

The Perceptions of Career Counsellors towards Girls and High Status Subjects in Five Secondary Schools in Durban

Neville Edward Wright

Student No. 201509963

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Supervisor: Dr Deevia Bhana

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Declaration of Originality

I, Neville Edward Wright, declare that this Mini Dissertation is my own work. It is being submitted as a 32-credit module for the Degree of Masters in Education at the University of Natal Durban.

It has not been submitted before for any accreditation or examination at any other university. Where use has been made of the works of others, it has been acknowledged and referenced.

Date: 22/10/04.....

Signed: N. E. Wright.....

NE Wright

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Abstract

This study was conducted to investigate what the perceptions of Career Guidance Counselors were toward young girls and High Status Subjects. The study was underpinned by the work done by a number of researchers in other countries.

These researchers all proved that the subjects Mathematics and Physical Science were not gender biased and girls could do as well as boys. The subject packages girls chose at the end of their grade 9 year would have an impact on possible career choices they could make after the completion of grade 12. The study also seeks to explore reasons why girls were not choosing these subjects and if the Career Guidance Counselors were actively encouraging the girls to take these subjects.

The study was a qualitative one using interviews based on questionnaires. The answers were carefully recorded and decoded. The Career Guidance Counselors were interviewed at their schools in the central Durban area. The schools selected were those fortunate enough to have counselors on their staff. Many schools do not have Career Guidance Counselors as they are unable to accommodate them with their limited resources

The study found that at many schools there was little if any encouragement from the Guidance Counselors to enter these subjects in grade 10. The two schools that did encourage their female learners to select these subjects found that their learners achieved very well. This study will show that urgent intervention needs to be made if our young girls are to take their rightful place in our society in a number of high status occupations.

Chapter 1

1.0 Introduction

What happens in the school curriculum is fundamental to peoples' lives. Schools are meant to educate the next generation, and to do so through the curriculum. If the curriculum excludes or marginalizes some groups or discounts their ideas, it will make it harder for members of those groups to benefit from the education system. If a high status curriculum is only offered to or accessible by some groups, social divisions will be perpetuated, conversely, if we want a future significantly different from our present, we will need to educate our future citizens differently (Paechter, 2001a: 1).

The secondary school curriculum is fundamental in offering various subject choices for both boys and girls. If some subject choices are accessible only to some groups of boys and not girls, then gender divisions are perpetuated. Subject choices determine to a large extent girls' future opportunities. Career paths are often gendered and schools play a major role in shaping the gendered nature of careers that often sideline girls and women to more domesticated career paths. School career guidance can play a decisive role in ensuring that young girls include high status subjects so that their future opportunities are less domesticated. Effective career education can significantly contribute to women and girls, resulting in economic empowerment and more opportunities in high status careers (GETT, 1997).

Research findings have pointed to the perpetuation of gender divisions in schooling. In terms of the formal curriculum, it has been found that the syllabus and content exclude the experiences of women

and girls (David, Weiner & Arnot, 2000). At secondary school level, where subject choices are available, girls tended to opt for humanities, languages and social sciences, and boys for science, mathematics and technological subjects (David *et al*, 2000). While this is changing both in the UK and in South Africa where girls are encouraged to participate in science, mathematics and engineering, the position of the majority of girls remains tenuous. Research has found that schools directed boys and girls into traditionally male and female subjects and careers and girls' careers were believed to be less important than boys (Arnot & Weiner, 1987). In terms of performance, research had found that at the secondary level, girls did not perform as well as boys in mathematics and science and had low occupational aspirations and thus tended to opt for low status and low paid feminine jobs.

This study considers career counsellors' perceptions of girls in high status subjects in five schools in Durban. My interest in high status subjects like mathematics, science and technology stems from my position as Subject Advisor in Engineering, Manufacturing and Technology in the eThekweni Region. Engineering, Manufacturing and Technology is a new learning area in secondary schools that the Department of National Education has introduced as part of the new curriculum 2005 in South Africa in the Further Education and Training band for which I am responsible.

Advising approximately 1800 schools in the Durban and surrounding areas and monitoring the introduction of Engineering, Manufacturing and Technology to the rest of Kwa-Zulu Natal is quite a huge undertaking. Engineering, Manufacturing and Technology offers fresh scope for young girls in breaking from the mould of traditional career paths.

As a Subject Advisor I have many responsibilities. I am tasked with curriculum interpretation and

implementation of new curricula. I am also responsible for the retraining of educators in the new Further Education and Training band. Furthermore, I am responsible for the introduction of Engineering, Manufacturing and Technology, and the promotion of it is my area of jurisdiction. The promotion of Engineering, Manufacturing and Technology to both boys' and girls' schools is a significant task.

In the promotion of Engineering, Manufacturing and Technology, I have been very alert to the ways in which high status subjects in schools are exclusionary; girls are often marginalized. If a high status curriculum package like Engineering, Manufacturing and Technology is only offered to, or accessible by mainly boys, then gender divisions will be perpetuated. Research shows that subjects like Engineering, Manufacturing and Technology are often considered to be the domain of boys (Paechter, 2000). The problem in Engineering, Manufacturing and Technology is further exacerbated by the requirements that accompany the subject. To pursue Engineering, Manufacturing and Technology, learners are compelled to choose Mathematics and Physical Science. The compulsion to take Mathematics and Physical Science, led me as Subject Advisor to investigate a number of schools that offer Physical Science with Mathematics, as these would be the schools where the new learning area would most easily be introduced. From my experience as Subject Advisor, examining the examination entries and results from Grade 12, it became very clear that in almost all the schools, small numbers of learners were taking a subject package that included Mathematics and Physical Science. Upon closer scrutiny, it became very evident that there were only small numbers of girls after Grade 12 who had taken up Engineering, Manufacturing and Technology.

I then ventured into trying to establish why this was the case and upon initial discussion with career counsellors in schools, there appeared to me to be a hidden gendered curriculum: 'Girls cannot do Physical Science'. This provoked the current study to investigate the perceptions of career counsellors in advancing high status subjects to girls. My initial discussion with teachers showed that there did not seem to be any encouragement for girls in Grade 9 to choose Physical Science in Grade 10. This sets limits to what girls can do and works to exclude girls from key non-traditional career paths. Physical Science is often presented to the girls as a difficult subject that is better suited to young boys. Career counsellors are thus complicit in the perpetuation of traditional gender careers. Many schools do not offer subject packages with Mathematics and Physical Science, as often there are no qualified teachers or the schools are Grade 12 results driven, and Physical Science is often regarded as a subject that will lower the pass rate of the school. This I believe is clear evidence of gate keeping, hence limiting the access that young female learners have to the subject and perpetuates gender inequalities.

In Kwa-Zulu Natal, there is an extremely hard drive to improve Grade 12 results and hence the formation of Matriculation Intervention Strategies. Improving girls' access to non-traditional subject choices is often lost in the quest for good results and/or 100% pass rates, irrespective of the subjects that the learners are studying. The Department of Education is extremely focused on the results that the learners will achieve and go to great lengths to keep improving the Matriculation Examination results. This is called the Matriculation Intervention Program.

The Department is providing standardised Trial Papers with past memorandums as well as ongoing workshops to Grade 12 Learners and Educators. Schools are formed into clusters and there is an

internal moderation of results from which continuous assessment marks are yielded. Through this process, the Department hopes to improve the matriculation percentage pass rate. In fact, it is one of the reasons that the matriculation pass rate has continued to climb. The department has a Matriculation Intervention Program that deals exclusively with under achieving schools. Moderation of Examination papers is also strictly controlled and variation from one year to the next frowned upon.

The government's drive to improve the matric pass rate has seen the number of people writing Maths on the Higher Grade drop by almost 20000 since 1998. The number of Physical Science Higher Grade candidates dropped by 16288 over the same period. Overall there has been an increase in the number of pupils writing matric, and the pass rate has climbed steadily from 47% in 1997 to an all time high last year of 73%. However, the number of candidates writing Maths and Science has been dwindling steadily since 1999. Of the 284780 students writing Maths this year only 14% or 40570 are writing on the Higher Grade, compared with 17.8% in 1999. Of the 165921 Physics candidates, 34% or 57072 are doing Higher Grade, compared to 41, 3% in 1999. The figures have stabilized over the past two years, however. And this year 4000 more pupils are doing Higher Grade Maths than last year. A government report released last month said the declining numbers of Higher Grade candidates was a matter of national concern. The report by Umalusi, the Council for Quality Assurance in General and Further Education and Training, found a declining level of, conceptual challenge in most standard grade papers. Professor Poobalan Pillay, a Maths exam moderator, said teachers were under pressure to produce good pass rates and so encouraged pupils to take subjects on Standard Grade.

‘In rural schools, the main problem is that teachers are not equipped to teach on the Higher Grade,’ he said. Limpopo’s Director-General for Education, Professor Harry Nengwekhuku, said he had intervened at three former model C Schools which had been “weeding out Black learners who performed poorly in Maths and Science”. Michael Khan, former Maths Advisor to former Minister of Education Kader Asmal, said: ‘The schools that were succeeding in the past in producing large numbers of Higher Grade pupils in Maths and Science are the same schools that are still succeeding’ (Mkize & Govender, 2004: 13).

At the national level there is recognition that schools are under pressure to produce good results. There is also recognition of the ways in which race and competence has been conceptualized. However, the gendered nature of high status subjects has received little attention in the quest to achieve better results.

In South African schools, gender inequalities have been identified as a major hurdle to the transformation of the education system (GETT, 1997). In South Africa, the curriculum is undergoing radical change and is underpinned by social justice. The school curriculum is thus an important site for change and intervention but may also be an important site for marginalizing girls’ career opportunities. The latter contrasts the stated aims of the new Curriculum 2005. Curriculum 2005 is geared towards eliminating the social divisions of the past. Subject choices are more diverse than in the past and provide some ways of changing girls’ and women’s position in society. It is hoped that Curriculum 2005 will improve life chances of boys and girls by offering diverse subject choices thereby increasing accessibility of so called ‘high status subjects’ like Mathematics and Science to all groups.

Subject choices are considered to be significant in determining career paths. In South Africa, emphasis has been placed on Mathematics and Science subjects to change stereotypical gender and racial patterns in career paths. The question of putting more girls in Mathematics and Science remains a key concern in education (Truscott, 1994; GETT, 1997). It is well known that Mathematics and Science are considered to be a boys' domain. In South Africa it is complicated by the fact that apartheid perpetuated a system whereby even Black boys' accessibility to Mathematics and Science was diminished. There are no simple explanations as to why girls have avoided Mathematics and Science subjects. These reasons for avoidance relate to girls' self image, the idea that Mathematics and Science are male domains, or the lack of facilities particularly in Black schools which meant girls took second place to boys in accessing Science and Mathematics (Truscott, 1994). In addition, there is the problem of the overall availability of Mathematics and Science in schools coupled with the poor training of teachers in these subjects. Access to Mathematics and Science is thus a huge concern in South African Education (GETT, 1997). However, where access is available, the question of career guidance is important. If girls are steered away from non-traditional subjects, gender divisions will be perpetuated. What career counsellors say and do in advancing high status subjects to girls is the central focus of this study.

This study investigates the role of career counsellors in ensuring that girls benefit from high status subjects offered in the schools. In South Africa, it is not known to what extent career guidance is provided in secondary schools. Career counselling can play an important role in changing women's positions in society for the better. Career guidance can help steer young girls away from subject choices that have perpetuated women's unequal position in society. The curriculum has the capacity

to direct knowledge, skills and values towards an equitable participation in employment. Subject choices determine career paths. The subject choices that girls make are thus crucial in changing or perpetuating women's position in society. Subject choices that include Mathematics, Science and Technology are critical in breaking from the structures and practices that have perpetuated women's unequal position in society. Given the social changes in South Africa, career choices for women are diverse and more complicated than in the past. Greater opportunities are now available for young women in South Africa. Yet, girls are more likely to pursue career paths that are stereotypical and without Mathematics and Science (GETT, 1997). It is crucial that career counsellors in schools have some understanding of the complex factors involved in the girls' career choices and work more actively to broaden the career scope for young girls. Career guidance can be hindered by the hidden curriculum that positions girls in subordinate ways. Career choices are made in contexts that are laden with cultural and social circumstances. Young girls learn from a very early age about what constitutes appropriate gender roles and careers. For example, teaching is considered to be a soft option as it allows women to work and to be primary caregivers in the family (Connell, 2002). In South Africa, women dominate teaching. There are thus clear messages about what constitutes appropriate gender careers. This study recognises the complex issues involved in career guidance that begins very early in young girl's lives. The study, however, is small and focuses only on career counsellors. I am interested in the extent to which career counsellors encourage and help to ensure girls' accessibility to high status subjects. In addition to the complex messages that girls receive about career paths, career counsellors at secondary school provide significant messages about what girls can and can't do.

1.1 Two central questions form the basis of this study. They are:-

What are the perceptions of career counsellors towards girls and high status subjects like Physical Science and Technology?

What are their views on promoting girls in high status subjects?

In investigating what was happening in schools, I soon realised that especially the learners in the Black and Coloured schools of the apartheid era had no career guidance at all or were often at the mercy of the school management team who decided what subject combinations would be offered. These schools were restricted in terms of the staff that they already had and additional staff could not just simply be asked for or employed. The Department of Education would apply the Post Provision Norm Ratio, in other words, schools are staffed according to the number of learners that they have enrolled for any particular year. In my experience in discussing the staffing requirements with the principals, very few even consider counsellors as being a necessity to their staff. It appears that these positions are the last to be filled and only if the school can fit them into their staffing allocation. The counsellors up until 2001 were only offering Life Skills and Counselling. In the new curriculum statement, counsellors have a vastly different role: they run the Life Orientation Program that has a nationally compiled curriculum, alongside the duties that they had previously. The previously "White" and "Indian" schools tended to have career guidance counsellors. However, the 'poorer' of these schools were not able to afford the services of a counsellor because the Post Provisioning Norm did not cater for guidance counsellors. Previously White schools have remained predominantly single-sex schools in KwaZulu-Natal. This impacted on the choice of schools for this study.

In selecting schools for this study, I had to have access to schools where there were career guidance counsellors. The absence of career counsellors in mainly Black and Coloured schools means that schools from predominantly White (and single sex schools) and Indian contexts were selected. The social context of these schools impacts heavily on the findings. Race and class impact on the nature of the school and the perceptions of counselors in the school. The following schools were selected:

School 1 (predominantly White, single sex (girls) and middle class)

School 2 (co- Ed, middle-upper class and predominantly Indian and White)

School 3 (predominantly White, single sex (girls) and middle class)

School 4 (predominantly White, single sex (girls) and middle class)

School 5 (co-ed, predominantly Indian, working class context)

A full description of the Methodology will be discussed in Chapter 3. In this chapter, the background and purpose of this study has been discussed. The focus on the perceptions of five career guidance counsellors in advancing girls access to high status Mathematics and Science subjects has been established. Chapter 2 provides a Literature Review in order to understand what counsellors say about girls and high status subjects. Chapter 4 is the Data Analysis and Chapter 5 is the conclusion.

Chapter 2

2.0 Literature Review

It is important that we realize that the preparation for careers in Science begins at the beginning, in the early education that girls and boys receive in their schools and communities. There has been near universal acceptance of the Jomtien Declaration, articulating the need to provide basic education for all. Science and Mathematics are crucial components of basic education, to introduce girls and boys to fundamental concepts that they will need to survive as citizens or to choose careers as Science, Engineering, Technical or Health professionals (Malcolm, S, 2003).

This study investigates the perceptions that career counsellors hold towards girls and high status subjects like Mathematics and Science. Research has shown that high status subjects are not equally accessible across gender lines (Paechter, 2000). There are complex reasons why the school curriculum excludes or marginalizes girls from high status subjects. These range from the ways in which girls resist Mathematics and Science to early schooling patterns in which girls were excluded from the curriculum to the impact of race and class on girls' achievement in Mathematics and science. In this study, one area of the complexity is examined: the perception of career counsellors and the extent to which these perceptions fuel gender imbalances. Gender power imbalances in the curriculum are an important factor to consider in the marginalized status that girls have in high status subjects. Very little literature exists in South Africa and hence the focus of the review is based largely on work conducted elsewhere.

2.1 Gender and the Curriculum

Schools are an extension of the wider society and therefore play an important role in defining gender identities of its learners. Girls and boys actively learn, as they engage with the formal and informal processes of schooling, that their gender defines almost everything they do, who they are, their hopes and possibilities, their futures and how they relate to others.

From early on in their schooling careers, learners are not only exposed to the formal school curriculum, but also the hidden curriculum: That which includes and surrounds their everyday experiences. During their primary school years, learners may understand that they belong to a certain gender group due to their physical attributes; however, the characteristics that society expects of that gender are still not understood (Paechter, 2000). By integrating with peers, teachers and the everyday life at school, they begin to learn what it means to fall into the category of being boy or girl. Gender boundaries are set up in school environments (Paechter, 2001a) and learners are continually working out who they are and where they fit in. Thus the school is a powerful site for the gendering of identities.

Within the formal curriculum, certain subjects have, through history, become gendered in nature. Subjects in the Science Faculty (for example: Physical Science, Mathematics and Technology) have been characteristically labeled as masculine, whereas subjects in the Humanities Faculty are often perceived as feminine. Paechter (1998) argues that while children are learning in the school environment, they tend to choose subjects that are characterized to their gender, that is, boys choose

subjects that are labeled as masculine and girls tend to choose subjects labeled as 'other', that is non-masculine subjects.

In South African schools as in the wider society, the knowledge received in the sciences that is Mathematics and Physical Science, is considered more powerful and confers more status than that of other subjects. The formal curriculum in schools favours certain forms of knowledge over others (Prinsloo, 1996). Arguably, knowledge acquired in school or anywhere, for that matter, is never neutral or objective but it is ordered and structured in particular ways; its emphases and exclusions partake of a silent logic (McLaren, cited in Prinsloo, 1996 :169).

Some forms of knowledge in schools as in the wider worlds are clearly labeled by gender, and those signified as masculine are considered more powerful (Paechter, 2000:30). Gendered access to positions of power arises, through the curriculum offered or denied to particular groups (Paechter, 2001a:14). High status subjects like Mathematics and Science are associated with reason. It is masculinised and thus considered more powerful. Damarin (2000) argues that there are two discourses concerning the place in society of the mathematically able learners. At the core of most research it is assumed that mathematical ability gives to all those who possess it, a level of power in society over those who are mathematically incompetent (Damarin, 2000:74).

The assumption by theorists that mathematical ability gives to those who possess it a level of power and success (Damarin, 2000) means that in the school environment, the high status domain like Mathematics is predominately occupied by boys. Girls are defined as 'other' because the subjects that are labeled as feminine are not considered important or as powerful as those with the masculine label.

High status subjects like Mathematics and Physical Science have been closely linked to reason and it appears that this bias has worked in favour of boys and against girls. Carrie Paechter (1998) argues that as far back as during the 18th century, the period of enlightenment, reason and rationality formed the basis of Western philosophical thought. Irrational and emotional thought was considered less worthy. Enlightenment thinkers saw reason as the province of males and emotion as female territory. This period also saw Mathematics as the ultimate rational subject and devoid of emotion, and therefore linked it to the domain of males. Valerie Walkerdine agrees with Paechter (in Paechter, 1998) and argues that ‘Success at Mathematics is taken to be an indication of success at reasoning. Mathematics is seen as a development of the reasoned and logical mind’ (1998:25).

Reason and rational thought are embedded and a central core of the Mathematics curriculum and, as a result, the subject has historically been stereotypically associated with masculinity and boys. Its association with reason not only supports this masculine image but also makes its processes and procedures less than congruent with the ways many females prefer to approach problems (Paechter, 2001b: 13). Subjects and subject choices are highly gendered and are important indicators of gender identities.

2.2 Gender and Subject Choices

Subject choices between girls and boys vary: many more boys than girls choose Mathematics and Physical Sciences as part of their subject packages; there are a variety of reasons why this happens. The most striking feature of subject choice is its gendered nature. In South Africa putting more

women and girls into Mathematics and Science is a growing concern. High status subjects like Mathematics and Science controls entry into high status areas in the labour market.

Biology has long been used to exclude women from the power education subjects. Women's emotions have been pathologised. Femininity is often seen to be natural and bodily whereas masculinity is often seen to be cerebral and based on the power of reason. Biological differences often explain why boys take on Mathematics and Science: most often boys are positioned as rational and therefore logical thinkers. To be considered strongly masculine is also to be considered rational and logical. Thus, for women and girls to become involved with such disciplines, to engage with them successfully, requires a denial of femininity, or part of one's identity. (Paechter, 2001b: 13). Biological explanations are simplistic and do not take into consideration the social and cultural influences in subject choices. However, biological arguments are still powerful in shaping subject choices.

The school may offer a wide range of choices but girls may actively resist subjects like Mathematics and Science. Yelland (1998) for example, has argued that in Computers, girls will often choose the softer option such as Word Processing as opposed to Programming even though both boys and girls felt Computer Programming was important for their future careers. The girls seemed less motivated and did ask for assistance from the boys but the girls were more interested in which keys to press. Paechter (2000) found that many girls, who have completed high schooling with Design Technology as a subject with Mathematics and Science, continue in their studies in either Food or Textile Technology. The figures of women who continue in the known vocational careers are a small minority. Paechter (2000)

The association between reason, masculinity and high status subjects is clear: Valerie Walkerdine argues that:

Success at Mathematics is taken to be an indication of success at reasoning. Mathematics is seen as a development of the reasoned and logical mind. (The Girls and Mathematics Unit. Walkerdine, 1989:25).

Peachter (2001) argues that when girls make subject choices they are also considering whether they are going to study a subject that is associated with the masculine gender. Furthermore, Peachter notes that when boys and girls in secondary schools select school subjects, they tend to split on gender lines. Male pupils are more likely to choose subjects marked as masculine, female as feminine. In her research, Paechter found that girls tend to choose food and compliant materials (textiles), boys resistant materials (wood and metal). At tertiary level, she finds that girls overwhelmingly reject Mathematics in favour of Arts and Humanities subjects. Paechter's study is very useful because she states that gender identity during the secondary phase of schooling is very precarious and vulnerable and young people may feel the need to assert their gender identities by the overt display of gender role behaviour. Thus, for example, teenage girls tend to assert femininity by rejecting Physical Education that has strong masculine connotations, while boys at this age are often very reluctant to take part in Dance activities. Girls also, because of its masculine connotations, often reject Mathematics.

John Archer (1992) found that boys see "masculine" subjects like Mathematics and Science as 'interesting' whereas girls see them as 'difficult'. Thus girls, even if they are interested in Mathematics, may have reservations because they perceive the subject as being difficult. Sheila

Riddell (1992) also found that both genders actively reinforced gender boundaries through their perceptions of certain subjects as being male or female. Both girls and boys used each other as a negative reference group in the maintenance of gender boundaries; for example, girls saw doing stereotypically masculine subjects such as Physics to be a threat to their feminine identity.

Girls who are seen to enjoy Mathematics are visibly not conforming to feminine models; this may result not only in teasing but in a questioning or undermining of some aspects of identity. It is therefore the case that for a girl to choose to study Mathematics, she will need to have already developed a strong sense of personal, including gender identity (Head, 1999); those girls whose femininity remains precarious (as may well be the case at age 16) are likely to leave it unthreatened and select stereotypically feminine subjects. Changing girls' career choices is not easy. Career guidance can help girls establish why they think in the ways that they do and why certain subject choices are pertinent to their future.

2.3 Gender and Career Guidance

Many factors shape the choices that girls make in schools. The form in which career guidance is presented is very important in ensuring girls' access to high status subjects. The important point is that career counsellors cannot automatically change perceptions regarding subject choices but they can intervene.

The literature shows that girls are not passive receivers of messages. Kenway *et. al.* (1998) offer some thoughts about changing educational choices that girls make. In a study by Kenway et al, girls who

were told the importance of studying Mathematics resisted the messages and felt that the campaign to increase their numbers in Mathematics was patronizing. They conclude by stating that any intervention to change girls' subject choices must acknowledge girls' ability to resist messages. What is needed, they argue is to engage with real constraints that are placed on girls' choices.

In South Africa, the Gender Equity Task Team (1997) indicates that the vast majority of girls choose either Biology or Zoology as Physical Science is seen as the domain of boys. Girls often do not see their self-image based on that of a mathematician and scientist. The race and class dynamics mean that often there are no facilities to study Physical Science, particularly in rural schools, and when there are boys, they are likely to be given preference. Career guidance thus requires trained counsellors and will make a huge difference. Parents also need to help their daughters identify a career where they will feel comfortable. A program of reform throughout our educational system is necessary if gender equity is to be the norm and for girls to will feel comfortable in choices they make.

2.4 Intervention Strategies

In South Africa, girls seem to be better provided for than most education systems in Africa, however, girls are still disadvantaged in many ways (Morrell, 1998). Some examples of this would be: the low number of girls participating in Mathematics at Matriculation level, the curriculum bias that prevents girls from taking boys' subjects and the continued racial imbalance with African learners, in particular, being marginalised (Truscott, 1994: 41 page 56 in Morrell, 1998: 220). GETT (1997) put forward the suggestion that curriculum plays a vital role in gender equity promotion. They put forward the idea that teachers need to be made aware that they may consciously teach an overt curriculum, a hidden

curriculum that discourages gender equity and its promotion thereof. In fact the GETT states that teachers/counsellors play a crucial role in transmitting all forms of knowledge including knowledge that reinforces girls' marginalized status. It is necessary for teachers/counsellors to question their unexamined beliefs and values (GETT, 1997: 77).

Educators and the parents often have misconceptions and perceptions about the abilities of girls to manage Physical Science as a subject and/or career. The GETT (1997) indicates that girls are more likely to pursue career paths without Mathematics and Science. It therefore makes it crucial for counsellors and parents to have some understanding of the complex issues and factors that hinder young girls from broadening the scope and field of study that they can pursue given the opportunities. Career Guidance can be hindered by the hidden curriculum and perceptions, including attitudes of the past, in encouraging girls into these areas of study previously considered the sole domain of men.

Guidance counsellors need to become literate about the world of work that will involve the understanding of how the world economies work and impact on the labour market. How particular women have broken with the constraints of the traditional careers and established themselves successfully in the economy is important in understanding that choices are not fixed and that women and girls can succeed in areas that are typically considered male and masculine. Role modeling is not without problems. Simple cause and effect approaches do not take the reality of the situation into account. The GETT for example suggests that: "It is about understanding how cultural and social power of private worlds, families and relationships, can be negotiated, especially where challenges to sexist structures are taken on socially rather than individually. A further problem evident is the encouragement of girls in Physical Science stems from the competence and ability of the science

teacher.” The teachers are often poorly trained or have no training at all, and try to teach the learners in some manner or other. It is not uncommon to find learners studying Physical Science without ever doing a practical experiment. The recommendations set out in GETT (1997) suggest a program of reform which would span a number of years, with gender equity being one of the prime considerations as structures and resources became available. Strategies include links with all levels of policy including, national, provincial and district in planning that develops support for gender equity in the communities.

Girls should not be disadvantaged when it comes to the subjects previously dominated by boys. The subject themselves do not have a gender bias but rather the perceptions and self-concepts that the girls have of themselves and the meanings that area associated with subjects and gender identity in the community. Subject choices of the learners should be monitored. Guidance counsellors need to be trained as they can have a valuable impact on the choices the learners make when choosing their subject packages at the end of Grade 9.

2.5 Conclusion

The school is supposed to be a key role player in the education of its learners (both boys and girls) equally and equitably. Girls’ and boys’ identities are deeply gendered. In the school, the gender hierarchies work to discriminate and suggest that some forms of knowledge are more powerful and confer more status than others. Women and girls remain within concentrated positions that are low paying and unskilled; there is a challenge to ensure that girls break the glass ceilings. Therefore, Science and Technology, as fundamental components of development, are ways of working and

promoting the establishment of a knowledge-based society. Given the large number of women in the workforce, South Africa must devise strategies to empower women and girls in these areas.

Chapter 3

3.0 Research Design and Methodology

3.1 Introduction

School career guidance can play a decisive role in ensuring that young girls include high status subjects in their subject choices at the end of grade 9 so that their future opportunities in careers are able to target the labour market in non-traditional areas. Effective career education can contribute significantly to women and girls, economic empowerment and broaden opportunities in high status careers (GETT, 1997). School career guidance is thus important in shaping and influencing possibilities for careers that extend beyond the traditional feminine domain. The perceptions of career guidance counsellors in advancing the possibilities for girls in non-traditional careers are important to consider. This study considers counsellors' perceptions of girls in high status subjects in five schools in Durban.

In this chapter the research design and method are considered.

3.2 Problem Statement

Effective career guidance in schools is important in advancing girls' career opportunities in high status areas of the labour market. The high status curriculum in schools often includes learning areas like Mathematics, Physical Science and now more recently the new learning area called Engineering, Manufacturing and Technology. It is imperative to understand career counsellors' perceptions of girls in relation to high status subjects and the impact of this on the career opportunities for young girls.

The primary research questions

The primary research questions are:-

What are the perceptions of career counsellors towards girls and high status subjects like

Physical Science and Technology?

What are their views on promoting girls in high status subjects?

The secondary research question can be formulated as follows:

What are the implications of career counsellor's perceptions of girls and high status subjects on future career opportunities for young girls?

3.3 Objectives of the Study

The following primary and secondary objectives emanate from the above research questions.

The primary research objective of this research is to explore and describe the career counsellors' perceptions of girls and high status subjects and its impact on girls' future career opportunities

The secondary research objective of this research is to use the information obtained to make some recommendations to enhance the career opportunities for young girls.

3.4 Research Design

A qualitative research design was used to explore the perceptions of career counsellors towards girls and high status subjects and its impact on girls' future opportunities.

Qualitative studies usually aim for depth rather than quantity of understanding (Henning, 2004).

Studies are conducted in settings that are bound by a theme. In this study, the particular theme that guided the research was the perceptions of career counsellors towards girls and high status subjects. In

this study I wanted to understand and explain (by using the evidence from the data and from the literature) the perceptions of career counsellors towards girls and high status subjects. Qualitative research enables the participants to divulge information, their meanings and their perceptions towards particular phenomena in this case their perceptions towards girls and high status subjects. Henning (2004) states that qualitative enquiry is a research form which respondents or participants have more open-ended ways of giving their views:

When we refer to qualitative research we are using the term that denotes the type of enquiry in which the qualities, the characteristics or the properties of a phenomenon are examined for better understanding and explanation. (Henning, 2004).

In this study interviews were conducted in order to better understand the perceptions of career counsellors towards girls and high status subjects. In conducting interviews, trustworthiness was important to consider. Trustworthiness is when reliability is ensured in qualitative research (Lincoln & Guba, 1985). In ensuring the trustworthiness of the study pseudonyms have been used and all data was transcribed verbatim.

3.5 Research Methodology

Sample

The sample population of this study consisted of five career counsellors in five secondary schools in Durban. In the following table the biographic details of the career guidance counsellors who participated in the research are reflected. The participants are referred to as A, B, C, D and E because

they were assured of anonymity. The schools are referred to as 1, 2, 3, 4, and 5. The sample size was purposive. Chapter 1 indicated why the selection of career counsellors in secondary schools could not be made in a random fashion. This is because of the financial constraints at the schools and the new PPN requirements that make it impossible to have specialist career guidance counsellors in all schools. What this meant was that predominantly Black schools were largely excluded from this sample.

Details of Career Counsellors at Five Schools in Durban

	School 1	School 2	School 3	School 4	School 5
Participant	Mrs A	Mrs B	Mrs C	Mrs D	Mr E
Age	45	47	45	46	40
Years of Experience	10	23	24	25	19
Male/Female	Female	Female	Female	Female	Male
Race	White	White	White	White	Indian
Trained as Counsellor	Yes/Principal	Yes	Yes	Yes	Yes
School Context	Middle class: 70% White	Upper middle class Predominantly White & Indian	Middle class 70% White	Middle Class 72% White	Working Class 74% Asian (Indian) 26% African
Girls In Physical Sc Grade 12	85%	46%	27%	24%	29%
Matric pass rate 2002	100%	100%	100%	100%	100%
State/Private	State	Private	State	State	State

The Counsellors

Four of the five participants are females and one is male. All female counsellors are White and the male counsellor is Indian. The ages of the participants range from 40 years to 46 years. The years of teaching experience of the participants range from 10 years to 26 years. All of the teachers had specialist training and experience in career counselling.

Research Procedure

In School 1 the Principal was also part of the career counselling team. As Subject Advisor, my access to the schools was very easy and both the schools and the principals are familiar to me. Only five career counsellors were targeted. After permission was granted, I met with each of the participants to inform them what the study was about. Most of the counsellors showed a willingness to participate. Responses to girls and high status subjects were stereotypical but also showed signs of change as will be seen in Chapter 4.

Interviews

The interviews with each of the participants were conducted in private and were audio taped. The interviews were unstructured but were guided by the key questions set out in Chapter 1. The process of interviewing was both an act of information gathering and of knowledge making (Henning, 2004:57). Henning states that researchers who interview participants are co-constructors of meanings whether they intend to be or not. The interviewer wields the power and shapes the process of the interview. In this study I was able to control the nature and the shape of the interview process by allowing questions and prompting answers that were within the main aim of this study. However, the

nature of the interviews was such that I was able to engage with the participants in a friendly and engaging manner.

My status as Subject Advisor has been beneficial in allowing me access to schools but at the same time it is also possible that participants were simply answering questions posed by an 'authority'. As a Subject Advisor, I wield a great deal of power and I am not sure to what extent participants felt intimidated or said the 'right' things. As far as possible I tried to manage the interviews in ways that were friendly and tried to reduce my power as an authority figure. Gubrium and Holstein (2002) argue for a discourse of empowerment in interview research. By this they mean that respondents and researchers build some reciprocal understanding as meanings emerge during the course of the interview. Here the interviewee is not to be seen as a vessel of information but as a research partner who is also trying to capture the essence of the particular phenomenon. From the following interview questions.

What kinds of subject choices do girls take in grade 10?

Why do only small percentages of girls take Science?

3.6 Data Analysis

An analysis strategy was used where the complex whole was taken and broken into parts. The first part of the process of data analysis involved open coding. I read through the complex whole to get a global impression of the data. Subsequent to the first reading, I then re-read and identified units of meanings. Different codes were given to different units of meaning. The units of meaning were arranged into

major themes and these are described in Chapter 4.

3.7 Conclusion

In this chapter the research design and qualitative research methods were described. The sample size was discussed and explained. In terms of conducting the interview, the problems associated with my 'authority' position as Subject Advisor and a member of the department of education was highlighted.

The interpretation and discussion of the findings will be dealt with in the next chapter.

CHAPTER 4

4.0 Research Findings and Discussion

School career guidance is important in ensuring that young girls include high status subjects. School career guidance can help shape and influence careers that may extend beyond the traditional feminine domain. The perceptions of career guidance counsellors in advancing possibilities for girls in non-traditional careers are important to consider. In this chapter the findings and the discussion from interviews with five secondary school counsellors are highlighted. The overall findings indicate stereotype perceptions about girls and high status subjects particularly Physical Science. There are, however, small variations in the percentages of girls who select these High Status Subjects. Here counsellors do see girls as capable of doing high status subjects and challenge the stereotype of girls at these schools and encourage girls to do these subjects.

In the next section the findings of the study and the discussion thereof are considered.

Career Counsellors' Perceptions of Girls and High Status Subjects

Awareness of gender in subject choices

The responses from the participants indicate that all of them were aware of the ways in which girls are positioned in subjects like Mathematics, Science and Technology.

Ms. C: Girls find Physical Science more demanding than say Biology, or the traditional subjects. Many of them opt for Accounting and Business Economics as entry into the commerce fields for possible careers.

The counsellor in this study has particular notions about gender-appropriate subjects and career paths for girls. Physical Science is considered to be more demanding for girls than Biology. Business Economics and the commerce fields are seen to be more appropriate. The 'demanding nature of Physical Science' means that this subject is considered inappropriate for girls but better suited for boys.

Ms D: Yes, our girls do not seem to do as well in Physical Science as in other subjects. The girls are also not very interested in the subject, as they appear to find it difficult and thus choose subject packages in grade 9 that exclude Physical Science.

There is a great degree of awareness that girls' performance in Physical Science is poor. Girls are blamed because they are seen not to be interested in the subject, they find it difficult and they do not choose the subject packages that include Physical Science. Biological explanations are used to explain why girls resist Physical Science. For example the demanding nature of Physical Science places emphasis on rational, logical and real understanding which is often seen to be the domain of boys (Paechter, 1998).

Another important finding from the interviews was the recognition from counsellors that girls are themselves resisting Physical Science. While the schools do offer the subject packages, which include

high status subjects like Physical Science, the counsellors are aware that girls resist high status subjects. Girls are thus choosing softer options.

Ms C: Well it all starts with the subject choices in grade 9; the girls are encouraged to choose subject packages they are best suited to.

Mr E states that girls seem to make choices based on avoidance of boys.

Mr E: There are a variety of reasons for this. The girls do not seem to choose the subject, as they usually end up in classes where the majority of the learners are boys. They seem to find that the boys intimidate them.

Pechter (2001b) argues that when girls make subject choices, they are also considering whether they are going to study a subject that is associated with the masculine gender. In the above comment, it is clear that choices are made which split according to gender lines. It is thus important to understand the dynamic process in the classroom that makes girls feel intimidated by boys.

Girls' choices are thus very gendered. Being suited to a subject is based on perceptions of high status subjects and boys. The counsellors thus draw attention to the need to focus on girls and why they make choices that exclude high status subjects like Physical Science.

What suits girls best is based on their own notions of subjects. These notions are also influenced by perceptions of ability

4.1 Ability in High Status Subjects

There is an acceptance from several counsellors that girls and Physical Science do not go together.

Ms D: This school has never had large numbers of girls choosing Physical Science, only those girls that intend to study medicine or related fields have ever chosen Physical Science. They have usually all been the more academically able learners.

The majority of girls do not choose Physical Science and those who are considered to be more able are encouraged to do so. There is very limited recognition of the broader issues that prevent girls from choosing the subjects including girls' own perceptions of high status subjects. Counsellors accept the choices that girls make. Ability is unproblematised and the status quo is allowed to continue.

Mr E: Usually I try to encourage the more capable girls, as it is a difficult subject. But it is difficult as the learners and parents have preconceived ideas about Physical Science, so the girls tend to choose Biology.

Mr E also believes that Physical Science is a difficult subject. This notion of difficulty is imposed on girls. The ways in which femininity is constructed reflects an association of logic and reason with males and therefore Science is a difficult subject in which girls find problems. Science has become associated with masculinity because it is considered to be rational. Counsellors are thus also part of the system of thinking in which Science is strongly associated with men and is protected in this way. These perceptions unwittingly favour boys and confirm high status subjects as difficult in which girls

lack ability. Girls are constructed as being less able to succeed. When they are successful, their success is seen as being in the case of difficulty rather than due to the natural aptitude perceived in boys (Paechter, 2001b: 38). Those girls who study medicine or related fields are thus seen to succeed in the context of difficulty. High status subjects are thus based on masculine criteria. While Biology may be part of Science, the idea of rote learning means that it has become an area in which girls can succeed.

While the above views about girls and ability were dominant in the study, a different view was also evident:

Ms B: No, at this school there is no evidence that girls find some subjects more difficult than boys, in fact the girls do very well in all the subjects. Perhaps one of the factors is their home life as many of our learners come from homes where both mother and father are professionally qualified. No, it is very clear that girls in this school even choose engineering as a career path when they leave school. We have quite a number of our top girls entering engineering and careers such as actuarial science when they leave school. Often the top student in Physical Science at this school has been a girl.

The view held by Ms B breaks the dominant idea that girls are biologically wired to fail in Science and high status subjects. In addition the role of the parents in supporting an environment to do Science is highlighted.

It seems that subject choice and career paths are often connected to parents' influence and

expectations.

4.2 Parents are conservative

The respondents felt that parents were to blame for the choices that girls made.

Ms C (the Technology teacher at School 3): I don't know; our girls are conservative and so are their parents, and there does not seem to be much opportunity for me to encourage the girls to select Physical Science.

Mr E: I think girls and parents have a perception that it is a difficult option, they therefore approach the subject negatively. This is also indicated by the provincial pass rate that for Grade 12's is around 60% that discourages the learners from taking the option in Grade 10.

The poor pass rate in Matric and added perception of girls and high status subjects mean that many parents dissuade or do not encourage Physical Science as a good career option.

Ms C: There is also the points system for university entrance, good Grade 12 results provide for university entrance, and the higher the points that the girls score, the greater their choices of universities to study at. Many parents are more interested in getting the most points possible and tend to encourage their daughters to choose the easier options, as they want their daughters to go to University. They are not too concerned with the careers or direction of study their

daughters choose. Their mothers also serve as role models and many have not done Physical Science, in fact the vast majority of our learners' mothers are housewives. They have not followed any career except the traditional ones women follow.

Girl's choices in high status subjects are not made alone but parents are important in influencing and shaping decisions. The pressure to enter university means that softer options, which exclude high status subjects, are considered to be better for girls, the subject also determine the number of points tertiary institutions allocate subjects.

Educators and the parents often have misconceptions and perceptions about the abilities of girls to manage Physical Science as a subject and or career. The findings in this study confirm these misconceptions.

Another important point is the need for more role models in changing the perceptions about girls and women and science. Ms C points out that girls are often influenced by role models in their homes and mothers are often not working or in traditional careers. Girls often do not see their self-image based on that of a scientist.

Parents also need to help their daughters identify a career that goes beyond the traditional careers as suggested by Ms B in the section above. Parents need to have some understanding of the complex issues and factors that hinder young girls from broadening the scope and field of study that they can pursue given the opportunities.

4.3 Views on promoting girls in high status subjects

The counsellors expressed many views about promoting girls in high status subjects focusing on counseling, the nature of Physical Science teaching as well as peers and parents. As far as interventions by school counsellors are concerned, the respondents stated that they were overburdened.

Mr E: Yes, I realise that we need more girls in the Physical Sciences but the problems are many and cannot be solved overnight, as the girls also do not generally do as well as the boys in the class.

There is recognition that more girls are needed in Science. At the same time there is also recognition that counselling alone cannot solve the problem. Counsellors suggest that girls' ability in Physical Science is part of the problem but they do little to problematise the gendered nature of ability and its relation to Science:

Mr E: There are many things that are expected of me during this period and I do not really have the time to do so as I am responsible for all the individual counselling that is needed at the school. The Physical Science educators are also overloaded with work and are just managing; some are not qualified to teach up to Grade 12.

The stress and work overload is an added factor that makes addressing girls and high status subjects

more difficult. Mr E points to a significant area that needs attention: unqualified Science teachers. In South Africa there are very few qualified Science and Technology teachers (GETT, 1997).

Ms C: No, in Technology we are not following the New Curriculum because our teachers have gone on workshops, but do not feel confident enough to offer the subject as required in the curriculum neither do we have the equipment nor space. The school also feels this subject is more suited to boys. None of our teachers is capable of teaching the graphic communication as laid out in the curriculum. The subject also presently ends at the end of Grade 9 and will not influence our Grade 12 results in any way as there are still quite a number of years before the New Curriculum will be implemented in Grade 10.

The problem that is raised above means that teachers have to become more literate in new subjects like Technology which are now part of the New Curriculum transformation in South Africa. A further problem evident is the encouragement of girls in Physical Science stems from the ability of the science/technology teacher. The teachers are often poorly trained or have no training at all, and try to teach the learners in some manner or other. Greater awareness of gender is required so that stereotypical perceptions of teachers can be challenged.

In addition to challenging teachers' perceptions, Ms D points to a complex nature of intervention: peers, parents and teachers.

Ms D: Yes, some of the common ones at this school are peer pressure where the learners all choose the same subjects as their friends. Then the parents often want their daughters to do

commercial subjects as they can easily study a course and enter the work place. The school also battles to find really competent Physical Science teachers and with the results being so poor provincially, we are reluctant to encourage learners who may not pass. We in fact steer them toward the easier options.

Counsellors do unwittingly steer girls towards easier options. The hidden curriculum works in ways that marginalize girls. Teachers/counsellors play a crucial role in transmitting forms of knowledge that reinforces girls' marginalized status. It is necessary for teachers/counsellors to question their unexamined beliefs and values (GETT, 1997: 77).

Furthermore, young girls need to be targeted and educated about the decisions that they make. Ms D points out that decisions taken are also based on peers and working groups of girls and friendship circles may be an important part of the work towards promoting girls in high status subjects.

Some counsellors do have some understanding that women and girls can succeed in areas that are typically considered male and masculine.

Ms B: Well, to be honest, the teachers and learners work very hard academically. Sport is not one of our priorities; we are geared for academic excellence. Pupils are taught to learn, think and apply (our motto) and are given as much extra individual tuition as required.

Ms A: Yes, we are very proud of our girls! They are doing as well as the boys in our school

next door. In fact, on average, our girls have done better than the boys next door. When I was first appointed by the department as Principal, there were only a few girls taking Physical Science in a school with only female teachers. The girls in these classes (Physical Science) scored below the marks they would receive for Mathematics and other subjects, often a girl would get 5 A's and a B or lower symbol for Physical Science.

Neville: Ms A, how did you bring about the significant change to the subject choices in Grade 10? And improve the results?

Ms A: I called in the subject advisor and questioned him why the girls were not performing as well as the boys from the neighbouring school. He informed me that this was not unusual as generally girls fared far worse than boys in the subject. This was not what I wanted to hear so I set about looking for reasons why this was the case. The SGB sent me to the Far East to look at the schooling system there where girls outperformed boys in Science. So when I arrived back after my visit, I consulted with the Chairperson of the SGB and we decided to encourage girls to do Science and we even employed male teachers to teach Physical Science.

The strategies in the schools above highlight the need for counsellors to take action. Ms B suggests that hard work is an important. However, it must be noted that the school is private and catering for upper income learners. The resources in this school allow the fulfillment of the motto whereas in government schools there is work overload and pressures that Mr E highlighted earlier.

While the school Ms A refers to is a government school, it is also located in an upper-income area

catering for middle to upper income learners. Ms A has been able to negotiate the sexist structures in Physical Science and with the support of the school governing body (SGB) changes have been made. In addition, the employment of male teachers in Physical Science in an all girl's school may be seen to be an achievement in breaking down the notions that only female teachers can teach in all girls' secondary schools. The comments from Ms A and Ms B highlight the view that girls should not be disadvantaged when it comes to the subjects previously dominated by boys. The subjects themselves do not have a gender bias but rather the perceptions of teachers/counsellors need to be challenged.

4.4 Conclusions

In this chapter, counsellors' perceptions towards girls and high status subjects were highlighted. Counsellors are aware of the gendered forms of subject choices but many seem to accept the status quo and use ability as an excuse to explain girls' poor performance in Science and Technology and preserve the domain of high status subjects for boys. Significantly, not all counsellors subscribe to this view. In some schools, girls are constructed as both capable and able to succeed in high status subjects and the schools actively endorse such a view. It must be noted that these are schools located in high-income areas and with the support of the school governing body; counsellors are able to bring greater awareness to the opportunities in the labour market for young girls. Overall, girls are still disadvantaged with lower number of girls participating in high status subjects. The findings show that counsellors are aware that both teachers and parents often have perceptions about the abilities of girls to manage Physical Science as a subject and/or career. It therefore makes it crucial for counsellors, teachers and parents to have some understanding of the complex issues and factors that hinder young girls from broadening the scope and field of study that they can pursue given the opportunities.

Chapter 5

5.0 Conclusions

It is evident from the findings of this study that on the whole, counsellors have stereotypical perceptions about girls and high status subjects. They are able to position girls as lacking in terms of their ability by using biological explanations to account for poor performance in Science. Counsellors do recognize the gendered nature of the curriculum in which girls are marginalized but the majority is accepting of this fate. However, there are some counsellors who take on a contradictory position and highlight the ability of girls to tackle and do Science. Parents, peer influences and the decisions of young girls are also key influences in determining the subject choices. While subject choices are available, many girls choose not to study Physical Science. Young girls were outside the scope of this study, but the counsellors' responses revealed that girls do not want to choose Science as it is considered to be more demanding. Parents are also identified as significant in shaping their daughters' decisions. Many of the parents are more concerned about matric results and university entrance requirements. Therefore, parents and girls opt for easier options based on what is achievable for university entrance requirements.

The school is supposed to be a key role player in the education of its learners (both boys and girls) equally and equitably. In South Africa, women and girls remain within concentrated positions that are low paying and unskilled. (GETT, 1997). There is a challenge to ensure that girls break the glass ceilings. Given the large number of women in the workforce, South Africa must devise strategies to empower women and girls in these areas. The biggest single challenge now arises on how to change the perceptions about young girls and their futures in the world where they have to fend for themselves

as valuable members of our society. The school is one place where changes can be made.

5.1 Recommendations

Based on the findings of this study it is recommended that:-

1. Guidance counsellors need to become literate about the gendered world of work and how subject choices impact upon the labour market that in turn can challenge the male dominated areas of science and technology. Their perceptions need to shift regarding ability. In some instances counsellors actively support girls in high status subjects.
2. Girls are educated about the choices that are available and how their choices can reproduce old career patterns. Clearly from the findings, girls are actively making choices that steer away from high status subjects. In addition, the ways in which girls are educated about career paths must be collective, involving their peers and friends, so that collectively girls can see their opportunities in the future.
3. Schools must target parents and educate them about the options in different career paths and resist stereotypical career paths for girls. The school governing body can liaise with teachers, counsellors and girls to ensure that they are made more aware of the kinds of career decisions that can hinder or break stereotypical career paths.
4. All Science, Technology and Mathematics teachers must be targeted and made aware of the gendered curriculum and the processes in the classroom that may make girls feel intimidated.

5.2 Limitations of the Study

A limitation of this study was that the number of schools investigated as well as the participants involved was limited. The research design does not make claims about generalisability. This is a small study and cannot be generalized to other schools and contexts. The main aim of the study was to gather information about the perceptions that counsellors hold towards girls and high status subjects.

A further limitation was that the sample excluded predominantly Black schools since career counsellors have become obsolete and too expensive to retain for the National Department of Education. The PPN ration makes this very difficult. In resource-rich school contexts, counsellors are employed as learners pay school fees beyond the reach of many poor Black communities.

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