal Society of Chemistry considered the results of one of the school's pupils so outstanding that they presented her with a special award and the school regularly achieves at least two Arkwright scholarships, awarded each year to 'A' level design and technology students for their design projects by the Arkwright Scholarship Trust, which works in partnership with schools to promote design and technology and engineering related careers.

Chapter 4

The Equal Opportunities Project: becoming an engineering specialist school

Engineering Status

Skipton Girls' High chose engineering as its special focus, along with science, maths and technology, because the head teacher and the senior staff believed that in applying to specialise in engineering the school could build on its existing strengths but also extend the range of opportunity and vision for its young women.

The school had recognised before the bid that science, engineering and technology are increasingly the focus of career choices for young women, and by forging strong partnerships with local and national business and industry, the school wants to actively challenge the stereotypes that still affect girls' attitudes to these subjects.

Even before the bid to become an engineering school, over twenty five per cent of the students at the school were applying each year to degrees in science, engineering, maths, technology and in engineering. The school is building on these existing strengths in order to contribute nationally to the pool of able young women entering the professions of engineering, mathematics, science and technology and to develop a culture that is technological, enterprising and vocational. The school wants to expand on its strong academic success by broadening the highly academic curriculum at Skipton Girls' High to provide its able students with more vocational contexts for learning – particularly in the field of engineering.

The school wants to encourage its students to look at engineering in the way it might be understood in Germany and Japan, as one of the most high profile, intellectually demanding and personally rewarding of all professions. The school is clear that it is not trying to turn every young woman at Skipton Girls' High into an engineer - but it does want to build on the excellence of its results in mathematics and the sciences, and to create opportunities both within school and for the local community - to challenge stereotypes that still affect girls' attitudes to these subjects, and to build on the school's outstanding record in this area.

The aim of becoming a girls' school with an engineering focus was to become a school with a culture and with practices which actively challenge gender stereotypes and enable female students to overcome the barriers preventing them or deterring them from entering the engineering and technology sectors. The focus on engineering is being used as a unifying theme to fuse the disciplines of mathematics, science, technology and enterprise.

This is not just wishful thinking. In putting together its bid for engineering status, the school was required to submit a detailed implementation plan setting out clear objectives for extending the range of opportunity and vision for its young women and for ensuring that subject specific stereotypes are challenged.

Implementing the new engineering status

One of the many active ways in which the school is taking this forward is by building on the existing support of major engineering and training sponsors such as Rolls Royce plc, Landis Lund, Airedeale Springs Ltd, EMTA (the National training organisation for

Engineering and Manufacture) NYBEP (the North Yorkshire Business and Education Partnership) and Edinburgh University's School of Engineering and Electronics. The school is using these partners to develop collaborative practical projects for its students and to gain information and knowledge which can support the students and widen the students' experience.

Another example of how the school is taking the engineering focus forward is by developing an engineering design club for gifted and talented pupils - boys *and* girls - from partner schools.

A key target that the school is developing to support the new engineering status is to provide younger students with the mathematical skills that are needed for excellence in engineering, and to enrich the curriculum by providing engineering contexts for learning science and mathematics. The school is actively trying to foster an appreciation of engineering as a vital discipline in the country's economy and to target and support individual pupils.

The school is continuously developing activities, competitions, and visits that will motivate the students to learn more about careers in engineering and design. Successful women including former pupils who have engaged in engineering careers (such as the site engineer for the new Wembley Stadium) are used as role models in promoting engineering as a career for young women.

The school is working in collaboration with the national campaign 'Women Into Science and Engineering' (WISE) to maximise the effects of the schools development as an engineering specialist school and to seek support for the school's quest to promote engineering as a discipline and as a career.

Discussions with the head teacher showed that the decision to chose engineering as the subject specialism was in line with the head's own vision for the school and for the education of young women. Coming from a background in City Technology Colleges, the head teacher believes that it is important to give vocational contexts to academic learning. The head is personally very active in forging partnerships with industry and the local community.

Partnership with business and industry to widen equality of opportunity

The investigations showed that the school has been very successful at building on active collaboration with its business and university partners such as STET and University of Edinburgh. These links encourage the students to engage with the field of engineering and to view it as a professional career for young women.

Many of the students commented that they had found information provided by visitors to the school extremely useful even if it had not prompted them to change their subject choices or consider careers that they had not previously considered. Comments included:

"By bringing people in who have the experience and have advice to give us then I think it has really been useful because we need all the advice we can get really".

"There are, if you look at the posters around the walls, lots of ideas and loads of competitions. There was a graphics competition for a logo for something, and

there are writing stories for the school newspaper and there are a lot of ways you are encouraged to use your talents. So if you are good at English then you can use that strength and if you are good at science then you can go on to build a space rocket or enter those challenges. There's a physics club and all that sort of thing".

"I think the way the school has got people to talk to us about the engineering has been great, and it would be nice to talk to even more people as well, but they're thinking of doing that. They are promoting it because it's been in the paper and everything. I think they're done quite well, they talked to us about it in assembly".

"A woman from WISE came in. I thought it was very good that she came in to talk to us because it gave you an idea of how far you can go. Even though I'm thinking I'm going to do engineering anyway, it makes you really think you can do it when you have someone come in to talk to you like that. It makes you think 'oh well I really can do it' because there are, you know, there are women out there doing it, and it proves for certain that you can get past a certain level. It just gives you that extra something to aim for".

Curriculum changes to increase awareness of engineering

The school is preparing to introduce a GCSE course in engineering from September 2004 in collaboration with the sponsorship of Rolls Royce. An engineering coordinator is going to be appointed who will identify suitable pupils for a pilot, inform parents and engineering will then be planned into the options timetable. The school expects that increasing numbers of students wanting to take up engineering at GCSE will come through as the careers guidance takes effect.

The school is preparing to provide a new course in engineering in the sixth form from September 2004 in collaboration with Rolls Royce. The school will make places available to boys from the neighbouring boys' grammar school leading firstly to an AVCE single award but later a dual award qualification will be phased in to further increase capacity for take up as more students come through with greater engineering awareness from Key Stages 3 and 4. The school will liaise with its university partners to ensure that the combinations offered are suitable for university engineering courses across the engineering disciplines.

The school is preparing to introduce a sixth form business course, an AVCE, from September 2004 with a greater emphasis on the engineering industry because the current business courses do not involve engineering.

The school is broadening the Key Stage 3 curriculum to include provision for engineering to counteract the fact that pupils have little knowledge of the engineering courses or careers available to them and the fact that there is very little emphasis on engineering in the Key Stage 3 curriculum. A Year 7 induction programme is planned to introduce all pupils to engineering plus a one week engineering challenge for Year 8 where all pupils will work in teams on a design challenge which requires a manufactured solution.

Chapter 5

The Success of the Project

It is not possible at this early stage to establish whether the engineering status has increased take-up of the specialist subject courses. There was evidence in all the discussion groups however that the new status of the school has generated discussion and interest in the specialist subject courses. The students comments suggested that they believe their school is successful at encouraging students to consider a wide variety of subjects and interests. Several girls commented on the usefulness of the work experience that the school planned for pupils with engineering employers.

Although many of the targets associated with successfully implementing the new engineering status of the school are ongoing activities, such as broadening the post 16 curriculum to emphasise business and enterprise skills related to engineering, there are many aspects of the new engineering status that have already had a positive impact on the pupils.

The data gathered from pupils in the discussion groups showed that the students broadly support the decision of the school to apply for engineering status and that the project is seen as beneficial to the school, staff and pupils.

This chapter will look at the different ways that the engineering status of the school has already been successful in further widening pupils' horizons, focusing the attention of pupils and parents on the implications of curriculum options and contributing to promoting non traditional career choices.

Chapter 6 will outline some suggested reasons behind the success of the activity. It is clear from the evidence collected that the project has already been successful in several different ways.

Students' perception of engineering status

As a girls' school with an engineering focus, the school is successfully challenging gender stereotypes by encouraging students to discuss issues of gender equality and to be aware of the issues around subject choices. The large majority of students had opinions to give about why they thought the school had opted for engineering status and what benefits they thought it would bring their school. Students from year 7 to year 12 were confident, articulate and full of ideas when discussing the engineering status of the school.

Comments from the different discussion groups about their views on the engineering status included:

"Now we have engineering status there's hardly anyone in school that thinks men and women need to do certain jobs. Men and women can do the same jobs, as well as men".

"The opportunities – I think there are a lot of opportunities. Because now we have the engineering title, and we've got really good teachers and you know that whatever career you choose someone with help you – they give you help with whatever you want to do, because we've got such a good range of subjects".

“Trying to get rid of the idea that only men can do the engineering, to try and get more women involved in it”.

“Definitely, because there are new courses coming in for engineering now, there is a new engineering course and there are more opportunities if that’s what you want. It gets rid of the whole men can only do engineering thing”.

“I think the engineering status is to give women the opportunities because at the boys school down the road, you can do electronics as well for your GCSE. And I think some girls would have liked to have done that and they couldn’t, but I think now with the engineering you can do more of that if you want to, I just think it’s making it more equal”.

“I think a lot of people at first thought when we got the engineering status that it wasn’t very suited to us as a school, but I do think that we are quite scientific if you look at the grades. People do very well in science here”.

“I think mainly it will have more of an impact on the upcoming years. But not for us I don’t think, no. I think that’s the only major difference really. They’re going to have a chance to do engineering”.

“There’s also been a lot of IT that we’ve started again, we did have IT in lower school, but now it is starting as a subject in itself and it is being backed quite a lot now since the engineering status. I don’t think that becoming an engineering college is a bad idea at all, because towards the beginning of this year, in September, they have had interesting people come in. We had one girl who came in from Bradford University where they do automotive engineering and we had a chance to look at the cars and that kind of thing, and that got me quite interested in it, I thought that it would be quite useful, although I still want to be a doctor. I am hoping to go for a weekend session where you get to go to the university for the weekend and to have a taster of the course, so I think I will do that even though I probably don’t want to do engineering finally”.

“We are the only girls school in the country to have engineering college status so it is good publicity for the school to be able to say look we have got all these girls who do this”.

“Engineering was a good choice, it is an obvious choice because as a school we are very good at science. The science teachers are very good here”.

“Well, it’s already having an effect in practice on our GCSEs because as well as doing ordinary maths they are offering statistics as well as now we are doing an extra GCSE because of the engineering link. I think it wouldn’t change someone from doing English to doing science or anything like that but it makes you think”.

Students’ perceptions about their freedom to make choices

The students had been made aware that the school was not trying to turn every student into an engineer and the students expressed pride that their school was successful in all subject areas. The students frequently remarked on the excellent teaching staff and facilities across all subject areas. The students’ comments revealed a high degree of

trust in the teaching staff and appreciation for the high degree of support provided by the school when students had to make decisions about subjects and degrees.

Comments included:

"I'm less academic, I don't really like academic subjects, I prefer music and drama and art and design, like graphics and stuff and I think that's good because this school has a lot of that. Like with the drama studio and music department and then all the graphics and engineering that's good for people like me who don't enjoy maths and sciences".

"Some of my friends didn't really know what to think because they thought that the school was trying to make us all engineers at first. They were saying why couldn't they have done languages or something else? But I think everyone's for it now because it's been explained to us. The school haven't just said we're engineering now, it has been explained to us and the opportunities – like how we're going to benefit from it, has been explained as well. So everyone is, I think, behind it now".

Engineering as an industry

The discussion groups showed that the introduction of engineering specialist status had provoked discussions and led students to gain a greater awareness of the many facets of the engineering sector. The fact that engineering is a non traditional sector for women graduates did not appear to be a factor that would adversely effect the students' post 16 subject choices or career destinations. The school is extremely successful in building the confidence and self esteem of its students so that they are confident in their ability to achieve and succeed in non traditional work places.

Comments from the discussions included:

"Well even though we are sort of engineering – generally engineering, you don't get as many women in it, because some women just don't want to do it and also they tend to also sort of look for men".

"You can be anything if you put your mind to it. If you want to be something then if you work hard at it you can do it..."

"I think that the gap between men and women and the opportunities is closing".

"I don't think it would really bother me if I was working largely with men. I don't think I'll think about that at all to be honest".

"It never crosses my mind that I might be working largely with men".

"Yes, it was in my mind, especially when I went for the Arkwright interview. I was one of the only few girls there, and I know that within engineering it is very much male dominated. Medicine is becoming more evenly balanced and they are purposefully trying to attract women though so that's good but it is an issue. I am thinking of doing medical research and it certainly is an issue that not many women do it".

“In some things that I’ve done, I haven’t even considered it – whether it was male dominated or if I thought it was male dominated or female dominated – but I think I’ve just gone for what I felt was interesting and not thought about it. I think even if I wanted to go into engineering I would apply. It would not put me off”.

Attitudes within the community about what women can achieve

The students were generally optimistic that barriers within society to gender equality were weakening and that the younger generations would experience fewer barriers than their parents’ generation. However, the students displayed an awareness during discussions that the factors contributing to occupational segregation are complex and that some of the stereotyping is hidden but deep rooted.

The comments of the students showed that the school is successfully raising awareness amongst the students of the prejudice and stereotypical attitudes that the students may encounter post full time education. Comments from the discussion groups included:

“The older generation think that women are supposed to do some jobs and men are supposed to do others and I think that’s just how they set their mind because they have been brought up that way”.

“Because when they were children half the people would probably never have heard of women plumbers probably”.

“I think that it is getting a bit better. My dad had to do the housework for three or four months because my mum got a full time job and at first he was a bit hesitant about it. I don’t know if he thought what are people going to think of me or he felt pressurised because he had to plan but he didn’t realise how hard it was. I don’t think men realise how hard it is to look after children. There are now more househusbands, more women are working full time and more men are staying at home now. I think the roles are reversing a bit but I think it’s still quite unequal”.

“My mum and dad both work full time. My dad does the ironing and my mum does the hovering, it’s not spoken about or anything but they have quite a good balance, so I don’t think one of my parents does more than the other”.

“People never say that men and women can’t all do the same jobs but it’s obvious that they don’t think that because there are still not that many women in business, are there?”

“Well I think you can do or be anything no matter what your gender. I think you can but there might be other obstacles in your way. It might not be as easy for one gender as another as for the other”.

“I think there are barriers. It can be more difficult for some people. For example, you can be a male teacher in an all girls school, but I know for one that I don’t relate to the male teachers nearly as well as I do to the female teachers and I think maybe that’s a feeling on my part, that they can do it but it’s probably easier to be a male teacher in an all boys school”.

“But I do agree that men and women can do anything because if you think about it, at the end of the day, if you are the best person for the job, man or woman, then you should get it really”.

“I think a lot of the time people trust certain jobs to be done more by men. I think if I was getting say a bathroom fitted, or my drainpipes cleaned or something, I personally wouldn't feel comfortable having a woman do it. Not because I didn't trust her, but because I'd fear for her safety or something. I know it sounds really clichéd and wrong”.

“I think it has probably got something to do with tradition, it is all about what jobs are traditionally seen to be done by men and therefore we accept that they are done by men”.

‘I think perhaps if women were totally equal with men, you know, some women would think ‘I can do that, you know’. If you are a women who wants to go into a predominantly male field, then you are probably going to feel more driven to do it because you know that it is done mainly by men, and you want to prove them wrong”.

“I don't necessarily think it's always a bad thing to have some kind of difference. Some might genuinely feel more comfortable in a job that requires more what is naturally in their nature, like teaching or something that's caring, maternal. It sounds really clichéd, and I don't want to sound like that, but generally women are more empathetic. It's just in their nature to be more caring, whereas you know, men might not be so much. ”

“It's the same with men. I suppose it's easy for them to be something like a mechanic or a plumber it's seen as more acceptable for men to do something like that but if a boy wanted to do something else, if he went home and said ‘Dad when I grow up I want to be a midwife’ or something like that, then they'd think there was something wrong with him, wouldn't they?”

Encouraging parental support for engineering status

The reports from the students suggested that parents largely supported the decision of the school to become an engineering status and that the school has worked hard to send out clear messages about its aims and objectives. The school has been successful in managing parental expectations and informing parents of its aims surrounding engineering status.

Many of the students displayed a perception that they had wider choices and opportunities than their mothers had enjoyed and many students reported receiving a high level of support and guidance from mothers and fathers. Comments included:-

“When I asked my mum what she wanted to do when she was my age, she said that all she ever wanted to do was to be a housewife, which is a big difference, so it is improving for women a bit now”.

“My mum a few months ago said ‘I don't really want you growing up as an engineer’ but then I brought home a leaflet and some letters and she changed her mind and decided that it is a good step for the school and that it is really

looking forward to the future and moving on, so she said you might as well branch out and try different things”.

“My mum and dad wanted it to be a language college originally because they knew that was what I was interested in but most people in my class have chosen the subjects they like so it has benefits for most people and also it is an interesting thing to go for. I think we are one of the first girls’ schools to get engineering status, and that is quite an achievement”.

“I think it is probably quite an individual thing compared to a few years ago, because when my mum was younger she went to a comprehensive and she was made to do physics when she didn’t want to because she was the best at physics and they don’t do that now. I think there is a bit too much pressure sometimes on exams, but I think probably at most schools there is pressure’

“My dad loves it! My dad thinks it’s a good idea because engineering is more a male thing but he thinks ‘yeah girls should be doing that’. I mean he’s not saying that all the girls who come to this school should do engineering when they leave but he believes in giving girls that opportunity. I am sure that few girls before this was all set up even knew what engineering was really about, whereas now I feel that I know more about the world of engineering. I am not necessarily going to go into it but at least I am exposed to it, which I think is definitely a very good thing”.

Careers guidance and support to students in connection with subject choices

The school is successful in providing careers guidance and support to students to enable them to make subject choices and access information about a wide variety of careers and industries.

The students spoke knowledgeably and confidently about how they and their peers had made subject choices and they commented on the supportive, challenging and stimulating atmosphere in the school. A very consistent theme in the discussion groups was the ease with which students felt that they could seek support from staff.

Comments showed the variety of factors influencing students’ choices:

“Where that career could take you. Does it have opportunities in it – because you don’t want to just stick in the same job all your life. You have to consider whether you would enjoy it because you don’t want to do something that you don’t enjoy. There are so many things to think about really when you choose your career”.

“You want to do something that you enjoy, and I don’t think you should choose a job for good money, but I think it sometimes helps because then if you do have children there is a lot more opportunity to go to university and get further education”.

“What I like about this school is that everyone wants to get on with their work here and everyone wants to work hard. I think we are very lucky because the teachers are very supportive and they always listen to you”.

“The people are really nice here. At my primary school, I ended up leaving that school because I got bullied and the teachers just didn’t care and then I came to

this school, which is so different. Teachers really care here. People get the help they need with school work here and personal problems as well, so the teachers are more than just teachers, they are actually friends because they are here for you and they really care what happens”.

“You read in magazines that they say go and talk to your teacher and people say oh I’ve never talked to my teacher about anything like that but I feel that I can”.

“You also feel like you’re achieving at the school, because everyone at the school is helping you along, so you’ve got a lot of support”.

“I think because we have all worked so hard to get here that, when we are here, we want to make the most out of it. If it is physics and maths that you’re interested in then you don’t care what people think about those subjects or if they are male subjects in other schools because you have got here and you want to take full advantage of all that there is for you in this school”.

“You don’t feel like, when you’re with your friends, you don’t feel embarrassed at all and you can just say I like maths and physics and science because there is bound to be someone else who does too”.

“At primary school if you said you liked a subject like physics then everyone thought you were a bit weird so you would be pretending not to do well, but here if you talk to your friends about it they don’t say you’re a swat or anything, they just say ‘yeah I think that too’”.

“I looked to engineering because I was always interested in architecture and that route anyway and so I did it of my own accord because that’s what I wanted to do”.

The impact of single sex schooling

Many students in the discussion groups identified the absence of boys as a factor which contributed to a lack of the stereotyping found in other mixed schools which they had attended or had heard about. Many of the students were aware that they were not subject to the same gender related restrictions as peers in mixed schools. Comments from the discussion groups included:

“There is less distraction. In my primary school, I don’t know about all schools, but it tended to be boys that kind of messed around and stuffed up in lessons”.

“You don’t have the pressure of having boys around, because when you get to this age you’re conscience of boys being around”.

“I think if we went to school with boys, in year 9 and year 10 you would become completely different people. I know I would and my friends would. We were saying recently that we would not be the people we are just around ourselves.”

“School is more important than boys really at the end of the day. You can see them after school”.

"I think because we are an all girls school we have always in some ways not had such a problem with stereotypes than other schools. I know in some schools, physics 'A' level for example has always been predominantly male but it has just not been like that here so we have always been a load of girls doing physics altogether. I know that we're told that if you've got physics as one of your 'A' levels that when you apply to university that they are going to think that a girl who has got physics is unusual. That seems strange for us as we are all girls and we are used to girls doing physics".

"We don't think about not having boys, because you just don't consider it. You don't consider the fact that if you were at a mixed school maybe you would be the only girl among ten boys so I think in some ways it's not going to make that much of an impact on our school as it would be if it was engineering status at a mixed school".

"I think because there are no boys that girls at our school have always been interested in the whole range of subjects. I think our school is very balanced. I think people have always liked science, maths and technology."

Support, enthusiasm and commitment from staff

The interviews with the discussion groups and with the head teacher and the staff at the school showed that the students are encouraged to be ambitious and self confident; they are encouraged to use their intellectual ability to the utmost; and they are encouraged to fulfil their potential.

Comments from members of the senior management team included:-

"There is no problem in the selection of subjects because everything is open to them and at no point does anybody ever say to them students 'I shouldn't do that if I were you because you are a girl'. We try to encourage them to consider everything. Whether that entirely quite prepares them for what they are going to find in the real world, I don't know, but I think that perhaps it does give them that extra confidence. What we hope happens is that if they get put down at university, we hope that they would bounce back because they have been taught to have belief in themselves. I think they would have plenty to say about it if anybody tried to put them down."

"With our girls it is not such a problem because they know they can do it. They have known right the way through school with no one ever telling them that they can't do it because elsewhere they get put down a bit by boys, but here they all do science right the way through. It is girls who come on to us later from other schools, with boys who assume that they are good at sciences and that the girls are not, those girls who do have this sort of crisis of confidence when they come so we have to persuade them that we don't just let them sink when they get here and that we will help them and if they want to do sciences then we will encourage them to do it because the sciences are some of our most popular subjects."

"We are trying to pull the students into leadership and management roles within the school too, so that they can rightly share a role in running the school. These are bright girls and they have got really wonderful things to say about the school"

and the direction of the school and we need to get them involved in giving us advice. Then hopefully people can develop confidence.”

“I think that it is important for the girls that they should have every opportunity to look at the whole range of careers on offer. We have taken engineering status not to mean that we are turning everybody into an engineer, but to just say to the girls that when they are looking at dance, drama, music, the performing arts and whatever else, and the humanities and English, that there is also this, and do not forget that you can do these things as well.”

“We do encourage them to aim as high as possible really because later in life they will think that they could have always done that if they had just been guided along the way. So we try to do that if we can. I wouldn’t say that they go into stereotyped courses because we do encourage them to look widely and we do get a tremendous number going into the sciences and maths. They don’t even realise that by comparison to other schools what wide choices they are making.”

Chapter 6

The Factors that Made the Project Successful

There is an explicit agenda in the school to challenge stereotyped choices and to encourage the students to fulfil their potential.

The school uses a range of activities to support the aim of striving to widen students' horizons and promoting non traditional career choices. The school breaks down the cycle which in many other schools reinforces the cycle of traditional choices, by widening the range of perceived choice to include non traditional choices.

The school is successful at increasing the numbers of girls selecting non traditional subject choices firstly by challenging what is categorised as traditional and non traditional and secondly because it prioritises supporting students who make non traditional choices.

The investigation suggests that the following factors make the activities of the school successful:-

- The school raises awareness of stereotyping and of the implications of stereotyped choices.
- The school gives consideration to the way that non traditional subjects are taught to girls to develop an inclusive and supportive approach.
- The school uses work experience positively to encourage young women to take placements in non-traditional jobs and does not use work experience opportunities that remain stereotyped. All pupils in year 11 participate in well organised work experience for one week. There is an appropriate programme of preparation, visits by members of staff and debriefing and opportunities for year 12 pupils to participate in work shadowing for one week. This is very successful and almost all pupils participate.
- The school provides unbiased and well informed careers education at an early stage to improve students' knowledge of the world of work and to challenge stereotypes about what men and women can and should do, which are developed at different stages throughout the school and across the curriculum.
- The sound programme of careers education is included as part of the PSE course in Years 9-11. Impartial guidance is provided by the career service and there is support of good quality to enable pupils to make informed choices in Years 9 and 11. All pupils in the sixth form are offered a careers interview and good guidance for entry to higher education, suitably enhanced by a higher education day for pupils in year 12.
- The school works collaboratively with higher education institutions such as the University of Edinburgh and the University of Bradford and organises events such as the visit from Lancaster University's engineering department in order to encourage universities to develop inclusive recruitment methods and to widen the scope of students' expectations and opportunities.

- The school regularly involves parents, governors and teachers in the work to develop equal opportunities in careers choices and is particularly good at inviting former pupils and women working in non traditional roles to return to talk to groups of pupils about their experiences and about non traditional employment.
- The school takes advantages of local employer input and works collaboratively with local and national employers such as Skipton Building Society, Rolls Royce Plc, Landis Lund and Airedale Springs Ltd.
- The school uses curriculum materials which provide information and encourage discussions about non traditional sectors such as materials produced by the Equal Opportunities Commission and real life discussion topics about men and women doing a whole range of jobs.
- The school develops practical projects involving non traditional skills.
- The school has built links with a variety of national initiatives such as the Specialist Schools Trust and WISE and materials produced by WISE are displayed around the school.
- The school has a head teacher with a strong vision for the school based on a philosophy and a team of staff who are motivated to break the influence of stereotypes and peer pressure. Teachers are among the most important adult influences in young womens' lives and can be one of the key factors in whether girls integrate non traditional skills into their lives and become comfortable with non stereotypical subjects. There are a number of inspirational figures on the staff of this school who act as role models and who encourage the students to engage with a range of subjects and educational experiences.
- The school has built consistent links with parents throughout the process of applying for engineering specialist status in order to engage parents with the aims of the school and to encourage parents to support their children and to encourage non traditional choices as well as traditional choices.
- The school displays a large amount of promotional material and information around the walls of the school and in the corridors which aims to encourage non traditional choices.
- The school places great emphasis on encouraging the girls to develop into confident and independent young adults. The staff consciously focus on fostering qualities of leadership and a sense of responsibility among the students, who take ownership of the school, its ethos and what goes on in the school. A number of the students have been closely involved in updating the new revised school prospectus, for example.
- There is an active schools council for which pupils take full responsibility. The students reported that they felt able to express their views openly and shape the direction of the school and this is clearly a school which empowers its students. The students do not feel intimidated by maths, science, technology or ICT for example.

- The capacity of pupils to show initiative and take on responsibility is impressive. A large number of pupils seek out such responsibility. The school has a considerable range of community and voluntary service, much of it undertaken within the popular Duke of Edinburgh Award Scheme, which involves around 150 pupils.

Chapter 7

Conclusion

Whilst the overall numbers of young women and men entering the workforce are now almost equal, the numbers accessing particular occupational sectors differ greatly, with young women still overwhelmingly moving into traditional females sectors and young men entering traditionally male sectors. The reasons behind this gender stereotyping are complex and the factors are both demand and supply led. Individuals' choices are often narrowed by a range of influences both informal and formal.

The focus on equalising opportunities at Skipton Girls' High School is innovative and proactive and the staff show noteworthy commitment and energy in promoting equal opportunities and tackling the issues around gender stereotyping.

The engineering status of the school has been successful in further developing each pupil's ability to make choices about her future that are not constrained by gender. The new status and all the surrounding activities have acted as a trigger to extend the range of opportunity and vision for the young women who leave Skipton Girls' High School yet further. If students decide that a career involving engineering is not for them, they are making informed decisions and they are not intimidated by a lack of knowledge, exposure or confidence.

The school makes considerations as to how to encourage equality of opportunity central to everything that it does. The school is committed to updating its curriculum and improving its links with business, vocational training providers and universities to widen its students' horizons ever further. This study has shown that the enthusiasm and the dedication of the staff within the school in systematically tackling gender stereotyping is effective in promoting gender equality and developing confident assertive students.

All schools are subject to external factors which encourage gender prejudices and stereotypical attitudes, aspirations and choices, such as parental and community attitudes and influences on personal identity. This school has shown that by tackling issues of gender equality in such a proactive and systematic way, it is possible to work towards equality of opportunity for female students.

The approach taken by the school has been highly successful. It provides an insight into how a school can mainstream equalities into everything it does and how a school can put gender equality at the top of its agenda and at the centre of the culture of the school.