A SURVEY OF PROVISION AND PRACTICE

RELATING TO GENDER IN PRIMARY SCHOOLS

2 VOLUMES/VOLUME 1

Mary Lewis B.Soc. Sc., M. Soc. Sc.

A thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy in the
Joint Faculty of Education, Dublin City University

Supervisor: Dr. Peter McKenna

April, 1997

DECLARATION

I hereby certify that this material, which I now submit for assessment
on the programme of study leading to the award of the degree of Doctor
of Philosophy is entirely my own work and has not been taken from the
work of others save and to the extent that such work has been cited and
acknowledged within the text of my work.

Signed: _Mary Lewis_   ID No.:   93700431
               Candidate

Date: April 29, 1997

TABLE OF CONTENTS

PAGE

ABSTRACT

The study described in this thesis investigated the extent to which sex-stereotyping is a feature of Irish primary schools. Information relating to educational provision, classroom practice, and teachers' perceptions of pupils was obtained in a survey of more than 600 single-sex and mixed primary schools. School principals and teachers at three points in the primary cycle (senior-infant, third, and sixth class) took part in the survey which was conducted by postal questionnaire.

Sex-stereotyping, though not reflected in the amount of time allocated to school subjects, was found in virtually all aspects of the investigation: in the staffing structures of primary schools (in favour of males in the senior grades and of females in the junior grades); in teachers' perceptions of the behavioural and academic characteristics of pupils; in classroom practices relating to discipline and task allocation; and in the nature and extent of extra-curricular activity in schools with different gender compositions. Male and female teachers were largely in agreement about differences in the characteristics of girls and boys. Further, the differences observed by teachers were found to increase as pupils progressed through primary school and to occur to a greater extent in mixed schools than in single-sex schools.

Even so, principals and teachers are generally in favour of coeducation, a finding which suggests that they may not be aware of the stereotyped nature of their perceptions and reported treatment of pupils. In considering action programmes to deal with problems of inequality, the survey data underline the need for teachers and principals to have more information about the implications for pupils of differential treatment on the basis of sex; for more school-based monitoring of sex-stereotyping; and for strategies that are sensitive to the characteristics of schools with different gender compositions.

ACKNOWLEDGEMENTS

CHAPTER ONE

THE CONCEPTUALIZATION OF GENDER INEQUALITY:
A REVIEW OF DEVELOPMENTS IN IRELAND 1970-1996

The study described in this thesis explores the extent to which gender differentiation is found in Irish primary schools. It was commissioned and funded by the Department of Education as part of the Gender Equity Action Research (GEAR) project which had as its aim the promotion of awareness of differences relating to gender in Irish schools. The survey, on which the study is based, was carried out in 1990 at a time when processes culminating in the recognition of gender inequality as a problem in Irish society were already well underway.

Chapter One of the thesis is devoted to an examination of these processes. The first part outlines some of the major changes which have occurred for women in Ireland. These are discussed in the light of European Union/ national policies and of developments in the Women's Movement. The second part is concerned with gender ideologies pertinent to educational provision in Ireland, both past and present. In the third and final part of the chapter, key assumptions underlying the conceptualization of gender inequality are identified and a number of limitations arising from the way in which the problem has been defined and treated are discussed.

CHANGING ROLES OF WOMEN IN PUBLIC AND PRIVATE SETTINGS

Until very recently, most people took for granted that an individual's gender identity largely determined occupational status and income as well as duties within one's family and in society generally. It was accepted that men would provide for the financial well-being of their families and that women would look after their husbands, rear children, and establish a family home. It was assumed that responsibility for the care of dependent and/or elderly family members and relatives would devolve mainly on women. Increasingly, these assumptions and the inequalities to which they give

1

rise are being questioned. In many western industrialized countries, including Ireland, inequality that is rooted in gender has become a public issue. Further, it is an issue which has been defined largely in terms of a woman's point of view. This is perhaps not surprising in view of the fact that it is women who had been discriminated against and who, in the recent past, have been affected to a greater extent than men by changes in their life situations and expectations.

Some Significant Trends

The appointment of Mary Robinson in 1990 to the office of President of Ireland underlined the significant opportunities which now exist for women in this country. Her achievement, along with countless others, is all the more remarkable when one considers not only the restricted range of roles that were available to women in the not too distant past but also the extent to which the importance of women as mothers has been underlined in official ideology. In the Constitution of Ireland which dates from 1937, mothers are accorded a special position within the family and the state is held responsible for endeavouring 'to ensure that mothers shall not be obliged by economic necessity to engage in labour to the neglect of their duties in the home' (Kelly, 1980, p.481). Though legally superior to all other laws in the country (Chubb, 1978), the Constitution is today regarded by many as outdated, at least insofar as its treatment of women is concerned. As both living standards and the number of women in the labour force continue to rise, arguments linking the employment of women with economic necessity seem unconvincing. The image of woman at home in the marriage-based family has faded, as the reality of women's greater financial independence is increasingly reflected in instruments of public policy.

Figures from official sources provide evidence of the extent to which changes in the experiences of women in Ireland have accelerated since the beginning of the 1980s. Recent trends include increasing female participation in education and in paid employment, an increase in the incidence of marital breakdown and single-motherhood, and a reduction in birth rates and family size. The substantial increase in the proportion of married women in the female labour force, which rose from 36.0%

to 47.1% between 1981 and 1991 (Ireland: Central Statistics Office, 1983, 1992) has meant, in effect, that more and more women are combining work with family responsibilities.[1] Moreover, the amount of time devoted to family, or at least to the rearing of children, continued to lessen over the same period. On average, there was a reduction in the number of children per woman (from 3.25 in 1980 to 2.11 in 1992) as well as a slight increase in age at time of first birth (from 24.9 years in 1980 to 26.3 years in 1990) (Eurostat, 1993). The survival of these trends in the immediate future is supported by at least two other factors: an escalation in the numbers of female students in third-level education which occurred in the latter half of the 1980s and a small, but notable, increase in the average age of women at time of marriage since the beginning of that decade.

While considerable change in the life experiences of some women in Ireland may have occurred within a relatively short period, it would not be difficult to argue that much more progress is necessary before anything approaching equality between the sexes is achieved. To begin with, the overall rate of participation by women in the labour force in Ireland is still relatively low (Eurostat, 1993). Something less than one-third of women of working age are deemed to be in the labour force, compared to almost half the corresponding populations in some European countries, notably France, Germany, and Denmark.[2] Secondly, the gains of women across economic sectors have not been uniform. While in a number of sectors, particularly in the professional, personal, business, and financial services, some degree of occupational crowding of women has already occurred, in other sectors, including most of the manufacturing industries and Agriculture, wholesale and retail distribution, Energy, Transport, and Communication, women are not well represented (Ireland, 1993a). A further perceived limitation of the change process is the lack of improvement in the overall socio-economic status of women (Drudy & Lynch, 1993; Hilliard, 1992). In large part, this situation can be attributed to the nature of women's involvement in the

---

[1]These percentages differ from those presented in the report of the Second Commission of the Status of Women. The corresponding percentages in that report are 30.2% for 1981 and 48.5% for 1991 (Ireland, 1993, p.95). It is not clear how the Commission arrived at its figures.

[2]Since the labour force includes all members of the population aged between 15 and 64 years who could be available for work -- those who are at work, who are registered as unemployed, and who are seeking employment or re-employment -- these rates are not an exact indication of the proportion of women who are actually at work.

3

labour force. Women constitute a majority--more than 70%--of those in part-time employment, they tend to be concentrated in the lower levels of occupational hierarchy and, even though more married women are now active in the labour force, their rates of activity decline sharply as the number of dependent children rises (Blackwell, 1989, 1990).

Whatever difficulties arise in the course of transition, further expansion of the role of women seems likely, at least in the short term. While the lessons of experience show that progress for women has been uneven and gains sometimes temporary (Noddings, 1992), a pattern of increasing state intervention in matters affecting women is now well established. As a result, anomalies in virtually all aspects of the social structure are being investigated. Recent publications have drawn attention to inequities in the access of women to financial resources (Callan, 1994; Daly, 1993) at work (Callan & Wren, 1994) and at home (Rottman, 1994) and to imbalances in the representation of women in political structures and public life (Gardiner, 1993; Hilliard, 1993). A review of gender and Irish law was recently published (Connelly, 1993) as was a major report highlighting the disadvantaged position of women in Irish society (Ireland, 1993a).

The production and flow of information that now exists about women in Ireland is in stark contrast to the position which pertained just 17 years ago when the author of a review of the progress of women complained that 'it is hard to build up a comprehensive picture of the development of Irish women's position in society' (Purcell, 1980, p.556; see also Sandell, 1980). Indeed, it would not be untrue to say that more or less the same comment could have been written even ten years later. However, while it is perhaps only since the beginning of the 1990s that the issue of women's welfare has attracted widespread/ mainstream interest in Ireland, this development has its beginning in events which essentially originated outside the country and which took place in the course of the previous two decades. Two factors, in particular, seem to have had a major influence on state intervention concerning women and ultimately on how the problem of gender inequality has been

defined and presented for public consumption: Membership of the European Union and the resurgence of the Women's Movement.

European Union/National Policy Developments

The institutions of the European Union (EU) and formerly of the European Community (EC) have played a major role in bringing 'women's issues' to the attention of the Irish public. More than this, few would deny the importance of the EU contribution in facilitating the promotion of women in this country. Indeed, one observer went so far as to say that 'it is mainly due to this pressure from the outside, and EC influence that gender equality in Ireland has so far been addressed' (Gardiner, 1993, p.75). Without discounting the efforts of members of the Women's Movement, it is, nevertheless, true that accession to the European Community in 1973 ensured that issues relating to women's rights acquired an urgency that would otherwise have been missing from the agenda at national level. Moreover, it is undoubtedly because of EC/ EU membership that so much of the change introduced has been marked by a very particular set of assumptions which do not correspond to those contained in the Irish Constitution. These include, first and foremost, an implicit acceptance of the expanding role of women, support for a more egalitarian partnership between the sexes in economic terms than has traditionally been the case, and some degree of tolerance for non-traditional or alternative family structures.

Over the past 20 years or so, work institutions, especially, have been the target of considerable state intervention in matters concerning the status of women in Ireland. The removal of the civil service marriage bar in 1973 must be regarded as the first major official response in support of women's financial independence. It was a landmark decision establishing the right of women to exercise choice in the matter of continuing a career after marriage and was quickly followed by legislation imposed on all member states of the European Community/European Union. Based on the principles of equal pay for equal work (the Anti-Discrimination (Pay) Act, 1974) and equal treatment of men and women (the Employment Equality Act, 1977), the new legislation was obviously intended to facilitate women in the *working population*.

5

Subsequently, during the 1980s, the application of the principle of equal treatment of men and women was further extended to social security provisions, again in accordance with EU specifications. As a result, taxation and social welfare policies, once drawn up solely on the central assumption 'of breadwinner father with dependent wife and children', now also cater for families which are not based on marriage and dual-income households (Kennedy, 1989, p.114).

Apart from processing legislative reform, the Irish authorities gradually began to establish an institutional framework to facilitate elimination of discrimination against women. In so doing, they were able to build on networks which had been developed by women's groups prior to EU membership and which, in effect, were officially recognized when the First Commission on the Status of Women was set up in 1970. Further institutionalization of these groups occurred in 1972 when the Council for the Status of Women was established to monitor progress on all actions aimed at bringing about equality. Now known as the National Women's Council of Ireland, this organization has grown to become the main umbrella association for women's lobby groups throughout the country (Institute of Public Administration, 1995). In contrast, the role of the Employment Equality Agency (1977), as national guardian of gender-related discrimination at work, is more narrowly constrained. It was established to ensure that discrimination at work is not based on sex or marital status and is responsible for overseeing implementation of the Anti-Discrimination (Pay) Act, 1974 and the Employment Equality Act, 1977. While the vast majority of its clients are women, the Agency has also had occasion to intervene on behalf of men.

Disadvantage associated with women came under further official scrutiny in a number of Ministerial portfolios but particularly in Women's Affairs which was established in 1982. This portfolio survived only until 1993, however, when the Department of Equality and Law Reform was set up. The brief of the new portfolio included the promotion and implementation of equality of treatment for persons experiencing disability, disadvantage, or discrimination through institutional, administrative, and legal reform. Its broader concerns, compared to those of its

predecessor, denote some degree of official distancing from an exclusive association between femaleness and gender inequality and a considerable increase in the willingness of the state to accept responsibility for inequality in a variety of contexts.

Backed by funding from EU institutions, the Irish authorities continued with their efforts to advance the position of women by implementing a series of preventitive and/ or compensatory measures. Interventions co-ordinated by the Department of Education since the early 1980s include an array of education and training programmes, vigorous attempts to eliminate sex-stereotyping from primary-school textbooks, research studies and action-research projects, seminars and in-service courses for teachers and school principals -- all with a view to raising awareness about gender conditioning and bringing about change in attitudes and behaviour. Not only the funding, but most of the impetus for this work, came from the European Commission which, in 1981, established a permanent Advisory Commitee on Equal Opportunities. It sanctioned two 'positive action' programmes which had the following objectives: to raise awareness of gender equality; to encourage girls to take up non-traditional courses of study and careers; to facilitate preparation of non-sexist teaching materials; and to develop training programmes for women of all ages (Wilson, 1991).

Post-school education and training programmes supported by EU funding have placed special emphasis on provision for girls and women from 'disadvantaged' backgrounds. In an effort to address the needs of this target group, numerous second-chance out-of-school programmes, focussing on the development of literacy skills amongst other things (including for example child care, food nutrition, and household budgeting), have been implemented by a variety of agencies and organisations concerned with adult education and poverty. In the past ten years also, courses for women returning to work after lengthy periods of absence from labour force participation have featured prominently in the activities of the state training agencies AnCO and subsequently FÁS. Such courses aim to provide participants with job-related skills and typically emphasise the importance of personal development and assertiveness training. More recently, efforts are being made to increase the number

7

of female apprentices in FÁS training schemes. While the results of a single case study point up some of the difficulties involved in this recruitment endeavour (Ireland, 1992a), additional longitudinal studies are needed in order to know something about how the women who participate in these programmes fare over time. It would, however, not be unreasonable to expect an increase in awareness of gender inequality to have resulted from such interventions -- in much the same way that university education is now seen to have influenced women from more 'privileged' backgrounds.

European Union social policy initiatives concerning gender inequality have increasingly begun to target the family as well as the institutions of work and education. The importance of sharing work, family, and social responsibilities between men and women was emphasised in two equal opportunities programmes which were implemented by the Commission between 1982 and 1990. In the Commission's Third Medium Term Community Action Programme on Equal Opportunities,1991-1995, the integration of women in the labour force is seen as a priority and changes within the family, resulting in a more equitable sharing of responsibilities between men and women, are identified as a key strategy by which this objective might be achieved (European Community Commission, 1990). So, while employment issues may still be the main starting point for much EU intervention in relation to gender inequality, a broader, if less easily monitored, approach towards its elimination seems to have been at work in recent years.

The Resurgence of the Women's Movement

The identification of gender inequality as a woman's issue has been an important assumption in the administration systems of western developed countries. This is not surprising in view of the key influence of the International Women's Liberation Movement, and its efforts to overcome what it perceives as the oppression of women. The Women's Movement can be understood as one of the most important social movements of this century, while feminism is interpreted as providing the ideological basis and principles that guide and inform its development (Byrne, Byrne, & Lyons, 1996). While the latter has evolved into a highly complex body of thought

8

since the resurgence of the movement in the 1960s, the concept of patriarchy (referring to structures through which male domination over women is established) remains a core focus of feminist thinking and writing (Polity Press, 1994). To the extent that this is true, segregation, rather than integration, has been emphasised as an essential characteristic of the relationship between the sexes and is central to many of the strategies directed towards the elimination of inequalities arising from their differences.

The origins of the Women's Movement in Ireland have been traced from 1850 when women were heavily involved in secret agrarian societies and in the nationalist movement (Connolly, 1996). Its subsequent development in the early part of this century lay in the hands of a small number of women who were active in the labour movement. During and following this period, important networks began to be developed under the shelter of a number of organisations including, for example, the Irish Countrywomen's Association (founded in 1910 as Irish Women United) and the Irish Housewive's Association which emerged in 1942. Members of these and other women's groups formed a committee in 1968 in response to a UN Directive which led first to the setting up of the First Commission on the Status of Women and subsequently to the Council for the Status of Women in 1972.[3] These developments signalled the beginning of official recognition of the Women's Movement in Ireland.

The formation of the Irish Women's Liberation Movement (IWLM), in 1970, marked the beginning of a period of renewal for the movement as a whole. In contrast to the more broadly based, and relatively conservative, Council for the Status of Women, the IWLM provided a forum for left-wing republican activists and professional/ university-educated women who favoured radical reform. A further significant development in the 1970s which, for a time, served to unite the various factions of the movement, was the emergence of single-issue pressure groups. As a result of the reform campaigns launched by these groups, a host of issues including increased political participation for women (The Women's Political Association,

---

[3] In 1967, the UN Commission on the Status of Women requested women's international non-governmental organizations to examine the status of women in their countries and to encourage their governments to set up a National Commission on the Status of Women.

1970), teenage pregnancy, adoption and single-motherhood (ALLY, 1971; Cherish, 1972) family law (AIM, 1972; FLAC, 1969), family planning (The Well Woman Centre, 1978) and violence against women (Women's Aid, 1974; The Rape Crisis Centre, 1979) were brought to public attention. This was achieved with considerable assistance from a small but dedicated number of women journalists who, in turn, were supported by a handful of women lecturers in university departments (see also, Smyth, 1993).

While both the IWLM and its more politicized successor, Irishwomen United (IU, 1975), had become fragmented by the late 1970s, the role of the universities and of the media in highlighting what came to be perceived as women's issues gradually intensified. During the 1980s, a number of products and services of both institutions began to be packaged and marketed for consumption mainly, if not exclusively, by women. The home-produced series entitled 'Women Today' televised in the mid 1980s is a case in point, while the establishment of women's studies diploma and degree courses in third-level colleges towards the end of the decade is a more recent example of the same phenomenon. The emerging definition of gender inequality as a woman's problem which resulted from such publicization was subsequently strengthened by a remarkable growth in feminist scholarship and publishing. This development is now perceived as part of a cultural revolution in the Women's Movement which, since the late 1980s, has found expression in a surge of creative output from women artists, poets, and writers (Smyth, 1993).

A continuing increase in output from women's publishing has been achieved in the 1990s together with further consolidation of women's studies in Irish universities. Originally developed with some of the same goals as ethnic studies, women's studies courses aim to provide access to knowledge deemed unimportant by those in power, to allow for alternative explanations of reality, and to offer information that students might find relevant to their own personal experiences (Pollard, 1993). Above all, they are designed to give (and to seek) recognition for the contributions of women. A further development in the 1990s has been the 'mushrooming' of community-based women's groups which have been compared to the small-group consciousness-raising

radical strands of the 1970s (Connolly, 1996). Unlike the earlier initiatives, however, an essential characteristic of local women's groups in the 1990s is their domination by working-class women. A second distinguishing feature of such groups is that they are much stronger in urban than in rural areas.

At this point, signs of resistance to the ideological imperatives of the Women's Movement can be detected. At the very least, there is acknowledgement of the view that men's exclusion from, or at least non-involvement in, domains which are now regarded as women's territory may not have been entirely wise or wholesome. This line of thinking is reflected in the emergence of degree courses in equality studies and groups such as parental equality which aims to promote the concept of equal treatment of men and women as parents. Such developments are by no means peculiar to Ireland but are part of a more general international movement broadly characterised by a shift from women's studies to gender studies, the formation of men's groups devoted to the pursuit of 'specifically masculine concerns and interests', and a proliferation of literature on themes surrounding male identity (Polity Press, 1994, p.3; see also Boulding, 1987). Not all aspects of this trend have been welcomed by those of feminist persuasion. Resistance to the growth of gender studies (now strengthened by the recent appointment of the first professor of gender relations in an English university) has been expressed in terms of a fear that 'analysis of women-centred problems and questions could suffer if the agenda shifts exclusively to concentrate upon issues shared with men' (Maynard & Purvis, 1994, p.8; see also Evans, 1991).

In Ireland, as in other countries, questions about the future direction of the Women's Movement are being asked. Rather than issuing clear signals of intent, current energy seems directed towards review and putting into writing the achievements of the past. Given the apparent shift in emphasis and perhaps a certain loss of visibility (particularly since the defeat of the 1983 abortion referendum), it is, in one way, not surprising that the present decade has sometimes been described as post-feminist. However, even if one agrees that feminism has lost something of its political momentum, it is still too early to conclude that it has become outdated or

11

irrelevant. Presumably it has gained in the process of becoming more formally established in third-level institutions and in forging links between disciplines which span the arts, humanities, and sciences. It remains to be seen, however, whether the increasing theoretical diversification that is reflected in feminist scholarship will ultimately weaken the political dimension of the organisation. While the extent of its grass roots support in this country has been questioned (Collins, 1986), the influence of the Women's Movement in the policy arena, and in education in particular, has not been inconsiderable.

GENDER IDEOLOGIES AND EDUCATIONAL PROVISION

In both official (EU/ national policy) and unofficial (Women's Movement), initiatives, formal education channels have been used extensively to publicize and eliminate the problem of gender inequality. From an equality point of view, however, the treatment of gender in education has itself been problematic for centuries. In fact, inequalities relating to gender and education have been traced to the early times of Plato and Aristotle when education was less highly valued for women than for men (Okin, 1979). Whereas Plato had owed women's alleged inferiority to a lack of education, Aristotle attributed it to the nature of female bodies themselves and considered the education of girls in anything more than the rudiments of housekeeping as wasteful. Unfortunately, Aristotle's writings on women were far more influential than those of Plato and it was his views which were ultimately adopted by the early Church fathers who provided and determined access to education (Noddings, 1992).

Even in the much more recent past, when there was a huge expansion in public education in response to demand from industrialists in the nineteenth century for a literate workforce, it was assumed that formal schooling was more important for boys than for girls. As Deem (1978) writing about the situation in England reports, it followed that boys were at first the only recipients of mass or public education. Gradually, as it was realized that schools could provide education for girls more efficiently than their families, large numbers of girls began to attend schools. Church

representatives and liberal reformers who took the view that everyone should be educated were the chief supporters of girls' participation in education. However, the purpose of education envisaged for girls was different to the one which was promoted for boys. While boys' schooling was conceived as preparation for work and involvement in the activities of the Church, the education of girls was justified in terms of the advantages it might bestow on their families. The fact that working-class women formed a sizeable proportion of wage labour does not appear to have figured in the arguments of those who favoured education for girls. Instead, the Church, the reformers, and the charitable institutions saw that educating girls would raise not only the domestic standards of care but also the moral standards of their husbands and children (Deem, 1978).

The evidence that is available for Ireland basically concurs with that reported for England and other countries.[4] The position of the Irish Catholic Hierarchy on the education of girls in the latter half of the nineteenth century was one which also favoured a religious and domestic emphasis in preparation for motherhood within a family structure. It supported the prevailing ethos in many Irish convent schools at the time which typically stressed the importance of accomplishments and la politesse in educating young women and offered the following range of subjects: English, history, geography, arithmetic, French (sometimes Italian and German), music, religious instruction, and needlework (Breathnach, 1980). This approach to educating girls was in sharp contrast to that of the high school movement in England which began in the 1870s but soon found its way into the Irish system through the Protestant schools. Important distinguishing features of this movement included a strong emphasis on public examinations as a means of raising standards, a close liaison between secondary schools and university, and a belief that the education of boys and girls should, as far as possible, be the same (O'Connor, 1987). Eventually, because of a combination of factors, including the introduction of the Intermediate Examination in 1878, pressure from the growing middle classes, and ultimately increasing competition between Protestant and Catholic schools for university places, the

---

[4]Evidence relating to this period is limited. In fact, few, including more recent, published accounts of the history of educational provision in Ireland make reference to gender.

curriculum in convent schools was broadened to include Latin and mathematics, thereby affording girls an opportunity to qualify for admission to university.

Many of the obstacles laid in the way of girls' participation in secondary schooling also surfaced in their path to third-level education. The founders of female seminaries in nineteenth-century America had to argue their case for women's further education in terms of anticipated roles as mothers and domestic economists and as public guardians of the moral order through the family (Tyack & Hansot, 1990). Much the same justification seems to have been used in attempts to improve higher education opportunities for women in Ireland. Even after the passing of the 1908 Universities Act, which provided for full access to women in respect of both degrees awarded and staff appointments in both Queen's University in Belfast and the National University in Dublin, Cork, and Galway, the argument that 'a better educated woman made a better mother was frequently used in defence of women's demand for access to higher education' (Breathnach, 1987, p.77).

Feminism, Equal Opportunity, and Educational Research

As the end of the twentieth century draws near, there is little doubt that the Women's Movement has been a powerful accelerator of change regarding educational opportunities for girls and women. Indeed, access to education as the key to securing economic independence has long been an important aspiration of feminist scholars (see 1908 speech by M. Carey Thomas quoted in Flexnor, 1975). It is only recently, however, that feminists have begun to examine the relative position of women in the labour-market structure (Komarsky, 1991) focussing, in particular, on women in the lower end of the market in part-time temporary employment which tends to be poorly paid and is relatively insecure. Reflecting their concern, an important strand of research on gender in the educational system has focussed on how women become socialized into occupations that are different from those pursued by men.[5] In several countries, this has led to an investigation of the processes whereby girls at second

---

[5] In this country, research concern with gender in education can be traced to 1967 when work commenced on the Equality of Opportunity in Irish Schools study (Greaney & Kellaghan, 1984).

14

level appear to 'opt out' of those subjects and examination courses (maths and science, especially) which would best qualify them for access to better-paid jobs.

The GIST (Girls into Science and Technology) action research project in England, led by two feminist researchers, is an example of such a study. During the four-year life of the project, the causes of female underachievement in science and technology in eight coeducational schools were investigated. Following implementation of several intervention programmes, the researchers, Kelly and Whyte, advised that the 'single most effective thing schools can do to ensure an equal representation of females in science and technology is to dispense with early specialization altogether', thereby eliminating subject choice in favour of what could be regarded as a male-centred curriculum. They also recommended the introduction of single-sex classes in subjects 'which have a powerful masculine image' to help improve the performance of girls in these subjects (Whyte, 1986, pp. 234-237).

While GIST was in progress in England, a major research study to investigate how girls might be losing out in Irish schools was commissioned by the Employment Equality Agency in Dublin. The Irish study, in which patterns of subject provision, allocation, and choice were examined, also attracted considerable interest in the early 1980s. In a report of the study, attention was drawn to the different educational paths which girls and boys follow. These were found to be 'intimately linked' with the anticipated adult roles of male and female pupils in work, familial and community life (Hannan, Breen, Murray, Watson, Hardiman, & O'Higgins, 1983). In particular, the report emphasized the extent to which girls' overall education was geared to preparation for an adult career as wife and mother and to the needs of traditional areas of female employment. Moreover, the researchers concluded that expectations surrounding the 'very different implicit models of education' for boys and girls were widely shared not only by teachers and parents but also by the majority of pupils themselves (Hannan & Breen, 1987, p.112).

The solutions proposed for the 'problem' highlighted in the research conducted by Hannan and his colleagues were also conceived largely in terms of

improving girls' access to and participation in subjects which tend to be linked with male occupational success. On close reading, the feminist orientation of the GIST project and the overall interpretation of the problem in the Irish study are not dissimilar. In fact, support for the approach adopted by GIST is clearly indicated in the report of the Irish study, notably in the recommendation advocating 'a series of intervention programmes ....particularly along the lines of the GIST (Girls into Science and Technology) programme at Manchester' (Hannan et al., 1983, p.325).

The impetus for change with regard to girls' poorer participation in higher mathematics and technical/science curricular options derived not only from the feminist movement operating as a pressure group but may also be traced to an ideal which had begun to find expression in mainstream educational thinking in the 1960s. Equality of opportunity, though for a long time identified with equalizing educational opportunities for children of different social class backgrounds, gradually became enshrined as a policy objective relating to gender during the 1970s and 1980s. Again, this is true of developments in both Ireland and England and is reflected in official policy documents published in both countries. In England, official recognition of gender as a factor in securing equality of educational opportunity appeared in the 1977 Green Paper on Education. It stated that while equal opportunity did not necessarily mean identical classroom provision for boys and girls, there was, nevertheless, the possibility that schools, in translating their aims into day-to-day practice, could by their assumptions, decisions, or choice of teaching materials, limit the educational opportunities offered to girls (Great Britain: Department of Education and Science, 1977). Some years later, following the study by Hannan et al. (1983), concerns about opportunities for girls also in terms of the equality ideal were expressed in the Irish Department of Education's 1984 Programme for Action in Education:

> all aspects of education must be available equally to both sexes. Recent
> studies have revealed serious imbalances in this regard, particularly with
> respect to the availability of certain subjects in girls' schools. It is important
> to respond to the problems that have been identified and to take action so

as to ensure the elimination of stumbling blocks which prevent equal access to particular subjects by both sexes (Ireland: Department of Education, 1984, p.4).

More widespread recognition of the implications for girls of restricted subject choice was achieved in 1984 when the then Irish Minister for Education, Gemma Hussey, designated 'Equality of Opportunity for Girls' as a priority theme for the Irish Presidency of the EC/ EU. Since then, as the gap in the educational achievements of boys and girls has narrowed, a trend which is reflected in the increasing participation of girls in higher mathematics and science courses, interest in this aspect of gender differentiation appears to have waned. This is true even though large areas of the curriculum remain outside the experience of most girls. Increases in provision for and participation by girls in trade-related subjects in particular have been minimal. This, in turn, is reflected in gender imbalances in apprenticeship which is the traditional path to employment in skilled occupations in Ireland. While the virtual absence of girls and young women in each of the 'designated trades' (engineering, construction, motor, electrical, printing, and furniture) is ultimately experienced as a problem by employers (e.g., The Electricity Supply Board) when they attempt to implement equal opportunity policies, these aspects of gender inequality have generally not been highlighted officially or by those who publicly engage in discussion about the progress of women. Neither has the low participation of girls in some third-level courses received much attention. Whereas the proportions of girls in commerce, science, law, dentistry, and medicine have increased, in some cases quite dramatically, throughout the 1980s, in other courses which have tended to attract far more boys than girls there was little change in the relative proportions of male and female students in the same period. These courses, which may be regarded as tending to lead to outdoor or at least 'non-office' types of employment, include engineering, veterinary medicine, and the agricultural sciences (see Higher Education Authority reports, 1985, p.53 and 1992, p. 72).

Since public interest in subject provision for girls was first aroused in the early 1980s, insights about other aspects of gender inequality have been highlighted in this

country which point up the complex nature of the issue. These were revealed in the results of another large-scale research study in which the representation of men and women in promoted posts in primary teaching was examined (Kellaghan, Fontes, O'Toole, & Egan, 1985). The evidence from this study showed that even when women and men hold similar qualifications, women, for a variety of reasons, are not promoted and do not seek further promotion to the same extent as men. More specifically, a teacher's decision to compete, or not to compete, for promotion was found to be related to a combination of personality, school, and home-related factors, including self-confidence, areas of teaching experience, and domestic responsibilities. Thus, while the results of the study drew attention to the influence of cultural constraints on women, they also pointed in the direction of explanations for gender inequality which have to do with the expectations individuals have of themselves and of others and the way in which these expectations are transformed into personal choices or decisions.

Commissioned Reports and Political Manifestos

In the past number of years, several bodies have been invested with authority to speak about gender inequality. These include the Third Joint Committee on Women's Rights, formed in 1989 of members of the Houses of Oireachtas, the Second Commission on the Status of Women the members of which were appointed in 1990 by the then Taoiseach, Charles Haughey, and the Secretariat of the National Convention on Education which assembled in 1993 at the invitation of the current Minister for Education, Niamh Bhreathnach. The reports issued by these bodies provide a rich source of insights and ideas about gender inequality and how it might be remedied.

The second report of the Third Joint Committee on Women's Rights, Gender Equality in Education in the Republic of Ireland (1984-1991) was published in 1992 (Ireland, 1992b). Official measures undertaken in relation to gender equality in the eight years prior to its publication were reviewed in the report which contains a total of 39 recommendations spanning primary, secondary, and third-level education. A

striking feature of the report is the unreserved support proclaimed for coeducational schools. Indeed the Committee recommends that 'the Department of Education should establish the necessary structures to accelerate the implementation of such a policy without further delay' (Ireland, 1992b, p.43).[6] While virtually all of the issues raised are, predictably enough, concerned with advancing the position of girls and women, the report may also be considered unusual in its recommendation that 'the treatment of gender equity in boys' schools should be addressed as a matter of urgency' (Ireland, 1992b, p.XXXII). Commenting on the progress that had been made since the beginning of the 1980s, the overall conclusion of the Committee was that 'the report gave an impetus to the examination of gender issues in education which has gone some way to improving the position as it was then' (Ireland, 1992b, p.VIII).

In the report of the Second Commission of the Status of Women, which contains the most comprehensive review of the position of women in Ireland, all levels of the educational system from pre-school to adult education were examined (Ireland, 1993a). In addition to identifying specific measures to facilitate a reduction in gender inequalities at each level (most of which are directed at post-primary schools), the Commission sets out detailed guidelines and recommendations which have implications for the system as a whole. In particular, it highlights the need for a gender-equity provision in the proposed Education Act and for an overall policy in the Department of Education to promote equal opportunity and treatment between the sexes. Additionally, it recommends the promotion of gender-equity policies at school level in single-sex and coeducational settings; in in-service courses and pre-service training; in the representation of men and women in school management and in the inspectorate; in textbooks and teaching materials, classroom interaction, and physical education and sports; in home-school liaison; and in the preparation of statistical information on pupil/teacher ratios, school enrolments, and public examination participation and performance.

---

[6]The findings of a recent major study conducted in Ireland suggest that coeducational provision may not always work to the advantage of either girls or boys. The authors report that while coeducation does not adversely affect average examination performance, it does have a negative impact on the mathematics performance of girls especially but also on that of boys (Hannan, Smyth, McCullagh, O' Leary, & McMahon, 1996).

In addition to identifying a fairly comprehensive range of areas in need of reform, the report of the Commission departs from previous officially-commissioned reports in the degree of emphasis it places on gender issues at primary level. Specifically, the development of new handbooks, teaching materials, and guidelines for teachers, which is now in progress, is welcomed by the Commission 'as an ideal opportunity to eliminate sexism from the vital early stages of children's education' (Ireland, 1993a, p.275). Overall, there is much more concern in the Commission's report about possible disadvantages in the system for girls and women. Questions about how boys may be adversely affected by their experiences in school are confined to the minority report.

This particular bias is very obviously reflected in the matter of subject choice which is dealt with mainly from the point of view of how girls might be losing out in terms of technical knowledge and curricula. At post-primary level, the Commission while acknowledging that 'the lack of subjects such as home economics closes off opportunities to boys with, for example, an interest in catering; reinforces traditional domestic roles; and ignores the development of life skills' (Ireland, 1993a, p.277), recommends that experience of non-traditional subjects should be provided for girls, without making a similar recommendation for boys. At primary level, also, girls are singled out for special attention again in the context of science and technology. In both of these subjects, which are about to be introduced to the primary curriculum, it is, states the Commission, 'particularly important that girls receive encouragement so that when they enter Post-primary education they will not be dissuaded from choosing these subjects by sex-stereotyped attitudes' (Ireland, 1993a, p.275).

The promotion of the interests of girls and women is also at the core of discussion on gender inequality in the report of the National Education Convention. This report is especially critical of the principle of equal opportunities and treatment policies because of its failure to recognize that 'women and other disadvantaged groups' may be 'at very different starting points' (National Education Convention Secretariat, 1994, p.118). While mention is made of the need to encourage both boys and girls into non-traditional areas of curriculum and some examples of good practice

to eliminate sexism in schools are identified, it is clear that women's under-representation in educational management and administration is the key issue as far as gender equality is concerned. Progress in the advancement of women is envisaged not by equal-opportunities policies, but, rather, by means of 'positive-intervention programmes, positive discrimination and the establishment of quotas' (National Education Convention Secretariat, 1994, p.119).

The report of the Convention is the outcome of written and oral submissions from interest groups and representative bodies in education which met in preparation for the White Paper on Education (Ireland, 1995). According to its authors, presentations representing teacher unions, adult educators, and the Council for the Status of Women/ the National Women's Council were particularly strong in supporting measures to eliminate gender inequality. Presumably, therefore, the issues raised in the report reflect the concerns and preferences of these groups in particular. However, the extent to which they find support in the broad spectrum of interests represented at the Convention is not discussed or made clear. Neither were its authors in a position to advocate the promotion of gender equity as 'one of the main aims of educational policy' as had been promised in the then government's programme of work (Ireland, 1993b, p.31), since, in the final analysis, the purpose of the Convention was to provide a forum for the representation of a plurality of interests rather than to concern itself with the promotion of any in particular.

Finally, a glance at the political manifestos/ programmes of work published by the present government and its predecessor points up, as might be expected, a lack of continuity in gender-equality agenda. The previous government, in its Programme for a Partnership Government (Ireland, 1993b), which was due to run from 1993 to 1997, stated its intentions to address 'gender equity in education' in terms of the following six provisions: 'full curriculum choice for all students; the enhancement of career guidance programmes to include a positive programme to encourage women to enter labour markets traditionally closed to them; an emphasis in adult education on encouraging women to re-enter the work force; the promotion of women's studies in third-level education; a sports policy to encourage the participation of women at

every level; and an adequate and comprehensive system of sex education appropriate to the maturity of students at second level' (Ireland, 1993b, p.31). Thus, with few exceptions, 'gender equity' was to be promoted for the benefit of adult females. The policy agreement issued by the present government A Government of Renewal (Ireland, 1994), is, by comparison, less specific and much less ambitious. A broad philosophical statement introducing the section on education sets out the government's commitment to the principles of democracy, accountability, equal access, and life-long learning, but does not refer specifically to gender inequality. A promise to promote 'gender equity with particular reference to curriculum and career choice' comes 28th in a list of 29 'priorities' (Ireland, 1994, p.66).

Department of Education Intervention

In the early-to-mid 1980s, apart from the guidelines issued for publishers on sexism and sex-stereotyping in primary-school textbooks (Ireland: Department of Education, 1984), Department of Education concern about gender inequality was more or less confined to anomalies in subject provision at second level. In 1989, however, an official gender equality pack was distributed to all primary schools. This included a set of posters promoting equal treatment of boys and girls and a gender-equity handbook for teachers (European Community Commission, 1985); it also contained a newsletter about the Department of Education's gender equality action programme, information about a pilot technology programme for girls, and pictorial 'fair play' guidelines produced by the Irish National Teachers' Organization (1989). At around that time, also, the Gender Equity Action Research (GEAR) project was commissioned. This initiative led ultimately to a survey of provision and practices relating to gender in more than 600 primary schools (Lewis, 1992).

In 1990, the Department of Education issued a gender-equity policy statement which had implications for both primary and post-primary schools. In the statement, issues of concern were identified and a number of measures were proposed. Specifically, the Department of Education pledged to eliminate sex-stereotyping from curricula and all aspects of public examinations; to support interventions for girls in

physics, chemistry, and technology; to provide in-service training for teachers; and to promote awareness of gender issues through its inspectorate (Department of Education, 1990). This plan of action was subsequently carried out and its results disseminated to schools as part of the European Union's Action Research Programme on Equal Opportunities in Education.

A good deal of the Department of Education's in-service training on gender was provided through an action-research project on the Integration of Equal Opportunities in the Curriculum of Teacher Education. In this project, otherwise known as TENET, various aspects of the issue of equal opportunities were examined in the context of pre-service and in-service education of teachers in primary and post-primary education (McHugh, 1989). It was implemented with several target groups as five separate projects by a university department and by departments in two teacher training colleges, a teacher union, and the Department of Education's curriculum unit. Primary schools also received a resource pack for teachers (Department of Education, 1994). The pack provided teachers with a new set of equality guidelines. It also contained updated guidelines on sexism in textbooks and teaching materials and information about gender projects in 20 schools, a classroom interaction study, and the GEAR project. Also in the early years of the present decade, the FUTURES exploring equal opportunities programme of six modules (Electrics, Communications, Computers, Design and Make, Art, and Geography) was disseminated to post-primary schools. It was the final outcome of the pilot Technology programme for girls and was based on activities designed to raise awareness of gender issues in second-level schools (Department of Education, 1992).

Further impetus for the elimination of gender inequalities in schools might have been expected to come from the Green Paper on Education, published in 1992 (Ireland, 1992a). In a four page discussion 'about the importance of gender equity', the Department of Education spelled out its commitment to 'truly' coeducational schools and underlined the necessity of avoiding gender bias both in school curricula and in the management functions of education. School boards of management and the inspectorate of the Department of Education were singled out for special attention in

this regard. All educational institutions at primary, second, and third level were called on to develop and publish a gender-equity policy and schools at second level were asked to provide a full range of course options for students. While the Department of Education did undertake to provide for regular screening of teaching materials to remove sex-stereotyping, a noticeable fall-off in the level of its own involvement in this sphere is discernible. Unlike the approach adopted in the policy statement issued two years previously, an implicit assumption in the Green Paper was that responsibility for gender inequality in education rests firmly with each educational institution rather than with the Department of Education.

In the most recent educational policy document, the White Paper on Education Charting our Education Future, the Department of Education pledges that it will 'continually evaluate the operation of the education system to ensure that equality is being promoted' (Ireland, 1995; p.190). However, while it is recognized that educational participation and achievement may be impeded (and hence the attainment of equality) by a variety of circumstances, gender being one, there are few detailed proposals dealing specifically with gender inequality. Primary education is not mentioned at all in this regard, while there is a rather vague promise that the proposed local education boards will be responsible for promoting equality including gender equality in the junior cycle of second-level schools.

In fact, most of the coverage on gender inequality in the White Paper is contained in the chapter on higher education in which it is stated that all institutions at this level will be asked to develop and publish gender-equity policies. These are to include: 'policies for the promotion of equal opportunities...including procedures for preventing the sexual harassment of students and employees; strategies to encourage increased participation by women students in faculties and courses of study in which they have traditionally been under-represented, including liaison with second-level schools and the preparation and distribution of suitable promotional materials; appropriate gender balance on all staff selection boards; encouraging and facilitating women to apply for senior academic and administrative positions; [and] the putting in place of arrangements to assist students with young children' (Ireland,1995, p.102).

Obviously, the position of women in third-level institutions is central to this agendum which broadly supports the main thrust of the National Education Convention report.

On the whole, however, there is little evidence in the White Paper of any serious attempt to build on or include the reform priorities identified in publications considered in this review. Issues around subject provision and choice at second level which received so much attention during the 1980s are no longer prominent and while primary education enjoyed a period of concentrated activity in the early part of the 1990s, we may conclude that primary schools generally have never been fully engaged by the forces of the state in its efforts to tackle gender inequality. Indeed, if there is any consistent message from recent reports and statements, it is, that, compared to five years ago, official activity in the first and second levels of education has declined in matters concerning gender equality. It remains to be seen whether recent trends showing boys' under-achievement in public examinations will reshape official policy in the coming years.

Theoretical Explanations of Gender and Educational Inequality

Apart from the policy, research, and political influences on developments relating to gender inequality considered so far in this review, ideas and theories from several strands of academic scholarship can also be seen to have impacted on public consciousness of the problem. Explanations about the development of sex differences originally come from biology but, in the context of more recent interest in sex-role development and gender discrimination, have also received considerable attention in psychology and sociology (Stockard, 1980). Feminist scholars from a variety of disciplines are currently at the forefront of enquiry about the nature of sex differences and how they develop. Central to these analyses are questions about how males and females come to adopt gender roles, why roles are so often differentiated on the basis of gender, and why the roles assigned to men tend to be more highly valued than those assigned to women.

In this discussion, our main interest is in gender theories in education and the various policy implications which flow from these perspectives. All of these theories owe something to sociological and psychological perspectives which commonly explain sex differences in achievement and cognitive abilities in terms of cultural factors. Thus, they tend to reject explanations which attribute male-female differences to biological influences as did most of the 'sex-difference' research in psychology (Maccoby, 1967) and which, though interesting in many respects, may not be very useful from an educator's point of view (Noddings, 1992). Nor do they have anything in common with sociological perspectives which either ignore the power dimension of gender relations or do not see this dimension as problematic. The latter include both functionalist theories which overlook the salience of gender in the creation of educational inequalities and assume that the experience of boys and girls in schools is basically the same and reproduction theories which concentrate on inequalities across social groups and classes but do not provide arguments that can be extended to explain inequalities within social class (Stromquist, 1989).

Gender theories in education which try to analyse how and why oppressive gender relations are formed, commonly look to patterns of nurturing and socialization as explanations for sex-related differences but vary in the extent to which they recognize that schools, in contributing to the reproduction of these differences, can help to eliminate them. They are prominent in feminist perspectives which now encompass four distinct schools of thought or theories. Though fundamentally similar in some respects, each was formed at least in part reaction to perceived flaws in the preceding theory. Collectively and individually, however, it is claimed that elements of all are still at work in the organization and management of schools, in the socialization of teachers and the construction of curricula, and the way that the sexes relate to each other at all levels of schooling (Davies, 1994).

Different concerns and priorities can be identified in the educational policies emanating from each of the feminist perspectives. Liberal feminism, which is quite well established, has focussed on attempts to improve access to educational institutions and to those roles and positions of public life traditionally regarded as the

province of men. At school level, according to this perspective, teachers are encouraged to tell girls they can do as well as boys in mathematics, science, and technology and not to discriminate against them by ensuring that they interact the same number of times with male and female students. Other common strategies for improving the socialization of girls favoured by liberal feminists include modification of school textbooks to include references to prominent women and provision of role models or women who have been successful (even exceptional) in careers and positions traditionally occupied by men.

Unlike liberal feminist theory, radical feminist analyses have questioned (but ultimately accept) the assimilation of women and girls into a male-ordered patriarchal value system which defines men as superior to women and supports control of women's sexuality (Stromquist, 1989). The main contribution of this perspective has been to affirm the value of women's experience. Educational policies operating within a radical feminist perspective emphasize separatist strategies involving the removal of girls and women from oppressive male environments. Such strategies favour instruction for girls in single-sex classes (as opposed to single-sex schools which are seen to reinforce class-related differences between women from different social groupings) and the proliferation of women's studies courses at third level. Strong positive discrimination to encourage female participation in high-status subjects is also advocated. While knowledge is seen as male-dominated and as an expression of the power distribution in society, radical feminists are basically in agreement with liberal feminists that gender biases favouring males can be eliminated in schools.

Socialist feminists emphasize the need to consider how individual consciousness is shaped by structural economic forces including patriarchy and capitalism (Davies, 1994). They are critical of both liberal and radical perspectives which fail to recognize that efforts to change what goes on in schools will be limited by the impact of these forces. Operating at a macro level of analysis, this perspective has little to suggest by way of practical strategies or policies which could be implemented at a micro/ individual school level. Basically, it sees the school as a site

for the reproduction of women's oppression and for the transmission of patriarchal values. A recasting of curriculum in women's terms and a return to single-sex schooling would probably be the most acceptable educational options for socialist feminists (Boyd, 1989). In the final analysis, however, those who adhere to this set of assumptions do not hold out much hope for achieving large-scale structural change by means of school reform.

Poststructuralist feminist theory and its application to educational policies is relatively undeveloped. Its proponents are essentially engaged in the task of re-writing history as the story of humankind. This perspective focusses on language and narrative structures in an attempt to reveal and 'deconstruct' the essentially masculinist expressions or descriptors which inform the sciences, the humanities, and the arts (see, for example, Martin, 1991). Students and teachers are encouraged to learn 'strategies of resistance' which go beyond male/ female dualism in spoken and written text (Davies, 1993). The ultimate objective is to find a set of discursive practices in which sex is neutral or not named. This perspective is obviously different from other feminist theories in that it seeks to downplay the salience of gender as a socially constructed category. Presumably this means supporting integration rather than segregation of the sexes which, at school level, would be reflected in the implementation of coeducational policies and gender-neutral curricula.

Gender theories in education based on feminist perspectives are typically used to analyse recent gender-related developments in education. Women's place in the educational realm over a longer time frame can be seen in terms of a another three-dimensional theoretical framework which also grew out of feminist scholarship. Segregation, assimilation, and transformational models, in rough historical order, and in various combinations, correspond to different ways of thinking about the organization of education for women, the place of women in curriculum, and the role of women in society (Noddings,1992). Traditionally, a double segregation model has been dominant, one which advocates single-sex schooling for separate occupational and social roles in adult life. Assimilation-segregation models were also to be found in the late nineteenth and early twentieth centuries when further education for women

was promoted for the good of motherhood. It is only recently that a double assimilation model, largely reflecting a liberal feminist perspective, has been widely introduced. It supports coeducational policies and stresses the importance of providing identical education for boys and girls with a view to preparing both sexes for the kinds of adult lifestyles traditionally reserved for men. Less frequently, but increasingly in some countries, a segregation-assimilation model is proposed. Incorporating radical feminist ideas, this approach basically favours the integration of women in male occupational structures but (as in the GIST project in England described earlier) recommends single-sex schooling with similar content for boys and girls as the means to achieve it. Transformational theory which usually rejects segregation and assimilation models is still being developed. It favours new forms of education that incorporate significant aspects of female and family experience in the curriculum for all students and seeks transformation of public and professional life in the light of this experience (Thompson, 1986). Ultimately, this means both sexes participating fully in domestic and public life and acquiring 'a deep appreciation for the contributions of women as well as those of men' (Noddings, 1992, p.678).

The application of these perspectives to recent developments in gender and education in Ireland suggests a strong liberal influence with elements of radical feminism striving to become more forceful. The overall thrust of educational policies and much of the educational research that has been considered in this review has been to encourage and advocate the integration of girls and women into subject areas and occupational roles traditionally associated with males. This is reflected not only in the emphasis that has been placed on girls' participation in mathematics, science, and technology to a lesser extent, but also in the recent promotion and pursuit of coeducational policies. Further remedies for gender inequality introduced to Irish classrooms, which derive from what are now considered to be the relatively uncritical assumptions of liberal feminism, include the removal of sex-stereotyping from textbooks and its replacement by depiction of women in non-traditional roles and the introduction to pupils of 'successful' women in occupations traditionally associated with males. Classroom-interaction studies in which teachers are encouraged to divide their attention equally between girls and boys such as the one described in the recently

disseminated resource pack for teachers (Department of Education, 1994) may also be described as liberal feminist in essence (Noddings, 1992).

If most of the initial efforts to address gender inequality in schools in this country have been implemented in a liberal feminist/ equal opportunities for girls policy framework, it is not certain that this consensus will be maintained in the future. Evidence of a more radical position favouring special or separate treatment for girls and women is reflected in the establishment of third-level women's studies courses. It can also be seen to underpin the measures of positive discrimination for women (in preference to ones based on equal opportunity) called for in the report of the National Education Convention (National Education Convention Secretariat, 1994) and in the Programme for a Partnership Government issued by Fine Gael, Labour, and Democratic Left (Ireland, 1993b). As yet, however, school-level radical feminist policies have not been developed. If the proportion of single-sex schools is relatively high in this country in comparison with others, this phenomenon can be attributed to a traditional segregationist approach that has persisted in Irish education rather than to any conscious allegiance to radical feminist principles.

OVERVIEW AND CRITIQUE

A number of key assumptions have underpinned the conceptualization of gender inequality in Ireland to date. The following, in particular, find support in this review. First, awareness of and interest in gender inequality has grown considerably in this country over the past twenty-five years. The problem received attention in a number of Ministerial portfolios and several areas of policy: in legislation relating to employment, family law, and social welfare and in programmes in education, training, and research. During this period, two commissions were appointed by government specifically to investigate the position of women in Ireland. Work institutions, and employers especially, had to come to terms with issues of gender inequality in the context of increasing official commitment to the principle of equal opportunity. Third-level courses in women's studies and equality studies were established and

several publications dealing with aspects of gender inequality were issued. The role of the media in bringing gender issues to the attention of the Irish public strengthened.

Second, there has been an extraordinary degree of public consensus about gender inequality and how it should be treated or eliminated. This is true of official interventions and policy statements generally and of unofficial influences emanating from the Women's Movement and is reflected in virtually all of the published work considered for this review. At the core of this consensus, lies an association between gender inequality and femaleness, an association which, in effect, has served to contain the problem making it more manageable, and has remained unchallenged. Moreover, it is unlikely to be undermined in the foreseeable future, in this country at any rate, by increasing marginal interest in gender studies, in men's literature, or in groups specifically formed to cater for 'male interests'. While a wider perspective on the problem has been adopted in the more recent gender-related interventions of the European Union (for example, by focussing more on the family, instead of mainly on employment and education, as previously happened) there is, nevertheless, an underlying assumption in all of its proposals and initiatives that it is females rather than males who are deserving of special consideration or 'positive discrimination'.

Third, while changes in the status of women have occurred, improvements resulting from these changes have not been evenly distributed among different socio-economic groupings. By and large, it is middle-class women employed in the services sector who have benefitted most in this respect. Their advancement reflects the substantial increase in female participation in certain second- and third-level courses which, prior to the 1980s, had been taken up mainly by males. However, large areas of technical and trade-related knowledge traditionally esteemed in the domain of the male blue-collar worker remain outside women's experience. Further, and perhaps not without good reason, there is still ambivalence about the appropriateness of women's involvement in these areas. This is reflected most obviously in the very low take-up by girls of apprenticeship leading to employment in skilled occupations. Thus, it is mainly women in higher socio-economic groupings who have been able to advance themselves by following in the paths of their male predecessors.

Fourth, information about gender inequality has been presented for consumption to fairly limited audiences or target groups. It has been distributed almost exclusively by women to women, often from relatively 'privileged' backgrounds. Journalists, academics, writers, lawyers, civil servants, and politicians who draw attention to gender inequality and present it as a women's issue are mainly women. The audiences to whom they appeal are almost always comprised of women. As a result, whether intentionally or not, certain groups have not engaged in dialogue about gender; progress in equality has been defined in terms which hardly reflects their experiences; and discussion generally has not been sufficiently sensitive to their circumstances or concerns. This is true in the case of women for whom the goal of equality between the sexes in terms of educational achievement or economic independence is not attainable in their present circumstances (though increasingly working-class women are forming their own networks). It also applies to men who increasingly share responsibilty for children but whose role as fathers is scarcely acknowledged in the workplace or in public generally. Without attempts to involve more men in discussion about gender inequality, progress will be limited in matters concerning not only job opportunities and promotion for women but also in relation to child-care services and the family-work interface.

Fifth, accepting that improvements in the status of women can hardly take place without cooperation from men, it is perhaps surprising that on the whole the education of boys has not been subjected to more scrutiny and appraisal. In general, only the disadvantages experienced by girls have been highlighted in attempts to eliminate school-based gender inequality. As a result, insufficient attention has been paid to the effects that socialization practices might have on limiting the development of boys and young men, particularly in the realm of emotional expression, intimacy, and friendship, but also in such areas as reading literacy, cookery, and the creative arts in general. In pursuing greater balance in the roles assigned to men and women, we need to be aware of how such deficits impact on both family and work settings.

In light of past experiences, particularly in view of the subordinate role assigned to women by Church authorities and the extent of the Church's control over

access to educational provision, it is understandable that, until now, the promotion of women has been addressed in terms of male ideals. Indeed, such an approach was perhaps the only option when one considers the education of girls in the past with its history of preparation for motherhood and a closing down of options which do not accord with this plan. While boys may have lost out by not having been encouraged to think very much about fatherhood or family life in general, economically, their independence has not been compromised by their education to the same extent as girls. Given the rather large discrepancies in access to income that have existed between men and women, it is not surprising that a 'girls must catch up on boys' outlook has prevailed in so much of the debate about gender inequality, particularly when, in society generally, economic status is more highly valued than parental status.

The adoption of a (female) deficit model approach to inequality is, however, not without its limitations. It can be critiqued from a number of viewpoints. In the context of education, it has been argued that such an approach is unlikely to change the status quo substantially. By focussing mainly on provision of resources and access to curriculum offerings, as happened in many early attempts to redress educational inequality, this approach does not take into account the out-of-school experiences of girls and boys (Yates, 1985). Also, as Yates argues, 'where the criteria of success and the norms of teaching and curriculum are still defined in terms of the already dominant group, that group is always likely to remain one step ahead' (Yates, 1985, p.212). In other words, the entitlement of girls and women to be equal on their own terms on the basis of their own 'interests, strategies and plans' may be overlooked (Gipps & Murphy, 1994, p.10).

Whatever justification may have existed at one time for the deficit model approach, certain limitations necessarily follow from adopting a position which basically accepts that gender inequality can be resolved by making good the educational and economic losses experienced by girls and women. Necessary as it is to redress these imbalances, particularly in developing countries and wherever women are seriously disadvantaged, the search for solutions may be too narrowly channelled if the problem is overly identified with economic disparity and imbalances in access to

material resources. Such a framework, by implicitly accepting definitions of progress which stem mainly from male experience, does not adequately acknowledge other forms of gender inequality ranging from subtle differences in expectations and treatment of others to extreme, though apparently not unusual, incidents of physical and psychological abuse. Nor does it allow due recognition of other manifestations of the problem, of the conditions which give rise to it, and of its implications for both public and private life. While, at an official level, we know that gender inequality has been recognized as a problem, we do not know the extent to which this is true in other settings. How is gender inequality manifested in rural communities in terms of land ownership and inheritance or in inner cities where large proportions of the population are unemployed? How is it dealt with in the context of the family? What implications does it have for how parents treat their children? What does it mean in the primary school where progress is not measured according to public examination performance? Questions such as these remain unanswered. An opportunity to begin to address them was afforded by the study described in this thesis.

CHAPTER TWO

GENDER AND PRIMARY EDUCATION

The study addressed in this thesis had the broad task of examining primary education in Ireland from a gender perspective, a topic which had not previously been investigated in this country or on a large scale in other countries. Specifically, it was concerned with establishing the prevalence of sex-stereotyping in the primary system. This phenomenon, broadly defined as a set of commonly held beliefs about the attributes, abilities, and interests of males and females, whereby children (and adults) are arbitrarily assigned to roles determined by their sex, was examined by means of a survey involving teachers and principals in more than 600 primary schools.

Chapter Two is based on a review of literature relating to gender and primary education. It combines information about provision in Ireland with evidence from studies conducted in other countries. The chapter begins with a brief account of research on gender differences in educational achievements, attitudes, and self-concepts. School-related factors associated with such differences -- the main focus of the present study -- are subsequently examined. The gender composition of school structures, curriculum content and implementation, classroom interaction, and teachers' attitudes towards gender issues receive particular attention. The final part of the chapter is devoted to the present study. Its objectives are to locate the study in the broader context of what is already known about gender in the primary school; to provide a detailed statement of the research problem; and to identify assumptions and limitations of the study.

ACHIEVEMENT, ATTITUDES, AND SELF-CONCEPTS

Most of the research interest in gender and education has focussed on comparisons of male and female academic achievement. The results of initial studies indicated the presence of large differences which tended to favour girls in the

35

acquisition of language skills and boys in mathematics (Maccoby, 1967; Maccoby & Jacklin, 1974; Stockard, 1980). The findings of later studies confirm this pattern, though the size of the gap between the genders has narrowed considerably (Feingold, 1988). While achievement outcomes at the end of second-level schooling have been to the fore of recent inquiry, research on gender differences in the educational achievements, scholastic attitudes, and self-concepts of primary-school pupils has also been published.

In fact, there is a good deal of evidence that gender differences in the achievements, attitudes, and self-concepts of pupils exist in primary schools in Ireland. The findings of several studies of mathematics carried out since the 1970s indicate firstly, that the overall performance of girls in the middle grades of primary school is superior to that of boys. Secondly, by the end of primary schooling, the position is reversed and the overall performance of boys is superior to that of girls. More recent studies, though not entirely consistent, suggest that the gap between boys and girls in mathematics around the end of primary schooling is closing. Thirdly, gender-related differences have been found in patterns of performance. Girls tend to do better than boys in basic computational mathematics while boys tend to do better than girls in measurement, algebra, geometry, and problem-solving (Department of Education, 1980, 1985; Close, Kellaghan, Madaus, & Airasian, 1978; Lapointe, Mead, & Askew, 1992; Lapointe, Mead, & Phillips, 1989; Lynch, Close, & Oldham, 1994).

Recent data obtained in an international study on the performance of boys and girls on a test of reading literacy indicate that at 9 years of age, girls had higher average scores than boys in all 27 participating educational systems. The difference for Irish pupils was larger than the mean international difference. In fact, the seventh largest difference was recorded for Ireland. In most countries, gender differences were smaller at 14 years of age than at 9, and in some countries, boys outperformed girls at 14. This was not the case for Ireland, where the gender difference was actually larger at 14 than at 9. In fact, the gender difference in Ireland at age 14 was the third largest among 31 participating educational systems. The differences

favouring girls were consistent in Ireland not only across age levels but also in all three domains of the reading literacy test (narrative, expository, and documents) (Wagemaker, 1996).

In a third area of achievement that has been investigated, the performance in science of girls has been found to be poorer than the performance of boys. Differences were greatest for questions dealing with physics and chemistry and least marked for questions on the nature of science and life sciences (Lapointe et al., 1989; Lapointe, Askew & Mead, 1992). As in the case of reading literacy, the gap between the genders widened as pupils increased in age.

Attitudes, self-concepts, and motivation are more difficult to define and measure than are achievements in mathematics, science, or reading. While their significance is often difficult to interpret, it seems likely that differences in pupils' concepts of their own abilities and in their attitudes to the value of subjects have implications for their approaches to learning. The evidence from studies carried out in Ireland is that boys tend to rate themselves more favourably than do girls relating to their abilities in a range of scholastic areas -- mathematics, English reading, English composition, spoken Irish, written Irish, intelligence, and memory -- and this is so even though the performance of girls on reading tests is superior to that of boys. Girls, on the other hand, tend to rate themselves more favourably than boys on attitudinal and motivational factors -- interest in school, interest in reading, and keenness to do well at school (Kellaghan & Fontes, 1988). Compared to boys, girls are also less likely to report that their parents want them to do well in maths, to expect to work in an area that would require maths, or to think that maths would be necessary to get a good job (Martin & Kellaghan, 1989).

Apart from a review of curricular documents and textbooks to identify gender bias (Byrne, 1989), there has been little effort to examine the conditions in Irish primary schools which might give rise to or reinforce the gender differences found in achievement, attitudes, and self-concepts. Evidence from studies conducted in other countries suggests that such differences are associated with several factors. These

include the gender composition of school structures (Streitmatter, 1994), curriculum provision (Ramirez & Cha, 1990) and classroom interaction (Hartley, 1978; Jacklin, 1983; Morgan & Dunn, 1988; Serbin, 1983).

SCHOOL STRUCTURES AND GENDER COMPOSITION

In examining the gender composition of primary schools in Ireland, both the representation of women and men in posts at teacher, principal, and inspector levels and the composition of the pupil body in schools and classes are of interest. A review of research on advantages and disadvantages associated with schools of different gender composition follows. The review includes studies which have been conducted in second-level schools since few countries provide single-sex education at primary level (Martin & Morgan, 1994).

The Gender Composition of Staffing Structures

The gender composition of staffing structures in Irish primary schools is characterized by large differences in the representation of men and women. In June 1990, there were 4,865 men and 15,456 women teaching in primary schools according to the Department of Education's Statistical Report for 1989-90 (Ireland: Department of Education, 1991). Thus, the national male-female teacher ratio at the time of sampling for the present study was 1:3.23 (the corresponding sample ratio is 1:3.28). Over time, the proportion of women teachers has been increasing. When Kellaghan et al. (1985) carried out their study in 1981, the male-female teacher ratio was 1:2.85; in 1994, the most recent year for which figures are available, it was 1:3.35 (Ireland: Department of Education, 1995).

Up until recently, a very severe imbalance was found in the number of posts obtained by women and men in the Department of Education's primary inspectorate. Of a total of 84 school inspectors in 1992/ 1993, only eight were women. This gives a male-female ratio of 10.50: 1. Since then, due to a combination of the effects of retirement and recruitment, the situation has improved in favour of women. Even so,

there are nearly five (4.85) times as many men as there are women inspectors (Institute of Public Administration, 1992; 1995).

Studies of staffing structures carried out in this country (Kellaghan et al., 1985) and in the United States (Clement, 1975; Gross & Trask, 1976) also provide evidence of the disadvantages experienced by women in the promotional stakes. In the Irish study which examined the representation of men and women in promoted posts in primary teaching in 1981, it was found that while women were more likely than men to be vice-principals (the male-female ratio was 1: 1.57) a male teacher was almost five (4.96) times as likely as his female colleagues to be principal. More recent data indicate that this situation has changed and that almost one in two principalships are currently held by women (Conference of Religious of Ireland, 1994).

Most of the concern about the under-representation of women in education posts has been reserved for women teachers. The implications of this anomaly for the curriculum experiences of pupils and for their educational and career choices have not received the same attention. This is true of research studies of school staffing structures and of equality guidelines issued to schools (e.g., see Bould & Hopson, 1983; Department of Education, 1994; Kellaghan et al., 1985; Marland, 1983; National Union of Teachers, 1988; Whyte, 1983). There has, however, been considerable interest in the gender composition of the pupil body of schools and classes and how it may affect the progress of pupils both academically and socially.

The Gender Composition of Schools and Classes

Educational provision may be classified as single-sex or coeducational according to the gender composition of the school, class, and teaching body. In Ireland, as in most European countries, single-sex education has traditionally been important. In its purest form, it is found where all pupils and teachers in a school are the same sex. A second type of single-sex schooling involves a mixed-sex teaching staff. Because of the relative scarcity of male primary teachers, this particular gender composition is not uncommon in boys' schools. A third type of single-sex education

occurs when the gender composition of the pupil body is mixed but is segregated for the purposes of instruction. This was fairly common in vocational schools in Ireland in the past.

Since the 1950s, Department of Education policy has been to amalgamate small schools into larger units. Since small schools were very often single-sex schools, the amalgamation policy has had the effect of reducing the number of single-sex schools in the system. In 1974-75, when implementation of the policy was well underway but the first year in which relevant information was provided in the Department of Education's Statistical Report (1977), 20.3% of primary schools were single-sex and 73.5% were mixed. (The remaining 6.2% were single-sex girls with mixed infants) (Table 2.1).[7] By 1993-94, the percentage of single-sex schools had been reduced to 15.8, while the percentage of mixed-sex schools had increased to 79.1 (5.1% of schools were single-sex with mixed infants) (Table 2.2).

The figures for sex category of school do not reflect entirely accurately figures for sex category of class. Figures for the latter are not available for 1974-75. For 1993-94, however, the Department of Education's Statistical Report (1995) does provide relevant information. In these recent figures, over two-thirds of pupils (68.1%) are in mixed classes while the remainder are in single-sex classes (Table 2.3). Thus, the experience of the majority of pupils in primary schools in Ireland, as in other countries, is that of a mixed-sex class.

Coeducational policies, though introduced largely because of economic considerations, have been promoted in the language of equal opportunities. This is true of the Irish Department of Education's 1984 Programme for Action in Education which states that 'Educating children of both sexes together is more in keeping with the concept of equality between the sexes and provides a better basis for developing co-operative but equal roles of men and women in adult life' (Ireland: Department of Education, 1984, p.17). In England, however, the equality implications of coeducation have been under review for some time (see, for example, Arnot, 1983;

---

[7] All tables relating to Chapter Two are presented in APPENDIX A.

Deem, 1984; Mahony, 1985) while, in the United States, segregated education is actively promoted. The main lobbyists are management personnel in single-sex schools 'determined to preserve their niche in the educational ecology' and feminists who, having once argued for coeducation, continue to 'stress the defects of mixed-sex schools' (Tyack & Hansot, 1990, p.286). To what extent are these positions supported in the research literature?

Research on Single-Sex and Coeducational Schools

A limited amount of research involving comparisons of primary schools with different gender compositions has been conducted in Ireland. Teachers' perceptions of pupils and pupils' performance in mathematics have been the main topics of interest. One study focussed on the educational beliefs and practices of sixth-class teachers in 44 girls' schools and 44 boys' schools. Few differences between both types of school emerged. However, boys' schools were found to have a more academic orientation than girls' schools and to make more use of disciplinary measures to ensure cooperation in working towards those academic goals. Teachers in boys' schools also attributed a higher influence to the impact of parental opinion on curriculum implementation (Burke & Fontes, 1986).

The findings of O'Sullivan's (1984) study of teachers' perceptions also revealed similarities rather than differences between single-sex schools. The responses of teachers (grades one to six) in ten girls' schools and eleven boys' schools differed significantly on only seven of the 44 items examined in the study. Teachers in girls' schools were less likely to rate their pupils highly in number work and more likely to describe them as attentive, reliable in working on their own, and enjoying school work. Female pupils were also more likely to be characterized by their teachers as sensitive to things of beauty, easily stimulated affectively, and protected from becoming aware of violent aspects of adult life.

Sugrue (1984) addressed the issue of gender composition of classes and mathematics performance in a study of fifth-class pupils in four single-sex and three

mixed-sex schools. She found that girls in single-sex classes obtained higher achievement scores than girls in mixed classes. This finding is, however, not supported in analyses of the performance of students in the 1984 national survey carried out in sixth classes by the Department of Education (1985). While, as noted earlier, boys performed better than girls in the areas of measurement, algebra, geometry, and problem-solving, a comparison of the performance of girls in mixed and single-sex schools revealed that inferior female performance was accounted for by the performance of girls in single-sex schools. This finding must be regarded as more reliable than that of Sugrue, since it is based on a representative sample of schools in the country. It suggests that the areas in which girls did relatively poorly (measurement, algebra, geometry, and problem-solving) received less attention in girls' schools than in boys' or mixed schools.

Research on the gender composition of second-level schools in Ireland and in other countries has given rise to a good deal of controversy. Early investigations pointed towards the advantages of single-sex provision for girls. This conclusion was supported by the findings of the First International Science Study which showed that, in the majority of countries studied, girls in single-sex schools performed better in science than girls in mixed schools (Comber & Keeves, 1973). Research on Catholic schools in the United States (Lee & Bryk, 1986; Riordan, 1985) also revealed higher achievements and less sex-stereotyped aspirations among girls in single-sex schools. Studies conducted in Britain produced similar findings. These indicated that girls in single-sex schools were more likely to take maths and science subjects (Arnot, 1983; King, 1965; Ormerod, 1975; Smith, 1984; Spender & Sarah, 1980) and to perform better in science and reading (Finn, 1980).

Support for single-sex schooling also came from Coleman's classic study of adolescent subcultures in ten American high schools. Perceiving the presence of social pressure from boys as a disadvantage for girls, Coleman argued that 'just putting together boys and girls in the same school....does not necessarily promote adjustment to life' (Coleman, 1961, p.55). While his conclusions clashed directly with the social and personal advantages attributed to coeducational schools in Dale's

(1969; 1971; 1974) subsequent inquiries involving teachers and pupils in British schools (though Dale too had reservations about the effects of mixed settings on girls' academic performance), we may conclude that, by the mid-1980s, research evidence favouring single-sex schools was mounting on both sides of the Atlantic.

At the same time, there was growing controversy about the quality of the designs of such studies. It was becoming apparent that findings had been seriously weakened by methodology which failed to take account of the selective nature of single-sex schools. Additionally, it was claimed that fair comparisons between single-sex and coeducational schools had not been achieved because of differences relating to curricula, staff/ pupil ratios, and teacher qualifications (Smith, 1984). These and similar reservations about research conducted in American schools (Moore, Piper, & Schaefer, cited in Hannan et al. 1996) led to the development of more substantial and statistically sophisticated studies.

The results of these more recent studies are also mixed. In most British studies, including ones in which hierarchical linear modelling was used in analysis, it was found that, once controls for prior ability and family background characteristics were introduced, very little in the examination results of pupils could be attributed to the gender composition of schools (Goldstein, Rasbash, Yang, Woodhouse, Nuttall, & Thomas, 1993; Nuttall, Thomas, & Goldstein 1992; Steedman, 1983; Thomas, Nuttall, & Goldstein, 1993). More or less the same conclusion emerged from Carpenter's (1985) Australian study, from Marsh's (1989) reanalysis of Lee and Bryk's (1986) data, and from Daly's (1994) study in Northern Ireland (though the number of pupils involved in his research was low). However, in a further more substantial study which included an array of controls for pupils' educational and social characteristics, Bryk and Lee, in association with Holland (1993), again reported superior academic achievements for girls in single-sex schools. Findings from Australian studies also show significant advantages for girls in single-sex schools in relation to their participation and achievement in maths and science (Yates & Firkin, 1986) and in their attitudes towards these subjects (Bryan & Digby, 1986; Gill, 1992). These outcomes are consistent with conclusions reached for similar

43

study populations in developing countries in less statistically sophisticated studies (Jimenez & Lockheed, 1989; Lee & Lockheed, 1990) and with the results of recent research involving 17 schools in this country (Hanafin & Ní Chárthaigh, 1993). In the Irish study, which included controls for pupil social class characteristics and school dropout rates but not for prior ability/ achievement, girls in single-sex schools performed better in the Leaving Certificate examination than girls in coeducational schools.

The most comprehensive study of single-sex and coeducational schools in Ireland was published in 1996 (Hannan et al., 1996). It was based on information obtained in questionnaires completed by 10,000 Junior and Leaving Certificate pupils in 116 schools. Information on the pupils' subsequent examination performance was obtained from Department of Education records. The study included controls for differences in pupils' homebackground and ability/ achievement characteristics prior to the examinations (though not at junior-cycle entry) and involved sophisticated statistical analyses including multi-level modelling.

The findings of the study indicate that the main effects on pupil performance in both examinations come from social and personal background factors. Average performance in the Leaving Certificate examination was not significantly affected by the gender composition of the school. While differences between single-sex and coeducational schools were significant at the Junior Certificate level (with small negative effects being limited to low-ability girls in coeducational schools), the authors attributed most of the variance in achievement to background factors. In mathematics, however, coeducation was found to have a negative impact on the performance of girls in the Junior Certificate examination and of both boys and girls in the Leaving Certificate examination. No effects were reported for English -- the only other subject examined in the study.

Coeducation was also found to have a negative impact on the personal and social development of boys who were described as being more self-critical and more anxious about their personal appearance than boys in single-sex schools. Boys in

coeducational schools were also reported as feeling less self-confident and less in control of their lives. Girls, on the other hand, had lower self-evaluations and higher stress levels than boys irrespective of the gender composition of their school. In several other studies, however, significant personal and social advantages for girls in single-sex settings have been reported (but see Schneider, Coutts, & Starr, 1988, for contrary indications). These include higher academic self-concepts and educational aspirations in addition to enhanced feelings of control over life events and less sex-stereotyped occupational aspirations (Bryk et al., 1993; Cairns, 1990; Carpenter, 1985; Lee & Bryk, 1986; Mahony, 1985; Rowe, 1988).

Pupil subject choice and preference has received considerable attention in studies of single-sex and coeducational provision (Bone, 1983; Dale, 1969; 1971; 1974; Deem, 1984; Ormerod, 1975; Stables, 1990). This body of research suggests that the polarization of subject interests between the sexes is greater in mixed than in single-sex schools. It further suggests that while such polarization occurs mainly in the physical sciences and modern languages, it is also found in craft, drama, and music and that boys may be more affected than girls. Based on these observations, Stables (1990, p.229) concludes that 'subject interest and specialisation may be guided to a greater extent by a desire to conform to a received sexual stereotype in mixed schools than in single-sex schools, thus effectively narrowing career choice for co-educated pupils'.

Whatever positive outcomes emerge in favour of single-sex schools, there is a good deal of evidence that pupils (both male and female) who attend coeducational schools consistently report higher levels of satisfaction with the personal and social aspects of their education than those educated in single-sex schools. This finding is reported in research studies conducted in several countries including Ireland (Dale, 1969; 1971; 1974; Feather, 1974; Hannan & Shortall, 1991; Hannan et al., 1996; Schneider & Coutts, 1982; Schneider et al., 1988; Stables, 1990). Thus, it would appear that the slight gains in achievement, aspirations, and self-confidence more often than not reported for pupils in single-sex schools may be achieved at some cost to their personal and emotional well-being.

While in all of this research there is an assumption that outputs are affected by inputs there has been little indepth examination of how pupils' experiences in single-sex and mixed schools are shaped by factors such as the gender composition of the teaching and management staff, curriculum provision and implementation, and classroom interaction (Schneider et al., 1988). In the study conducted for this thesis, we may ask if there is anything in the primary-school experiences of pupils in Ireland which would seem to account for the somewhat higher achievements and aspirations reported for second-level pupils in single-sex schools and for the greater personal and social advantages enjoyed by their coeducated peers. With this in mind, we turn now to examine the nature of the primary curriculum and its implications for male and female pupils.

CURRICULUM PROVISION AND IMPLEMENTATION

Pupils attending Irish primary schools follow a national curriculum laid down by the Department of Education. All subjects specified in the curriculum, which is contained in two handbooks for teachers, are compulsory for girls and boys. English, mathematics, Irish, religion, social and environmental studies, art and craft, music, and physical education are taught at all grades. During the first two years, schools are also expected to make provision for play with toys, or free play, and story-telling. Depending on resources, older pupils may be introduced to computer technology and to a variety of school-based extra-curricular activities.

In 1971, when the 'new' curriculum was introduced, consciousness of sexism or of sex stereotyping was not as high as it is today. It is not surprising then that the curriculum handbooks have little to say about gender or that they contain some material which would now be regarded as reflecting traditional stereotypes (Blount, 1990). The material refers to music and sport, not to the core curriculum areas of language and mathematics. In the case of music, some songs (e.g., martial, gay, humorous, rhythmic airs) are regarded as being more suited to boys while others (e.g., lullabies, spinning songs, songs tender in content and expression) are regarded as being more suitable to girls (Department of Education, 1971b, p.213). In physical

education, the curriculum handbook says that at standards 5 and 6 separate arrangements in movement training may be made for boys and girls (p.310). In other parts of the curriculum, however, a more integrated approach to educating girls and boys is advocated. In the art and craft section, it is worth noting that needlework is regarded as suitable for both boys and girls (Department of Education, 1971a, p.324) as is the recommendation that boys as well as girls should take part in simple domestic chores (e.g., setting a table, sweeping the floor) (p.326).

In light of increased public awareness about equality issues, the absence of a thorough treatment of gender in the curriculum handbooks may present difficulty for teachers. O'Sullivan (1984), a former primary teacher, is critical of the fact that 'the behavioural norms meant to govern classroom interaction are unspecified and the issue of their differentiation by sex [and other factors including social class and geographical location] is unexplored' (O'Sullivan, 1984, p.22). While a gender-neutral curriculum may signal progress for American transformation feminist theorists, O'Sullivan's observation suggests that teachers in Ireland require more, rather than less, information about how male and female pupils should be treated in primary-school classrooms.

In several countries, school textbooks and testing materials have recently been extensively revised on the assumption that children rely on the characters portrayed in these and other such media to model their perceptions of adult roles and occupations. While, at one stage, the negative effects of a feminized curriculum on boys were of interest, most of the present concern has focussed on girls and how they may be affected by the kinds of roles assigned to women in instructional guides and teaching resources (Gage & Berliner, 1988; Stockard, 1980). In the past ten years, or so, this issue has received considerable attention in the primary curriculum in Ireland. In a study of a reading scheme, it was found that the majority of story characters portrayed were male, particularly at the senior grades. Further, when portrayed, women tended to be seen in a restricted range of occupational roles, mostly within the home (Byrne, 1989). Official efforts to eliminate such sexism and sex-

stereotyping have been extensively publicized and have included the preparation of guidelines for textbook publishers issued by the Department of Education in 1984.

A second source of gender differentiation which has been investigated in the Irish primary curriculum is the amount of time spent on subjects by girls and boys. Precise information on this issue is difficult to obtain, particularly if teachers are integrating subject areas as is recommended in the curriculum handbooks. This means, for example, that mathematics and language may be taught in the context of several subjects. However, the fact that even arbitrary time guides exist suggests that schools are broadly in agreement about teaching priorities. From a gender point of view, an important issue is whether teachers spend more time on traditional 'female' subjects with girls and more time on traditional 'male' subjects with boys. If such differences exist, they will be more likely to occur in single-sex than in mixed schools. Burke & Fontes' (1986) national survey of sixth-class teachers provides some evidence on this topic. They found that boys' schools devoted more time per week to the teaching of mathematics (5.23 hours compared to 4.79 hours in girls' schools). The opposite was true in the case of art and craft which, in girls' schools, received twice as much time (1.96 hours) as in boys' schools (0.98 hours).

In recent years, also, there has been some concern about the gender implications of computer technology. In line with other European countries, computers and educational software were introduced to primary schools in Ireland in the early-to-mid 1980s (Galton, 1989). Published information on their availability or use is virtually non-existent though, in 1988, it was estimated that approximately 25% of schools had acquired computers (McNamara, 1988). While official awareness of gender in the context of computer technology is reflected in equality guidelines for schools (e.g., Department of Education, 1994), on the whole, the issue has received limited attention. However, in one study of the integration of pupils with physical and communication disabilities in 50 primary schools, reference was made to the need to ensure that integration and the use of a computer to assist integration 'are not thought to be more appropriate for boys than for girls' (Lewis, 1993). In a second study of 34 primary schools conducted by the Department of

Education, awareness of gender issues was reflected in the observation that boys and girls who participated in the study were 'equally enthusiastic about using and becoming familiar with a computer' (National Council for Curriculum and Assessment, 1990).

Teachers' observations of pupils working with computers in other countries suggest that the use of educational technology by girls and boys in schools is likely to require careful monitoring (Hoyles, 1988; Lewis, 1989; Lockheed, 1985). In a study of primary schools in Canada, it was noted that boys took over the computers in free periods and were more willing than girls to use computers in response to teachers' requests (Carmichael, cited in Hoyles, 1988). Teachers in Spanish schools observed that in mixed-sex classes boys 'took' to computers immediately whereas girls adopted a more reticent approach. However, when girls were segregated from boys, teachers reported that girls showed just as much interest in and aptitude for computers as did boys. A second observation of teachers was that girls are more motivated to work with computers when they have female teachers. Thirdly, teachers noted the differential expectations of parents for their male and female children with the effect that boys, but not girls, were encouraged to be familiar with the new technology.

Research studies conducted in other countries also indicate that gender socialization is likely to be affected by the kinds of toys, extra-curricular provision, and playground activities that are available in primary schools. Burn found that boys in English schools tended to have toys that develop spatial and problem-solving abilities and that provide educational advantages 'that dolls and soft toys do not' (Burn, 1989, p.143). Reported observations of school playgrounds in England and the United States show boys frequently engaged in team sports and girls in small-scale, turn-taking, cooperative kinds of play (Delamont, 1980; Lever, 1978; Thorne, 1993). Lynch's (1989) study of second-level schools in Ireland (N = 41) suggests that extra-curricular provision in schools in this country is also gender differentiated. She found that options in the arts i.e., in drama, debating, art and craft, and musical activities, were much more likely to be offered in girls' schools than in boys' schools.

For further indications of where gender differences in primary-school experience are likely to occur, we must look to classroom interactional influences including organizational factors and the characteristics of teachers and pupils. The following discussion draws together key issues in the existing research on these influences focussing particularly on teachers and how they perceive and interact with male and female pupils. A common assumption in the research reviewed is that teachers' perceptions and expectations reinforce, rather than cause, the development of different academic aptitudes and behaviours in girls and boys which, in turn, are reflected in their different achievement outcomes. Certainly, there is a good deal of evidence indicating that gender differences in classroom behaviour are apparent at an early age. Askew and Ross (1988) document how girls and boys in infant classes tend to use resources (equipment and space) differently and to value activities differently depending on whether these involve, for example, verbal or physical communication, cooperation, or competition. They describe boys as having a 'territorial' attitude to classroom activities and a greater need than girls to identify activities as male or female.

Studies of toy preferences and play activity also provide evidence of sex-stereotyped behaviour in young children (e.g., Burn, 1989; Fagot & Patterson, 1969; Serbin, 1972). In a study of infant classes conducted by Serbin, O'Leary, Kent, and Tonick (1973), girls were found to be more frequently close to the teacher, i.e., staying within arm's reach of the teacher during play periods (thereby reducing their opportunities to play independently). Boys, on the other hand, were more often observed to explore areas of the classroom not frequented by the teacher and to disrupt classroom activities by fighting, destroying materials, and ignoring directions. However, play activity and preferences can be influenced by the presence of teachers and other children. In a study involving four classes of pre-schoolers, both girls and boys were found to increase their rate of play with both male-preferred toys (trucks, blocks) and female-preferred toys (dolls, kitchen play, drawing) when a teacher was present (Serbin, Connor, & Citron, 1977). Serbin (1978) also found that girls and

boys played with toys typically associated with the opposite sex until another child entered their play space.

Overall, boys are reported as presenting more problems for teachers than girls. Studies show that boys are not only more physically and verbally aggressive -- they are also referred more often for adjustment and emotional problems (Maccoby & Jacklyn, 1974; Serbin, 1983; Wheldall & Merrett, 1989). In a study of infant classrooms, Morgan and Dunn (1988) identified what they called 'visible' or physically active and lively children who seek a considerable amount of attention from teachers and classmates, and 'invisible' children who pass unnoticed for lengthy periods. They concluded that, while a 'direct equation of visibility and invisibility with male and female would be an oversimplification, a clear connection with typical patterns of boys' and girls' behaviour was found' (Morgan & Dunn, 1988, p.3).

Jean Stockard draws attention to evidence which suggests that not all boys receive more disapproval from teachers than girls receive. She reports that 'most of the negative interactions with boys involve those who have behaviour problems and those who are under-achievers. Girls who are under-achievers tend to be quiet and withdrawn rather than disruptive and ....often receive little attention' (Stockard, 1980, p.15). In other words, teachers respond differently to girls and boys, not on the basis of gender per se, but because girls and boys behave in different ways. Thus, pupil sex may be more informative as a part, rather than as a main, effect in helping to understand the different classroom experiences of girls and boys (Brophy, 1985). However, in responding to boys' greater 'visibility' and attention-seeking behaviour, teachers may unintentionally support its perpetuation. Hartley (1978), in a study of two large infant schools, found that boys received more teacher attention mainly because teachers had more difficulty in controlling them. Similar observations are reported in other classroom studies which show that 'it is male pupils who are more likely to be praised by teachers, are more likely to be criticized by teachers and are more likely to be punished by teachers' (Windass, 1989, p.44; see also Serbin, 1973). These response patterns tend to become more pronounced when pupils reach adolescence and have been shown to reinforce the disruptive behaviours that teachers

wish to minimize (Morse & Handley, cited in Wilkinson & Marrett, 1985; O'Leary, Kaufman, Kass, & Drabman, 1970; Pinkston, Reese, Leblanc, & Baer, 1973).

In addition to reacting differently to the behaviours of girls and boys, teachers may adopt a variety of classroom practices which, in effect, serve to reinforce traditional gender-role stereotypes. One such practice relates to the tendency of teachers to assign some tasks to girls, such as child minding or tending plants or flowers, and other tasks to boys such as carrying chairs or emptying bins (Cole, 1991; Marland, 1983; Robinson, 1989). A second has to do with teachers' use of different adjectives to describe the personalities of girls (e.g., obedient, tidy, conscientious, fussy, gossiping) and boys (e.g., lively, aggressive, self-confident, independent, couldn't-care-less, loyal) (Clarricotes, 1980). A third gender-differentiating practice involves the separation of girls and boys in seating and lining up arrangements. This seemingly harmless aspect of classroom organization may, it seems, have the effect of giving official sanction to the idea that gender is an important aspect of one's personality even in situations where it would appear to be irrelevant (Whyte, 1983).

Relatively little is known about how pupils' academic progress may be affected by the nature and extent of their contact with teachers. Some researchers have looked for explanations of girls' (lower) and boys' (higher) academic self-concepts in terms of teacher-pupil interactions. This line of inquiry received considerable attention in a study of fourth and fifth-grade classrooms in American elementary schools. The researchers, Dweck, Davidson, Nelson, and Enna (1978) found that while boys received far more criticism than girls for conduct and non-intellectual aspects of their work (e.g., neatness), girls received relatively little criticism for non-intellectual matters. This meant that the proportion of all negative evaluation received by girls that was related to the intellectual quality of their work was extremely high. Further imbalance resulted from the fact that teachers were eight times more likely to attribute the failure of a boy than of a girl to insufficient effort. In a subsequent experiment involving two groups, each with male and female pupils, Dweck et al. (1978) arranged for one group to be given feedback typical of boys' experience and for the second group to be given feedback typical of girls'

experience. As predicted, pupils of both sexes who received the feedback girls receive tended to attribute negative evaluation to ability while most of the pupils in the other group attributed negative evaluation to insufficient effort. The researchers concluded that differences in girls' and boys' interpretations of their achievement outcomes are at least partially explained by feedback received from teachers.

Only a few studies have examined teacher-pupil interactions in specific subject areas. Observational studies of reading and mathematics classes in American elementary schools have shown a tendency for teachers to concentrate more on girls in reading instruction and more on boys in mathematics instruction (Leinhardt, Seewald, & Engel, 1979; Pflaum, Pascarella, Boswick, & Auer, 1980). The findings suggest that teachers' instructional styles tend to reflect traditional gender-role expectations.

The question of whether male and female teachers differ in their treatment of pupils has also been explored in classroom interaction studies. Instructional styles, language use, and leadership styles have received attention in this context. While it cannot be concluded that either male or female teachers are more direct or dominant in their contact with pupils (either male or female) (see, for example, Adams & Biddle, 1970; Good, Sikes & Brophy, 1972), gender differences have been reported in studies of linguistic and instructional styles. These indicate that male teachers tend to respond more to pupils' incorrect responses and to use more complex sentences (Adams & Biddle, 1970; Hays, Kantor & Goldstein, 1971) and that female teachers tend to praise correct answers, to ignore incorrect ones, and to adopt more personal and less threatening styles of interaction (Brophy, 1975; Good et al., 1972). The impression that emerges most strongly from all of this research is that the classrooms of female teachers tend to be warmer, more nurturant milieux, while male teachers' classrooms are more organized and task oriented (Dunkin, 1984).

A second area of research on the effects of teacher gender has involved comparisons of pupils' performances on tests of various kinds. Much of this research was prompted by the common finding that girls achieve better than boys at reading in

the lower grades of primary/ elementary schools. Given that most primary teachers are women, it was thought that the answer for boys might be to place more male teachers in primary schools. This solution was, however, based on the assumption that teachers favour students of like sex and that the favoured treatment results in enhanced achievement. While evidence exists that both male and female teachers assign more leadership positions to same-sex pupils (Lee & Wolinsky, 1973) research findings generally provide little support for this hypothesis (Asher & Gottman, 1972; Clapp, 1967; Good et al., 1972; Stake & Katz, 1982). On the contrary, it seems that if there is a bias it tends to favour boys who receive more attention from both male and female teachers (Etaugh & Harlow, 1975; Lee & Wolinsky, 1973). Thus, classroom interaction observers have concluded that male and female pupils are treated differently, but similarly, by teachers of both sexes (Brophy, 1985).

A limited amount of research has been conducted on gender and classroom interaction in Irish primary schools. Burke and Fontes' (1986) study of sixth-class teachers revealed significant differences between boys' and girls' schools in the extent to which teachers relied on corporal punishment (a practice that has since been abolished) and assigned extra work to pupils as a disciplinary measure. In both cases, pupils in boys' schools were more severely disciplined. A more recent study of teacher-pupil interaction in 30 coeducational classes (Department of Education, 1994) showed that boys, in addition to initiating more conversation with teachers, received on average one-and-a-half-times as many questions as girls. Further, boys were found to receive twice as many 'higher level' questions as girls. Thus, it would appear that the patterns of gender differentiation which have been observed in primary-school systems in other countries are also to be found in primary classrooms in Ireland.

TEACHERS' ATTITUDES TOWARDS GENDER ISSUES

Thus far, this chapter has focussed on how girls' and boys' experiences of primary school, including their different achievement orientations and outcomes, may

54

be related to such factors as the gender composition of schools, curriculum provision and implementation, and teacher-pupil interactions. Though not well explored in the literature, a further consideration which merits attention in this context has to do with the attitudes of teachers and the extent to which teachers are aware of gender issues in school settings. It seems reasonable to assume that sex-stereotyping will be eliminated with much less difficulty in schools where teachers are actively committed to the principle of gender equality. To what extent is this assumption supported in the research literature?

Studies conducted in England suggest that considerable variation exists between teachers in their views on the role of schools in relation to gender equality (Adams, 1985; Pratt, 1985). Specifically, four perspectives may be identified. One set of teachers report little or no interest in the topic. A second set subscribes to the view that schools must face the reality of unequal gender roles in society and prepare pupils accordingly. A third perspective is that schools should play an active part in seeking and working to bring about equal opportunity. This view is opposed by a fourth set of teachers who argue that it is best to ignore, rather than emphasize, problems associated with gender inequality.

Secondly, the findings of the English studies show that teachers' views on gender issues vary according to their sex and subject specialization. Perhaps, not surprisingly, female teachers tend to report more interest in gender issues than their male colleagues, though the opinions of the female majority are also shared by a substantial minority of male teachers. Male teachers of English and social studies, in particular, along with their female counterparts in these subject areas, generally favour equality initiatives, whereas teachers of mathematics, physical sciences, and technical crafts (all mainly male) show opposing tendencies. Teachers' views also appear to be affected by the gender composition of the school in which they work, with resistance to reform being most concentrated in boys' schools.

A third observation based on the English studies relates to the gap between teachers' recognition of problems associated with gender inequality and the

implementation of strategies to resolve them. Female teachers, in particular, have drawn attention to the 'enormous contradiction between policy and reality' in their schools (Adams 1985; p.120). Further, while teachers (both male and female) strongly agreed that pupils' subject and career choices should be free of sex-stereotyping, they also agreed that teachers, in their daily interactions, support and encourage sex-stereotyped preferences. These findings suggest that while a good deal of support exists in schools for the principle of gender equality there is, in practice, rather less commitment to action.

In Ireland, the need to address gender in primary schools had been recognized by the beginning of the 1990s (Blount, 1990; Department of Education, 1989; O'Sullivan, 1985). In the absence of widescale in-service training, however, most teachers would not have had an opportunity to familiarize themselves with the issues involved. On the contrary, it is likely that teachers' awareness of gender in the primary-school setting was extremely limited when information for the present study was obtained in 1990.

THE PRESENT STUDY

The present study was conceived in the knowledge that most of the concern about gender issues has been directed at later stages in the life cycle --attention to the learning and developmental needs of young children has, as we have seen, taken a back seat in the agenda of women's liberation --and in the belief that changing or broadening gender roles has to begin in early childhood. In focussing on primary schools, it was recognized that what children learn or absorb in these environments will affect not only later educational and vocational choice; it will also influence judgment about what are considered to be appropriate roles and activities for boys and girls and for men and women.

The study was designed in the knowledge that most research on gender and education has focussed on achievement. The results of this body of work show that, over time, the size of the gender difference, particularly in maths and science, has

decreased. A fair amount of cultural variation in the academic performance of girls and boys is also indicated (Feingold, 1988; Maccoby & Jacklyn, 1974). Secular change, cultural differences, and the findings of research which cast doubt on the role of visual-spatial ability in explaining the once considerably higher achievement of males in mathematics (see Noddings, 1992), have two important implications for research activity generally and for the present study in particular. First, they lend support to the arguments of researchers who favour socialization over biological explanations of gender differences in achievement and cognitive abilities. Second, they indicate that, rather than focussing on the extent to which sex differences exist, further inquiry should be directed towards examining how schools as major agents of socialization may be contributing to the fostering of consistent patterns of gender bias in the achievements of students.

Specifically, the research problem was conceived in terms of three objectives. The first objective was to examine curriculum and extra-curricular provision, classroom practice, and teachers' perceptions of pupils for evidence of sex-stereotyping/ gender bias. A second objective was to establish the extent to which sex-sterotyping might vary by sex category of school (mixed, single-sex, and girls' schools with mixed infants). A third objective was to explore the extent to which sex-stereotyping is associated with gender of teacher. This line of inquiry was pursued in view of the diminishing numbers of men in the teaching profession and the fact that there are now few opportunities to include male teachers in research studies conducted in western developed countries.

Rationale for the Survey

The initial impetus for the study came from a group of women inspectors in the Department of Education who expressed concern about the adequacy of maths and science provision for girls in primary schools. In feminist tradition, an action research project was envisaged in which a small number of schools with good practice would be investigated and possibly emulated by other schools in the primary system. Difficulty in pursuing this objective ensued with the realization that there

was insufficient information on which to base the selection of schools. Criteria for good practice could not be specified and schools could not be identified. It was then decided that a more appropriate objective might be to obtain information about the system as a whole and about schools with different gender compositions. Such an approach called for the use of a survey design and, in effect, substantially broadened the focus of inquiry. Whereas an action-research model based on the concerns of the inspectors would have involved taking a snapshot of the primary system mainly, if not entirely, from a girl's perspective, the use of survey-design methodology, which readily facilitates group comparisons, meant that the early formal socialization experiences of girls could be examined in relation to those of boys in a substantial number of schools.

In fact, as the study developed, an important assumption of the survey was that boys as well as girls can be disadvantaged by primary-school experience. Thus, the exclusive link between gender inequality and femaleness which, as we have seen, has tended to dominate conceptualization and treatment of the problem, was rejected in the design of the study. Specifically, it came to be recognized that sex-stereotyping is a negative influence on the educational development of both boys and girls and that the adoption of a deficit approach to inequality is not appropriate for girls unless a similar approach is also adopted for boys. In other words, if we need to look at how girls are losing out in terms of male standards of success, then we also need to examine where deficits in boys' socialization occur with regard to female experience.

A further assumption underlying the survey was that the experiences of boys and girls in primary school will vary depending on the gender composition of the school they attend and that different types of school organization will reflect different aspects of problems associated with gender inequalities. Consequently, all four types of Irish primary school with regard to gender composition (boys', girls', girls' with mixed infants and mixed) were included in the study. It was further assumed that sex-stereotyping will vary in strength and in form as pupils progress through the

system. Thus, information was obtained from teachers at three points in the primary cycle (senior-infant, third, and sixth class) as well as from school principals.

An important philosophical problem for empirical research which may be seen as a limiting factor in the present study has to do with the relationship between 'knowledge' and reality. In the context of the study, this problem may be presented in terms of the following question: To what extent do the reports of principals and teachers (knowledge), on which the survey is based, accurately reflect the behaviour and treatment of pupils (reality)?

From a methodological point of view, an obvious solution would be to include classroom observational data which could then be matched with the reports of principals and teachers. This could be done either by collecting observational data in addition to the survey data or, more economically, by ensuring that the survey questions are based on the questions, insights, and findings of existing observational studies. The latter is, in fact, what was attempted in the present study. Moreover, given the considerable number of American and English classroom interaction studies which have been carried out, it is unlikely that additional data of this kind would contribute much, if anything, to what is already known about gender in the primary school.

More philosophically, it can be argued that the relationship between 'knowledge' and reality may be treated in a way that implies that such methodological considerations are largely irrelevant to the quest for truth. In the sociology of knowledge, there is a school of thought which claims that it is possible to take everyday life as 'a reality interpreted by men and subjectively meaningful as a coherent word...to take this reality as given, [and] to take as data particular phenomena arising within it, without further inquiring about the foundations of this reality, which is a philosophical task' (Berger & Luckmann, 1966, p.33). In their treatise, The Social Construction of Reality, Berger and Luckmann contend that human society is made up of different and competing definitions of reality each of which is 'legitmate' to specific groups of actors. Because reality is socially defined,

59

it is therefore permissible, indeed imperative, that sociology 'concern itself with whatever passes for knowledge in a society, regardless of the ultimate validity or invalidity (by whatever criteria) of such knowledge (Berger & Luckmann, 1966, p.15). Applied to the study, the arguments of Berger and Luckmann lend support to the case for an examination of gender in primary classrooms that is based on the reports/ perceptions of principals and teachers. By implication, their position provides justification for the view that even if these reports do not accurately reflect the behaviour and treatment of pupils, and no doubt they do to some extent, they are still important since their perceptions can affect the structuring of the educational environment and how pupils respond to it.

Finally, the potential value of survey methodology as a means of raising public awareness about gender was a consideration in the choice of study design. Such an aspiration was, of course, based on the optimistic assumption that increasing the awareness of teachers and of parents of inequalities can lead to a reduction of the inequalities. Broadly in accordance with a liberal feminist perspective, this is ultimately what the present study hoped to achieve but in a research context which included boys as well as girls.

CHAPTER THREE

METHODOLOGY

The empirical component of the study is based on the responses of school principals and teachers in primary schools to questionnaires distributed in a postal survey. The survey design and methodology are described in Chapter Three. An essential task of the chapter is to report on the sampling procedure and research instruments. This is followed by an account of how the survey was conducted and the response rate achieved. Next, the variable measures and statistical procedures used in analyses are described. The chapter concludes with a profile of the survey respondents.

THE SAMPLE

To ensure representation of all stages of the primary cycle in the investigation, a 'junior', 'middle', and 'senior' grade were selected for study. Thus, information was obtained from teachers at senior-infant, third-, and sixth-class grades as well as from school principals. The selection of principals involved only one stage in the sampling process since a single principal is identified with each individual school. However, the selection of teachers within schools required a further stage when there was more than one teacher at a selected grade. In these cases, principals were asked to select the teacher whose surname came first alphabetically.

The sample will be considered in the light of three factors that are relevant in evaluating how well a sample represents a population: the sample frame (the set of individual units or participants that has a chance of being selected), the design of the sample (which involves choices about procedures for selecting participants), and sample size (Fowler, 1993; Kalton, 1983; Kish, 1967).

The Sample Frame

To select schools (and principals), a list of all primary schools in the country was obtained from the files of the Department of Education. In 1985-86, the year for which the most recent listing was available, there were 3,270 primary schools (Department of Education, 1988). The fact that the sample frame was four years old when the sampling was done (March 1990) meant that it was not entirely accurate for the survey. This inaccuracy was reflected in the selection of four schools which had closed and one which had amalgamated since 1986. However, the list was the most comprehensive and recent available. Further, it is unlikely that many schools were omitted from the frame since it is more likely that schools would have closed or amalgamated rather than opened since the list was compiled. In fact, in the four-year period in question, the number of primary schools fell by 28 to 3,242 (Department of Education, 1992).

Sample Design

A stratified random sampling design was used, a procedure which is possible when at least a few of the characteristics of the population are known at the time of sampling. Stratification, or structuring of the sampling process, involves the classification of the population into subpopulations or strata and the selection of separate samples from each of the strata (Kalton, 1983). Since sample sizes in the strata are controlled rather than determined randomly, stratification has the effect of reducing normal sampling variation, thereby producing a sample that is more likely to reflect the total population than a simple random sample (Fowler, 1993).

In the present study, stratification was carried out by sex category (single-sex boys', single-sex girls', mixed, and girls' schools with mixed infants) and by range of grades of schools (junior, senior, and 'all-thru'). Junior schools cater for pupils from junior infants to first or second class; senior schools cater for pupils from second or third class to sixth class; and 'all-thru' schools cater for pupils from junior infants to sixth class. Sex category and range were combined into a single variable GENTYPE

consisting of the following ten subpopulations or strata: boys' junior, boys' senior, boys' 'all-thru' schools, girls' junior, girls' senior, and girls' 'all-thru' schools, girls' schools with mixed infants, mixed junior, mixed senior, and mixed 'all-thru' schools. GENTYPE was cross-classified by school size, 'small' (less than 100 pupils), 'medium' (100-299 pupils), and 'large' (300 or more pupils) to produce a 10 × 3 matrix (Table 3.1). This matrix was reduced to an 18-cell matrix to combine cells containing small numbers in some of the size categories. In the case of boys' junior schools, for example, cells containing small, medium, and large schools were combined to form a single stratum comprising eleven schools (Table 3.2).

Sample Size

There are several considerations (financial, technical, and practical) involved in deciding how large a survey sample should be. Factors such as cost and administrative feasibility have to be considered in the context of minimising possible sources of error, particularly sampling error and nonresponse. Sampling error, usually described in terms of the standard error of the mean ($\sqrt{\text{var}/n}$), is the standard deviation of the distribution of sample estimates of means that would be formed if an infinite number of samples of a given size were drawn (Fowler, 1993). As the formula indicates, the magnitude of the standard error is affected by both sample size and variance in what is being measured. In general, the larger the sample, and the smaller the variance, the more accurate sample-based estimates will be.

Information from past surveys of similar variables may provide indications of expected variance, though normally estimates of variance are not available to a decision about sample size. Some guidance, however, is available regarding sample size from a consideration of the expected size of standard errors associated with samples of varying sizes. The following figures are for cases in which approximately 50% of a sample exhibit a characteristic. In a sample size of 50, the true mean (at the 95% level of confidence) would be expected to fall between 36 and 64. Increasing the sample size to 75 would reduce the range to 38 to 62, while a sample size of 100 would reduce the range further (40 to 60). To achieve a range of 43 to 57

would require a sample of 200, while a sample of 300 provides only a marginal further improvement (44 to 56) (Fowler, 1993, Table 3.1). These figures, it should be noted, are based on a simple random sample. Stratification would be expected to reduce the sampling errors.

The main focus of interest in the present study was in differences between sex categories of school -- mixed schools, boys' schools, and girls' schools (which could be further sub-divided into all girls' schools and girls' schools with mixed infants). Thus, the figures most relevant to a decision about sample size were those for sex categories of school, not those for the total sample. From the figures considered, and taking into account the cost of collecting information, an expected sample of 75 would seem adequate. Since a non-response rate of 25% could be anticipated, the smallest category should then contain 100 cases. This decision resulted in an overall allocation of 400 mixed schools and 400 single-sex schools (200 boys' schools, 100 girls' schools, and 100 girls' schools with mixed infants).

A uniform sampling fraction was used in selecting schools *within* each sex category. The sampling fraction for each sex category was the number which had been allocated to the category in the sample divided by the number of schools in the category in the population. For example, there are 44 'small' boys' senior schools in the population (Table 3.1). So, 44 multiplied by 200 (the number allocated to boys' schools) divided by 372 (the number of boys' schools in the population) gives the number of boys' senior small schools selected for the study which, to the nearest whole number, is 24 (Table 3.2). In the case of each stratum of mixed schools, however, the number of schools in the population was multiplied by 400 (the number allocated to mixed schools in the sample) and divided by 2,511 (the number of mixed schools in the population).

SURVEY INSTRUMENTS

Information for the survey was obtained in self-administered postal questionnaires. Given the sampling design, which was stratified by sex category and

range of grades of school, and the fact that information was sought at four points in the primary cycle, the questionnaire design is necessarily complex. In fact, a number of questionnaires were prepared -- one for school principals and several versions of another for teachers.

Questionnaire Design and Preparation

One questionnaire was prepared for school principals in all sex categories of school (see Form P, APPENDIX A). In the case of teachers, who were asked about the nature of their interaction with pupils, questionnaires had to be designed to cater for schools with different sex compositions. Accordingly, one version was prepared for teachers in mixed schools and another was prepared for teachers in both categories of single-sex school. These versions were further adapted to allow for the fact that provision varies as pupils progress through the system. Consequently, the version prepared for senior-infant teachers is different from the one prepared for third- and sixth-class teachers. Thus, four separate versions of a questionnaire were prepared for teachers though, as far as possible, the same questions were included in all versions to facilitate comparison of data. Each version was then matched to one or more groups of respondents i.e., to teachers at senior-infant, third-, and sixth-class grades in single-sex boys', girls', and mixed schools to produce the following nine forms: IB, IG, IM, 3B, 3G, 3M, 6B, 6G, 6M. An unusual situation occurred in relation to girls' schools with mixed infants. In this case, senior-infant teachers were assigned the same form as senior-infant teachers in mixed schools (Form IM); however, teachers at third- and sixth-class grades were assigned Forms 3G and 6G and so, for the purposes of data collection, were treated in the same way as teachers in single-sex girls' schools. Copies of the questions contained in all of the forms prepared for teachers are reproduced in APPENDIX B.

Initial drafts of the questionnaires were completed following a review of literature and of the primary curriculum in Irish schools (Department of Education, 1971a; 1971b). The preliminary drafts were revised following a pilot test involving principals and teachers at each of the grades selected for study. The purpose of the

pilot test was to ensure that questions were clearly worded and that their meaning and interpretation were not ambiguous. The amount of time involved in completing questions was a further consideration since, if this was regarded by respondents as excessive, it could have the effect of substantially lowering the rate of response. In fact, the results of the pilot test indicated that this was unlikely since none of the respondents complained about the time factor and, in any case, all of the questionnaires were completed in less than twenty-five minutes.

When work on the questionnaires had progressed to an advanced stage, copies were submitted to school inspectors of the Department of Education. The inspectors judged the content of the questionnaires with respect to appropriateness and range or comprehensiveness and, in a meeting at the Department of Education, recommended minor modifications and additions. The questionnaires were amended accordingly and instructions for coding were inserted. Finally, the questionnaires were type-set, proof-read, and despatched to the printer.

Questionnaire Content

A broad range of variables was included in the questionnaires. Principals and teachers provided information on educational provision and practice in their schools, on their perceptions of the behavioural and learning characteristics of pupils, and on their perceptions of gender issues in school environments. They also provided some personal background information. In general, most, though not all, of the content in the principals' questionnaire relates to school-level information whereas classroom variables are the focus of interest in the teachers' questionnaires.

In the principals' questionnaire (APPENDIX A), information was obtained on the gender and number of years' national school teaching (including management) experience of respondents, the numbers of male and female teachers at each grade, and provision for computer facilities. Principals also provided information on their perceptions of pupils' performance in single-sex and mixed-class situations, pupils' subject preferences, and the extent to which they perceived single-sex and

coeducation to benefit boys and girls. Finally, in response to a series of questions designed to elicit information on gender awareness in schools, principals specified the contexts in which gender issues had been discussed and the extent to which they would support a review of practice relating to gender in their school. They also indicated the proportion of staff members who would be interested in participating in a review of this kind and the level of awareness about gender issues among teachers, parents, and pupils generally.

The teachers' questionnaire (APPENDIX B) also yielded information on the gender and number of years' national school teaching experience of respondents. Additionally, it focussed on time spent at curriculum subjects, extra-curricular provision and take-up (for third- and sixth-class pupils), availability and choice of play activities (for senior infants), classroom tasks allocated to pupils, teachers' use of disciplinary procedures, lining up and seating arrangements in mixed schools, and code of dress for physical education (P.E.). Information on teachers' perceptions of pupils was obtained from responses to questions on pupils' performance in single-sex and mixed learning environments, on the effect of the presence of boys and girls on each other in mixed classes, on the subject preferences of pupils, and on the behavioural and learning characteristics of pupils. Finally, teachers identified the contexts in their school in which sex-stereotyping in teaching materials had been discussed and indicated whether any action had resulted from discussion.

PROCEDURE

Address labels for the 800 primary schools selected for study were generated and sets of questionnaires were prepared for each school. For example, whereas a mixed 'all-thru' school received four questionnaires (one for the principal and one 'mixed version' each for teachers of senior-infant, third-, and sixth-class pupils), a girls' junior school received only two questionnaires (one for the principal and one girls' version for the senior-infants' teacher). A school ID number (1-800) and a stratum number (1-18) were assigned to each questionnaire so that returns could be

monitored. The questionnaires, each with its own envelope, were enclosed in one larger envelope along with a letter addressed to the principal.

In the letter, principals were informed of the nature and purpose of the research and invited to participate in the study. They were requested to distribute the enclosed questionnaires to teachers at the selected grade(s), selecting the teacher whose name came first alphabetically if there was more than one teacher involved, to then collect the completed questionnaires in the sealed envelopes from the teachers and to return them, together with their own completed questionnaire, in the enclosed business reply envelope.

More than 3,000 questionnaires were despatched to schools in March 1990. Written reminders to schools which had not returned completed questionnaires were issued in April. Some questionnaires from non-respondents of the second round of data collection were not returned until September when schools reopened after the summer holidays. Thus, the period of data collection was approximately six months.

Completed questionnaires were returned from principals of 608 schools (76.0% of the sample). The response rate varied across school types by less than nine percentage points. It was highest from girls' schools with mixed infants (82.0%), followed by boys' schools (79.0%), and lowest from mixed schools (73.3%). Seventy-five percent of girls' schools returned questionnaires.

VARIABLE MEASURES

The questionnaires were designed so that most of the questions could be answered by placing a tick in an appropriate box. The values next to the response boxes on the questionnaire forms were the ones used in analysis (APPENDICES A and B). For questions in which respondents could tick more than one box, response options were assigned a value of 1 if ticked or 0 if not ticked. Data from the open-ended question at the end of the teachers' questionnaire were not entered in the computer but were treated separately in a content analysis.

It was intended that most of the variables selected for inclusion in the survey would yield information about the prevalence of sex-stereotyping in primary schools in Ireland. It was decided that sex-stereotyping would be measured in terms of the presence (or absence) of bias towards or against either male or female pupils in the responses of teachers and principals. Thus, for example, a gender bias/ imbalance at classroom level was identified if teachers, say in mixed schools, differed significantly in their treatment and/ or perceptions of girls and boys. If significant differences between teachers in single-sex schools were also found (but for fewer of the same set of variables) this result was interpreted as meaning that sex-stereotyping existed to a greater extent in mixed than in single-sex schools.

The variables selected for analysis can be grouped into the following categories: the characteristics of respondents, gender in the structure of the system, curricular and extra-curricular provision, classroom practices, teachers' perceptions of pupils, comparisons of pupils in single-sex and mixed classes, and awareness of gender in schools.

Characteristics of Respondents

Information was sought on respondents' gender and number of years teaching experience to provide a profile of responding principals and teachers and to examine the possibility that principals and teachers might differ in their responses on one or both of these characteristics.

Gender

Principal (APPENDIX A, Q1) and teacher (APPENDIX B, Q1) respondents ticked 'Male' (coded 1) or 'Female' (coded 2).

Number of years teaching experience

This variable was included to examine whether age was a factor influencing treatment and perceptions of pupils and attitudes to gender issues in school. Since some reluctance or unwillingness to disclose this information could be anticipated,

respondents were asked to write in the number of years they had worked as a National School teacher at the time of completing the questionnaire (APPENDIX B, Q2). In the case of principals, this number included the number of years spent in school management (APPENDIX A, Q2).

Gender in the Structure of the System

A number of sources were used to obtain information about gender in the structure of the system. Information about the gender composition of the primary inspectorate was obtained from the Institute of Public Administration's (1992) Administration Yearbook and Diary 1993. Additional information on the numbers of boys and girls in the population in single-sex and mixed classes and in each sex category of school was obtained from the Department of Education's (1991) Statistical Report for 1989-90. Information on sex category of school and the numbers of male and female teachers at each grade in a school was obtained in the survey.

Sex category of school

When selecting the sample, the gender composition of the pupils served by a school was identified as a major independent variable and as a component of the 18 strata or subpopulations which were coded 1 to 18 (Table 3.2). For the purposes of data analysis, the strata were combined into the four sex categories of primary school and recoded as follows: single-sex boys' (1 to 7 = 1), single-sex girls' (8 to 11 = 2), girls/mixed infants' (12 to 13 = 3), and mixed (14 to 18 = 4).

The number of male and female teachers at each grade

Principals identified the number of male teachers and the number of female teachers at each of the grades served in their schools (APPENDIX A, Q3). Thus, in a school catering for all eight grades in the primary system, the principals wrote in the numbers of male and female teachers separately for junior infants, senior infants, first class, second class, third class, fourth class, fifth class, and sixth class.

Provision (Curricular and Extra-Curricular)

Several variables relating to the availability and take-up of curricular and extra-curricular provision in primary schools were included in the survey. The literature review and official primary curriculum directed attention towards time spent at school subjects, availability and choice of play activities, and availability and participation in extra-curricular activities. Variables relating to provision for computer facilities were included at the request of an inspector of the Department of Education.

Time spent at curriculum subjects

Teachers were presented with a list of the subjects laid down in the primary curriculum and asked to estimate the number of hours per week (to the nearest half hour) pupils in their class spend at each subject (APPENDIX B, Q3). At third- and sixth-class levels, teachers wrote in their estimated number of hours for Irish, mathematics, English, social and environmental studies, P.E., music, art and craft, and religion. Teachers of senior-infant pupils responded similarly except that, in lieu of English, they gave estimates for reading and writing. They also estimated the amount of time spent in a typical week at free play and listening to stories.

Availability and choice of play activities

A list of 15 play activities identified with the assistance of a primary teacher was presented to teachers of senior-infant pupils (APPENDIX B, Q9). The activities selected were: play with sand, toy cars, dolls, and the home corner, play with a teaset and play with water, imaginative play, dressing up, drawing and colouring pictures, and play with lego, soft toys, jigsaws, sticklebricks and building blocks. The frequency with which pupils chose to participate in each of the activities was measured in terms of responses assigned to one of the following options: 'Frequently' (coded 1), 'Sometimes' (coded 2), 'Rarely' (coded 3) and 'Never' (coded 4). An option to indicate that an activity was not available (coded 5) was also provided. In mixed schools, and in girls' schools with mixed infants, teachers responded separately for girls and boys.

Participation in extra-curricular activities/ subjects

Teachers of third- and sixth-class pupils indicated which of 22 activities and subjects were offered on an extra-curricular basis to pupils in their classes. For each activity and subject, teachers in single-sex schools ticked 'participated in' (coded 1) or 'not offered' (coded 2) (APPENDIX B, Q10). In mixed schools, teachers indicated if the activities and subjects were offered to 'boys and girls' (coded 1), 'girls only' (coded 2), 'boys only' (coded 3) or 'not offered' (coded 4). The activities and subjects presented were: basketball, camogie, computers, cookery, dance, drama, football, hockey, hurling, knitting, model-making, music (instrument), nature study, needlework, painting, P.E., rugby, science, sex education, singing, soccer, and tennis.

Availability of computer facilities

Two measures of computer availability in primary schools were obtained in the principal's questionnaire (APPENDIX A, Q4). In response to a question about whether pupils in their school had access to a computer, principals ticked 'Yes' (coded 1) or 'No' (coded 2). Principals who indicated 'Yes' were asked to write in the number of workstations available to pupils.

Classroom Practice

The variables selected to examine the practices of teachers in classrooms relate to frequency of task allocation, frequency of use of disciplinary actions and, in mixed schools, the interaction of pupils in seating and lining up arrangements. All of these issues had received attention in small-scale studies reported in the research literature. In view of the extent to which sporting activities have traditionally been segregated by gender, it was decided to examine pupils' dress code for P.E., a practice which class teachers are usually in a position to observe.

Frequency of task allocation

Teachers at senior-infant, third-, and sixth-class grades indicated the frequency with which a number of tasks were carried out by pupils in their class (APPENDIX B, Q8). Some of the tasks were ones typically associated with boys

(emptying the bin, carrying chairs and tables, and picking up litter in the school yard). Others were ones typically associated with girls (tidying up the classroom, watering plants and flowers, and minding children in junior classes). Other tasks that teachers were asked about might be regarded as less sex-stereotyped (cleaning the blackboard, looking after classroom pets, and taking messages to other parts of the school). Responses indicating frequency of allocation were assigned to one of the following options 'Frequently' (coded 1), 'Sometimes' (coded 2), 'Rarely' (coded 3), 'Never' (coded 4) and 'Task does not arise' (coded 5). Teachers in mixed schools recorded their responses separately for boys and girls.

Frequency of use of disciplinary actions

Disciplinary practices in Irish schools were examined in the late 1970s as part of a study of the educational beliefs and practices of sixth-class teachers (Burke & Fontes, 1986). In the present study, the actions used by teachers to discipline pupils were examined in the same way as in the Burke and Fontes study except that the variable on corporal punishment was excluded (APPENDIX B, Q7). At third- and sixth-class grades, the variables selected for analysis were: use of verbal reproof, assigning extra homework, withdrawing privileges, putting pupils standing, excluding pupils from activities, sending pupils out of the room, sending pupils to the principal, sending letters home, and informing parents about pupils at parent-teacher meetings. At senior-infant level, because of the pupils' age, the variables on assigning extra homework and sending pupils home were omitted. Frequency of use of the disciplinary actions was indicated by ticking one of the following response options: 'Frequently' (coded 1), 'Sometimes' (coded 2), 'Rarely' (coded 3), or 'Never' (coded 4). Teachers in mixed schools recorded their responses separately for boys and girls.

Control of pupil interaction

Four sets of variables relating to line formation and seating arrangements in mixed schools were included in the survey. The variables were designed to elicit information about the interaction or integration of girls and boys and the extent to which interaction is controlled by teachers and pupils.

In response to a question about how pupils in their classes usually line up, teachers ticked one of three options, 'Boys get into one line, girls form a separate line' (coded 1), 'Boys and girls get into mixed lines' (coded 2), and 'Other (Please explain)' (coded 3) (APPENDIX B, Q12). Teachers indicated who was responsible for deciding how pupils line up by placing a tick beside one of the following options: 'You decide' (coded 1), 'The pupils decide' (coded 2), 'The principal decides' (coded 3), and 'Other (Please explain)' (coded 4) (APPENDIX B, Q13).

Teachers described the seating arrangements in their classrooms by selecting one of the following options: 'Boys and girls sit in separate groups' (coded 1), 'Boys and girls are mixed' (coded 2), 'Seating arrangements vary according to the subject' (coded 3), and 'Other (Please specify)' (coded 4) (APPENDIX B, Q14). They also selected one of five options to indicate who was responsible for making decisions about seating arrangements. The options presented were: 'You decide' (coded 1), 'The pupils decide' (coded 2), 'The principal decides' (coded 3), 'The pupils decide initially, but you make changes as you get to know them' (coded 4), and 'Other (Please specify)' (coded 5) (APPENDIX B, Q15).

Dress code for P.E.

In response to a question about whether sports gear (shoes and clothes) was usually worn by pupils in their class, teachers in single-sex schools indicated 'Yes' (coded 1), 'No' (coded 2), or 'Unsure' (coded 3) (APPENDIX B, Q11). The response options presented to teachers in mixed schools were: 'All pupils' (coded 1), 'Only boys' (coded 2), 'Only girls' (coded 3), 'No pupils' (coded 4), and 'Unsure' (coded 5).

Teachers' Perceptions of Pupils

Teachers' academic expectations of boys and girls were examined in a series of questions about pupils' approaches to learning, their subject interests, and the areas in which they need extra help. Teachers also provided information on the behavioural characteristics they had observed in pupils. In mixed schools, teachers'

perceptions of the effects of the presence of boys and girls on the opposite sex were examined.

Approaches to learning

Building on Askew and Ross' (1988) analysis of classroom dynamics in English primary schools, eight learning approaches were identified four of which are typically associated with boys (physically active, competitive, problem-solving, and independent) and four of which are associated with girls (collaborative, creative, questioning, and communicative). Teachers were asked to indicate on a scale of 1 to 5 the extent to which they agreed that each adjective is an accurate description of the learning approaches typically adopted by pupils (APPENDIX B, Q4). Teachers in mixed schools responded separately for boys and girls. In each case, an explanation of what was meant by the adjective was provided: physically active (using physical space for classwork), collaborative (working with classmates), creative (showing imagination), competitive (keen to do better than other people), questioning (asking teacher questions), problem-solving (applying principles to concrete situations), independent (working alone), and communicative (talking about work with classmates). Responses were assigned the following values, 'Strongly agree' = 1, 'Agree' = 2, 'Unsure' = 3, 'Disagree' = 4, 'Strongly disagree' = 5.

Subject interests of pupils

In a question designed to elicit information about sex-stereotyping in subject preferences, principals and teachers at senior-infant, third, and sixth-class grades indicated the extent to which they agreed with each of the following statements: 'Boys show little interest in subject areas which are often associated with girls (e.g., cooking, sewing)', and 'Girls show little interest in subject areas which are often associated with boys (e.g., science, computers)' (APPENDIX A, Q7; APPENDIX B, Q17). Responses were assigned to one of five options and coded as follows: 'Strongly agree' (coded 1), 'Agree' (coded 2), 'Unsure' (coded 3), 'Disagree' (coded 4), 'Strongly disagree' (coded 5).

<u>Subject areas in which pupils are perceived to need extra help</u>

The perceptions of teachers were also explored for insights about sex-stereotyping in subject competence. Teachers at third- and sixth-class grades were presented with a list of the curriculum subjects (Irish, mathematics, English, social and environmental studies, P.E., music, and art and craft) prescribed for those grades. They were asked to place a tick next to the subjects in which pupils in their class need extra help more than in others (APPENDIX B, Q5). Free play and reading and writing (in lieu of English) were included in the list of subjects presented to senior-infant teachers. In mixed schools, teachers responded separately for girls and boys. Responses were assigned a value of 1.

<u>Behavioural characteristics</u>

A set of variables relating to the classroom behaviour of girls and boys which, in other countries has been found to be highly gender-specific, was included in the survey. Teachers at senior-infant, third-, and sixth-class grades indicated the frequency with which they observed a total of 13 behavioural characteristics in pupils in their class (APPENDIX B, Q6). The characteristics selected were: attentiveness, insolence, helpfulness, fighting, obedience, excessive talk, object throwing, 'telling tales', interfering with other pupils' learning, resentment of correction, heedlessness, day dreaming, and conscientiousness. Responses, which were recorded separately for boys and girls in mixed schools, were assigned the following values: 'Frequently' = 1, 'Sometimes' = 2, 'Rarely' = 3, 'Never' = 4.

<u>Effects of the presence of girls and boys on the opposite sex in mixed classes</u>

Third- and sixth-class teachers in mixed schools indicated on a scale of 1 to 5 the extent to which they agreed with eight statements about the effects of boys on girls and of girls on boys in mixed-class settings (APPENDIX B, Q16). The statements were matched so that teachers responded to four pairs of statements with respect to boys and girls: 'The presence of girls/ boys tends to lower boys'/ girls' achievement levels', 'Girls/ Boys tend to get in the way of boys'/ girls' access to learning materials', 'The presence of girls/boys tends to inhibit boys'/ girls' participation in discussion', 'The presence of girls/ boys tends to inhibit boys/ girls

showing what they know'. Senior-infant teachers were asked to respond to the following two statements: 'Girls/ Boys tend to get in the way of boys'/ girls' access to play materials'. The values assigned to responses were: 'Strongly agree' = 1, 'Agree' = 2, 'Unsure' = 3, 'Disagree' = 4, 'Strongly disagree' = 5.

Comparisons of Pupils in Single-Sex and Mixed Classes

Pairs of statements relating to aspects of pupils' experiences in single-sex and mixed classes were presented to principals and teachers (APPENDIX A, Q7; APPENDIX B, Q17). In each pair of statements (listed below), the single-sex and mixed-class situation is compared separately for boys and girls in terms of access to sex-stereotyped subjects, academic performance, academic confidence, participation in discussion, relations with the opposite sex and discipline. Respondents were asked to indicate on a scale of 1 to 5 the extent to which they agreed with each of the statements. The values assigned to responses were 'Strongly agree' = 1, 'Agree' = 2, 'Unsure' = 3, 'Disagree' = 4, 'Strongly disagree' = 5.

Access to sex-stereotyped subjects

'Boys in single-sex classes are less likely than boys in mixed classes to have access to subject areas often associated with girls (e.g., cooking, sewing)'; 'Girls in single-sex classes are less likely than girls in mixed classes to have access to subject areas often associated with boys (e.g., science, computers)'.

Academic performance

'Boys /Girls do better academically in single-sex classes than in mixed classes'.

Academic confidence

'Boys/ Girls in single-sex classes are less confident academically than boys/ girls in mixed classes'; 'Boys/ Girls in single-sex classes are less inhibited showing what they know than boys/ girls in mixed classes'.

Participation in discussion

'Boys/ Girls in single-sex classes are more likely to participate in discussion than boys/ girls in mixed classes'.

Relations with the opposite sex

'Boys/ Girls in single-sex classes find it more difficult to relate to girls/ boys in mixed classes'.

Discipline:

'Boys/ Girls in single-sex classes are easier to control than boys/ girls in mixed classes'.

Awareness of Gender in School

Several questions about gender awareness in primary schools were included in the survey. School principals provided information on the contexts in which they perceived gender issues to have been discussed in their schools, on awareness levels among parents, teachers, and pupils, and on the proportion of staff members who, in their opinion, would be likely to support a school review of gender-related practices. Principals were also asked whether they themselves would support a review of this nature. Teachers provided information on the contexts in their schools in which sex-stereotyping in teaching materials had been discussed.

Contexts in which gender issues were discussed

Principals selected from a list of response options the contexts in which the issue of gender equality had been discussed in their schools (APPENDIX A Q8). The options provided were: 'At a formal staff meeting' (coded 1), 'Informally in the staff room' (coded 2), 'With parents at a parent-teaching meeting' (coded 3), 'In a once-off review of school practices' (coded 4), 'In an on-going review of school practices' (coded 5), 'At pupil level' (coded 6), and 'Other (Please specify)' (coded 7).

Teachers were asked more specifically about sex-stereotyping in teaching materials, an issue which had received attention in Irish schools before the survey was conducted (Department of Education, 1984). They indicated the contexts in their schools in which the portrayal of men and women (or boys and girls) in teaching materials (textbooks, worksheets, posters and videotapes) had been discussed (APPENDIX B, Q18). Five response options were provided: 'At a formal staff meeting' (coded 1), 'Informally in the staff room' (coded 2), 'With parents at a parent-teacher meeting' (coded 3), 'With pupils in your class' (coded 4), and 'Other (Please specify)' (coded 5). Teachers also indicated 'Yes' (coded 1) or 'No' (coded 2) to a question on whether any action had resulted from the discussion. Those who responded affirmatively were asked to describe (in their own words) the nature of the action.

Awareness of gender-related issues

Principals indicated the extent to which they perceived awareness of gender-related issues to be reflected in teacher attitudes, teacher practice, pupil attitudes, pupil behaviour, and parental attitudes (APPENDIX A, Q9). The same response format was used for all five variables. Responding principals indicated: 'A lot' (coded 1), 'Some' (coded 2), 'A little' (coded 3), 'None' (coded 4), or 'Unsure' (coded 5).

Support in schools for a review of practices relating to gender

Principals were asked to estimate the proportion of staff members in their schools who would be interested in carrying out a school-based review of gender-related practices (APPENDIX A, Q10). Responding principals selected one of six options which were coded as follows: 'All' (coded 1), 'Most' (coded 2), 'Some' (coded 3), 'A few' (coded 4), 'None' (coded 5), 'Unsure' (coded 6). They also indicated whether they themselves would support such a review. Responses were assigned the following values: 'Yes' (coded 1), 'No' (coded 2), 'Unsure' (coded 3).

ANALYSIS

Statistical analyses were carried out to examine the prevalence of sex-stereotyping in each of the four sex categories of primary school (single-sex boys', single-sex girls', girls' schools with mixed infants, and mixed schools) and at four levels within schools (principal, senior infant, third class, and sixth class). The major independent variable throughout is sex category of school though, in some analyses, teacher gender, principal gender, and pupil gender were treated as independent variables. Data on aspects of provision, classroom practice, perceptions of pupils, and awareness of gender issues were used as dependent variables and, in the case of teachers, were examined separately for each of the selected grades.

The classification and treatment of girls' schools with mixed infants posed a number of dilemmas in the course of conducting the survey. As described earlier, schools in this category were grouped with girls' schools in the sampling design, but, for the purposes of data collection and questionnaire design, were treated as mixed schools at senior-infant level and as girls' schools at third- and sixth-class levels. For most of the analyses, however, girls' schools with mixed infants, because of their unique gender composition, were treated independently of both girls' schools and mixed schools (but, for exceptions, see Chapter Four, p.93).

Further complications arose from the fact that it was not always possible to include girls' schools with mixed infants in analyses. To facilitate comparisons between teachers' ratings of their treatment and perceptions of pupils across sex categories of schools, data from girls' schools with mixed infants were included at senior-infant level but excluded at third- and sixth-class levels. This resulted in ratings for three groups of same-sex pupils (in single-sex girls'/ boys' schools, mixed schools, and girls' schools with mixed infants) at senior-infant level and for two groups of same-sex pupils (in single-sex girls'/ boys' schools and mixed schools) at third- and sixth-class levels. Thus, the data from girls' schools with mixed infants were omitted at the middle and senior grades so that differences in the conditions of comparison might be minimized. For the same reason, schools in this category were

omitted from analyses involving comparisons (including those at senior-infant level) of teachers' ratings of boys and girls in single-sex schools.

Data also had to be excluded from analyses involving comparisons of male and female teachers. In fact, only data from sixth-class teachers were used. This decision was determined by the numbers of male and female teachers in the sample at the grades selected for study. Whereas, at sixth-class level, the proportions of male and female teachers are fairly even, at senior-infant level, the vast majority of teachers are female and, at third-class level, the relatively small numbers of male respondents would, in many instances, have yielded cells with very low numbers (Tables 3.4-5). Additionally, it should be noted that the male/ female teacher comparisons were confined to data returned from mixed schools. The decision to focus on mixed schools was deemed appropriate in light of the Department of Education's commitment to coeducation; it may also be justified in terms of feminist concerns about classroom interaction and the possible effects of boys' presence on girls' performance in mixed settings.

Depending on the nature of the data, the statistical analyses involved chi-square tests, or analysis of variance, or t-tests. For frequency data in which percentages choosing response categories were counted, chi-square (non-parametric) tests were used (SPSS-X User's guide, 1988, p.436). Parametric tests were used in cases where responses were treated as representing points on a continuous scale. One-way analysis of variance (SPSS-X User's guide, 1988, p.649) was used where there were more than two groups (e.g., in comparisons of senior-infant pupils in single-sex schools, girls' schools with mixed infants, and mixed schools). When a significant F-ratio was found, Scheffé post-hoc analyses were used to determine the source of the difference(s) (SPSS-X User's guide, 1988, p.764). Where there were just two groups, t-tests were used. A t-test for non-independent samples was used in comparisons of groups involving the same teacher (e.g., in comparisons of boys and girls who were judged by teachers in mixed schools) (SPSS-X User's guide, 1988, p.971). When comparisons of groups involving different teachers were made (e.g., comparisons of boys and girls based on the judgments of teachers in single-sex boys'

and girls' schools) a t-test for independent samples was used (SPSS-X User's guide, 1988, p.970).

Levene's test for equality of variance between populations was used in interpreting the results of the t-tests for independent samples. The test is used to determine whether the variances in the two samples are equal. Where pooled/ equal variance was justified, its value is reported. In cases where it was not justified, i.e., where there is a significant difference between the variances, t-values (and degrees of freedom) based on separate variance estimates are reported.

A 2x2 factorial analysis of variance with a repeated measure on the second factor was performed in analyses involving comparisons of male and female teachers' ratings of boys and girls. This procedure permitted investigation of the separate and combined influences of two independent variables, teacher gender (male and female) and pupil gender (male and female) on selected dependent variables. The repeated measure was obtained by including in the analysis teachers' ratings of both boys and girls. A 2x2x2 factorial analysis of variance design with a repeated measure on the third factor was used in analyses which combined gender of principal, sex category of school, and pupil gender. For these analyses, which involved comparisons of pupils in single-sex and mixed settings, both categories of single-sex school and girls' schools with mixed infants were treated as one 'single-sex' category.

An important advantage of the factorial design is its capacity to identify interaction effects as well as main effects. An interaction effect is said to have occurred when a combination of independent variables yields an outcome that could not be predicted from knowing about the separate or main effects of the variables i.e., when the influence of one variable changes according to the 'level' of another variable (Aron & Aron, 1994, p.369). When the results of analysis yielded a statistically significant interaction effect, a t-test, performed on the mean scores obtained for each combination of variables, though not reported, was used to determine the source(s) of difference.

In reporting results, descriptive statistics are provided throughout. These can take the form of numbers or percentages in a particular category (for example, the number of principals or teachers who indicated 'yes' to a particular question) or the mean and standard deviation of a group (for example, teachers or principals in each sex category of school) on a particular variable. The .01 level of probability was accepted throughout as evidence of statistically significant differences.

Finally, a content analysis was performed on teachers' responses to an open-ended question about the nature of action following discussion on gender and teaching materials in schools (APPENDIX B, Q18). Initially, 12 response categories were identified from the responses of third-class teachers in 25 questionnaires. A coding scheme based on the responses assigned to these categories was subsequently applied by two raters to a further 25 questionnaires completed by sixth-class teachers. When assignment of responses was compared, agreement between the raters was found to have been reached in about 75% of cases. Following an examination of the discrepancies, and some further refinement of the coding scheme which included the addition of another category, coding was completed by a third rater.

When the numbers of responses in each category were added (separately for each sex category of school) the number of categories was reduced from 13 to eight (see Chapter Eight, p.150) to produce a 32 cell matrix. A chi-square statistical test might have been used to compare the significance of differences between sex categories of school. However, because the types of actions listed by teachers were constrained by the gender composition of schools (e.g., it was not possible for teachers in single-sex schools to pursue the same kinds of actions with pupils as teachers in mixed schools), statistical analysis was deemed inappropriate.

RESPONDENT CHARACTERISTICS

Finally, the questionnaires yielded data on the gender of respondents and on the number of years teaching experience they had acquired at the time of

questionnaire completion. In the case of principals, this number included the number of years they had spent as school managers.

Gender Profile

Of principals who returned questionnaires, 53.1% are male and 46.9% are female (Table 3.3), yielding a male/female ratio of 1.13:1. Comparison with the national ratio in 1989/1990 indicates that women are slightly over-represented in the sample. The discrepancy between the two ratios reflects the fact that girls' schools with mixed infants were over-sampled to facilitate analyses.

There are marked differences between sex categories of school in the representation of male and female responding principals. Male principals are rarely found among respondents in girls' schools (6.7%) or in girls' schools with mixed infants (1.2%). The opposite is true to a lesser extent in boys' schools, where female respondents hold less than one-tenth (8.2%) of principalships. Greater balance in the representation of male and female responding principals is found in mixed schools, though males outnumber females in these schools by 3 to 2.

Of the 487 schools which returned questionnaires from teachers of senior-infant pupils, a total of 474 (97.3%) were completed by female respondents. Of schools in which questionnaires were completed by third-class teachers (N = 554), more than three-quarters (77.3%) of the respondents are female. While virtually all responding third-class teachers in girls' schools (98.5%) and in girls' schools with mixed infants (96.2%) are female, women account for just over half (56.4%) of the respondents in boys' schools. In mixed schools, the male-female ratio reflects the overall ratio: just over three-quarters (77.4%) of the respondents are female (Table 3.4). The number of schools which returned questionnaires from sixth-class teachers is 569 (Table 3.5). In just over half of these cases (52.2%), the responding teachers are male. While in boys' schools the vast majority of teachers who responded are male (90.3%), in girls' schools and in girls' schools with mixed infants men account

for a very small minority (4.3 and 1.3% respectively) of the respondents. In mixed schools, males outnumber females by 3 to 2.

Teaching Experience

Principals provided information on the combined number of years they had spent teaching and managing schools. In the majority of schools (69.4%), responding principals had between 20 and 40 years' experience of working in schools as teacher and principal (Table 3.6). Almost a quarter (24.8%) had less than 20 years' experience and the remainder (5.8%) had between 40 and 45 years' experience. Thus, we may conclude that three-quarters (75.2%) of the principals who returned questionnaires were 40 or more years of age. Similar amounts of experience were reported by principals in each sex category of school.

In the majority of schools (70.0%), teachers at senior-infant level had less than 20 years' experience of teaching (Table 3.7). In fact, in as many as one-third of schools (33.1%), teachers indicated that they had less than ten years' teaching experience. Some senior-infant teachers had between 20 and 29 years' experience though this was the case in a relatively small proportion of schools (16.4%), while, in a smaller proportion again (13.6%), teachers at this grade reported 30 or more years' experience. In the majority of schools (58.7%), teachers at third-class level also had less than 20 years' teaching experience (Table 3.8). One-fifth (22.1%) had between 20 and 29 years' experience while a similar proportion (19.2%) had more than 30 years' experience. Sixth-class teachers were more experienced with the majority (54.8%) reporting a teaching career of 20 or more years (Table 3.9). Only one-eighth (12.5%) had less than ten years' experience while the remaining third (32.7%) had between ten and 20 years' experience. Teachers at all grades across sex categories of school reported similar amounts of teaching experience.

In summary, we may conclude that the age and gender profile of survey respondents varies for each of the grades examined in the study. Responding senior-infant teachers are almost all female and, overall, they are younger than responding

third- and sixth-class teachers. Compared to sixth-class teachers, respondents at third-class level are also relatively young and the majority are female. At sixth-class and principal grades, the age and gender profile of respondents includes a greater number of older male teachers with a concentration of male teachers and principals in boys' schools.

CHAPTER FOUR

PROVISION IN SCHOOLS

Findings of the survey relating to provision in primary schools are presented in Chapter Four. Several aspects of pupils' experiences receive attention. First, the distribution of male and female teachers is considered. Next, provision at classroom level is examined in terms of the amount of time allocated to curriculum subjects, the play activities of senior-infant pupils, and the extra-curricular activities of third- and sixth-class pupils. Finally, the availability of computer facilities in schools is discussed.

THE DISTRIBUTION OF MALE AND FEMALE TEACHERS

Gender bias in school organizations may be reflected in the proportion of posts held by male and female staff members. School principals who took part in the survey provided information on the distribution of male and female teachers at each primary grade (APPENDIX A, Q3). Results of analyses show that in all grades, with the exception of sixth class, the number of women teachers exceeds the number of male teachers. In fact, the data reveal a pattern in which the ratio of men to women teachers increases progressively from junior to senior grades (Table 4.1). Thus, at the most junior grade (junior infants), the ratio of men to women is 1:68.77, at first class it is 1:13.98, while at the most senior grade (sixth class) the male-female ratio is 1:0.99.

With the exception of third class, the proportions of male and female teachers do not correspond to those in the overall sample or to the national ratio of men to women teachers. Above third class, women are under-represented; below it they are heavily over-represented.

An examination of differences between sex categories of school in the proportions of men and women teachers at senior-infant, third-, and sixth-class grades, indicates that considerable variation exists between boys' and mixed schools, on the one hand, and schools catering for girls and girls with mixed infants, on the other (Table 4.2). The data reveal a pattern in which differences in the relative proportions of male and female teachers are much smaller in boys' and mixed schools than in girls' schools or in girls' schools with mixed infants. The differences are particularly small in third- and in sixth-class grades in boys' schools (the respective ratios are 1:0.92 and 1:0.13) and in sixth class in mixed schools where the ratio is 1:0.78. Thus, for pupils in these schools, at these grades, the chances of being taught by a man or woman are relatively even. Looked at another way, these ratios, when compared with the national male-female ratio, indicate that male teachers are over-represented in sixth class in boys' and mixed schools and in third class in boys' schools. Male teachers are under-represented at all grades in girls' schools and in girls' schools with mixed infants and at senior-infant level in all school categories.

PROVISION AT CLASSROOM LEVEL IN SELECTED GRADES

Since schools can reflect a gender bias in the curriculum experiences they provide for pupils (Breen & Hannan, 1987; Hannan, Breen, Murray, Watson, Hardiman, & O' Higgins, 1983; Lynch, 1989), the survey addressed a number of questions. Do schools of different gender composition differ in the amounts of time they allocate to subjects in the curriculum? Do teachers allocate time differently depending on whether they are male or female? Do schools differ in the range of extra-curricular activities which they provide for pupils? And, in the junior grades, do schools differ in the kinds of play activities offered to pupils?

Time Allocated to Curriculum Subjects

Teachers who took part in the survey were asked to estimate *to the nearest half hour* the amount of time they spend in a typical week at each curriculum subject (APPENDIX B, Q3). In preliminary analyses, the mean number of hours allocated to

each subject was obtained for senior-infant, third-, and sixth-class grades (Tables 4.3-5). In subsequent one-way analysis of variance, the means were compared across sex categories of school. At senior-infant level, an overall significant difference was found only for P.E. (Table 4.6). When Scheffé post-hoc analyses were carried out, however, no significant difference emerged between any pair of school types.

At third-class level, significant differences were found in the case of Irish, English, and art and craft (Table 4.7). Scheffé post-hoc analyses revealed differences between pairs of school types only in the case of art and craft. Boys' schools were found to differ significantly both from girls' schools and from girls' schools with mixed infants. Third-class pupils in boys' schools spend less time per week at art and craft (1.21 hours) than their female peers in girls' schools (1.66 hours) and in girls' schools with mixed infants (1.57 hours). A second source of difference was found between mixed and girls' schools. Third-class pupils in mixed schools also spend less time at art and craft (1.33 hours) than pupils in girls' schools.

Analyses of variance yielded statistically significant differences between sex categories of school in the amount of time sixth-class pupils spend at art and craft, music, and religion (Table 4.8). Again, however, the Scheffé post-hoc results indicated significant differences only in the case of art and craft, with girls' schools and girls' schools with mixed infants both differing from boys' schools. In girls' schools and in girls' schools with mixed infants, pupils spend just over 1.5 hours each week at art and craft whereas in boys' schools, and in mixed schools, just over an hour is allocated to the subject.

In subsequent analyses, the time allocated to subjects by male and female teachers at sixth-class level was compared. The results show that female teachers, compared to their male counterparts, spend significantly more time at art and craft and music (Table 4.9). Male teachers, compared to their female counterparts, were found to spend significantly more time at Irish.

Play Activities of Senior-Infant Pupils

Teachers at senior-infant level were presented with a list of 15 play activities and asked to indicate the extent to which pupils in their class choose to participate in each of them (APPENDIX B, Q9). 'Boy-preferred' and 'girl-preferred' activities were included in the list. The response options provided were 'frequently', 'sometimes', 'rarely', and 'never'. An option indicating that an activity was 'not available' was also provided. Preliminary analyses focussed on the availability of the selected activities. Results are presented with the numbers and percentages of schools offering each activity (Table 4.10).

In the vast majority of schools, all of the following toys and activities are available: drawing pictures (100%); colouring pictures (99.8%); play with jigsaws (99.4%); imaginative play (97.9%); building blocks (96.1%); and play with soft toys (83.7%); toy cars (83.6%); and dolls (83.5%). Dressing up (72.9%), teasets (69.2%), and sticklebricks (64.8%) are provided in a smaller majority of schools while play activity with water (59.1%), sand (43.4%), and a home corner (41.1%) is provided to a lesser extent.

Chi-square analysis revealed several significant differences between sex categories of school. Overall, provision is poorer in single-sex schools than in mixed schools (Table 4.10). Proportionately fewer girls' schools provide toy cars (45.5%) and lego (71.2%) while boys' schools are comparatively less well equipped with dolls (44.9%), soft toys (70.7%), teasets (39.4%) and a home corner (27.8%). Availability of sticklebricks is more limited in both girls' schools (58.5%) and mixed schools (60.3%) while a home corner is also not available in mixed schools (39.4%) to the same extent as in schools catering soley or predominantly for girls.

When availability is controlled for (schools in which activities were not available were eliminated from analyses), it is clear that boys and girls generally choose with the same frequency to play with sand and water, to draw and colour pictures, and to play with building blocks and jigsaws (Tables 4.11-12). However, girls more often choose imaginative play, dressing up, and play with soft toys, dolls,

and teasets. They also play in the home corner more often (Table 4.12). Boys choose more often than girls to play with lego, toy cars, and sticklebricks (Table 4.11).

Play activities chosen by boys in different types of school

Looking at Table 4.11, activities 'frequently' chosen by boys in the majority of schools, in order of popularity, are drawing pictures (83.8%), colouring pictures (80.1%), play with building blocks (78.9%), play with jigsaws (72.5%), play with lego (76.2%), and play with toy cars (71.2%). Thus, teachers perceive boys as tending to choose 'boy-preferred' toys.

There are only three activities on which differences are significant in the frequency of participation by boys in single-sex schools, in girls' schools with mixed infants, and in mixed schools (Table 4.11). Activities which are less frequently chosen by boys in boys' schools are play with water, play with soft toys, and play in the home corner. These findings suggest that boys in single-sex schools are somewhat more sex-stereotyped in their play preferences than boys in mixed settings.

Play activities chosen by girls in different types of school

Activities chosen 'frequently' by girls in order of popularity are drawing pictures (91.6%), colouring pictures (89.7%), play with jigsaws (76.2%), dolls (70.5%) and soft toys (58.0%) (Table 4.12). Thus, teachers perceive girls as tending to choose 'girl-preferred' toys.

There are only two activities on which significant differences in the frequency of pupils' choice of play activities are found between schools catering for senior-infant girls (Table 4.12). Play with toy cars is more frequently chosen by girls in single-sex schools notwithstanding the fact that toy cars are provided to a significantly lesser extent in these schools than in other school categories. Play in a home corner is significantly more often chosen by girls in mixed schools and in girls' schools with mixed infants than by girls in single-sex schools, a higher proportion of which provide a home corner. These findings suggest that girls in single-sex schools

are somewhat less sex-stereotyped in their play preferences than girls in mixed settings.

Play activities chosen by boys and girls in single-sex schools

A series of t-tests was carried out to examine the significance of differences between boys and girls in single-sex schools, and between boys and girls in mixed schools in their choice of play activities. Responses were assigned the following values ('frequently' = 1, 'sometimes' = 2, 'rarely' = 3, 'never' = 4).

In the first set of t-tests, differences between boys and girls in single-sex schools were examined. The results of the t-tests show significant differences in the case of seven activities (Table 4.13). Boys in single-sex schools choose to play with toy cars significantly more often than girls in single-sex schools. However, girls more often choose to play in the home corner and to play with dolls, soft toys, and teasets. Compared to boys in single-sex schools, girls in single-sex schools also like to dress up and engage in imaginative play more often. The findings suggest that while girls tend to engage in more classroom play than boys, most of their activity is constrained by traditional gender-role preferences.

Play activities chosen by boys and girls in mixed schools

Three sets of t-tests comparing boys and girls in mixed settings were carried out. In the first set of t-tests, data from girls' schools with mixed infants were combined with those from mixed schools. In the second set, differences between boys and girls in girls' schools with mixed infants were examined. The third set of t-tests, involved comparisons between boys and girls in mixed schools.

The results of the three t-tests are similar for almost all activities (Tables 4.14-16). Boys in mixed settings play with toy cars, lego, sticklebricks, and building blocks significantly more often than girls. Girls, however, choose a wider range of play activities significantly more often than boys. They play with dolls and soft toys, with teasets, and in the home corner significantly more often than boys; they also dress up, engage in imaginative play, and colour pictures significantly more often. In

fact, play with water is the only activity on which boys and girls in all of the mixed-class comparisons do not differ significantly.

In addition, girls were found to choose to draw with pictures and play with jigsaws significantly more often than boys, though not in all cases. In mixed schools, girls play with jigsaws more often (Table 4.16) and, in girls' schools with mixed infants and mixed schools combined, they draw pictures more often (Table 4.14). Boys, compared to girls, have a stronger preference for play with sand in mixed schools and in mixed schools and girls' schools with mixed infants combined (Tables 4.14; 4.16). Thus, in mixed settings, as in single-sex schools, girls tend to engage in a greater range of play activity more frequently than boys. Compared to single-sex schools, however, there is much greater polarization between the sexes with both girls and boys tending to support traditional preferences.

<div align="center">School-Based Extra-Curricular Activities</div>

School-based activities and subjects which may be provided at the discretion of school authorities, and/or as part of the official curriculum, were examined at third- and sixth-class grades. Specifically, teachers were asked to indicate which of 22 activities and subjects pupils in their class participate in on an extra-curricular basis (APPENDIX B, Q10). In mixed schools, teachers recorded the participation of boys and girls separately. The numbers and percentages of single-sex and mixed schools providing each activity are presented separately for third- (Table 4.17) and sixth-class pupils (Table 4.18). For these analyses, data from girls' schools and girls' schools with mixed infants were combined.

Turning first to provision for third-class pupils, it is clear that more than half of the selected activities (N = 13) are offered in a majority of schools. In fact, more than nine in ten schools provide nature study (93.9%), singing (93.7%), painting (92.8%) and P.E. (91.7%). Drama (71.1%), football (70.5%) and knitting (66.8%) are offered in more than two-thirds of schools while provision for needlework (62.2%) and music (57.2%) is less common. Just over half of the schools surveyed

offer basketball (54.0%), dance (53.1%), soccer (52.4%), and model-making (51.1%).

Smaller proportions of schools offer hurling (37.5%) and computer study (31.7%) while camogie (12.2%) and tennis (11.8%) are played in less than one eighth of schools. Sex education (7.2%), hockey (5.3%), rugby (4.8%), and cookery (4.0%) are provided in very small numbers of schools.

Chi-square tests revealed significant differences between sex categories of school on all but four activities: computer study, music, P.E., and tennis. Overall, provision is better in mixed schools than in single-sex schools. Pupils in significantly higher proportions of mixed schools than in both categories of single-sex school participate in basketball, camogie, hockey, model-making, sex education, science and singing. Pupils in significantly higher proportions of mixed schools than of boys' schools participate in cookery and nature study, while football is played in a significantly higher proportion of mixed schools than of girls' schools (Table 4.17).

Boys' schools do not provide the selected activities to the same extent as girls' and mixed schools. Dance, drama, knitting, music, needlework, and painting are all provided in significantly higher proportions of both girls' schools and mixed schools. Team/ ball games -- basketball, football, hurling, soccer, and rugby -- are the only activities provided in significantly higher proportions of boys' schools than of girls' schools. Hurling is the only activity that is more common in boys' schools than mixed schools.

Eleven of the 13 activities provided in the majority of schools for third-class pupils are also available to sixth-class pupils in the majority of schools: nature study (92.6%), singing (96.1%), painting (91.7%), P.E. (91.9%), drama (70.4%), football (73.5%), basketball (70.1%), knitting (65.4%), needlework (64.5%), music (59.7%), and soccer (55.2%). The drop in the proportions of schools offering dance (49.0%) and model-making (46.4%) at sixth-class is slight (Table 4.18).

Compared to provision for third-class pupils, there is a marginal increase in the numbers of schools providing virtually all activities at sixth-class level. There are substantial increases in the proportions of schools offering sex education (37.7% compared to just 7.2%) and basketball (70.1% compared to just 54.0%) and smaller but still considerable increases in provision in computer study (43.8 % compared to 31.7%) and science (43.7% compared to 34.5%).

Provision at sixth-class level also varies across sex category of school. In fact, there are significant differences in provision across sex categories of school on all but five activities. These are computer study, P.E., and tennis (matching the findings for third-class pupils), basketball, and hockey.

In sixth class, as in third class, pupils in significantly higher proportions of mixed schools than of single-sex schools participate in model-making, camogie, and science. However, while at third-class level, we saw that much higher proportions of mixed schools than of single-sex schools provide several of the selected activities, at sixth-class level the gap in provision between mixed and girls' schools narrows considerably. In fact, the proportions of girls' and mixed schools offering basketball, drama, knitting, music, nature study, needlework, painting, tennis, and singing are similar. Significantly fewer boys' schools than of girls' schools or of mixed schools offer each of these activities. Much higher proportions of girls' schools than of boys' schools in particular, but also of mixed schools, provide cookery, dance, and sex education for sixth-class pupils.

Pupils in the majority of boys' and mixed schools play football and soccer, whereas pupils in only a small minority of girls' schools participate in these activities. Hurling and rugby are played in a significantly higher proportion of boys' schools than of girls' and mixed schools but the numbers of schools involved in rugby are small.

Finally, in mixed schools the extent to which each of the selected activities and subjects are participated in by boys and girls, by boys only, and by girls only was

examined. The results of analyses are presented separately for third- and sixth-class pupils (Tables 4.19-20).

The results show that, in more than four-fifths of mixed schools, both boys and girls participate in more than half of the selected activities (14 at third-class level and 13 at sixth-class level). Pupils of both sexes in most mixed schools participate in computer study, cookery (sixth class), dance, drama, model-making, music, science, sex education, and tennis. In most of the mixed schools which offer the selected activities and subjects, both boys and girls also participate in basketball, nature study, painting, P.E., and singing. In fact, the only subjects which show marked gender differentiation are needlework and knitting. In 57.9% of mixed schools at third-class level, girls only do needlework and this figure increases to 66.7% at sixth-class level. Knitting is done by girls only in 53.3% of mixed schools at third-class level and in 59.1% of mixed schools at sixth-class level.

Considerable gender differentiation occurs in all team/ ball games, though not always along traditional lines (Tables 4.19-20). In more than four-fifths of mixed schools, camogie is played by girls only at both third- and sixth-class levels. In sizeable proportions of mixed schools also, boys only play hurling (the respective percentages are 59.5 and 48.4% at third- and sixth-class levels) and football (36.0 and 25.0% at third- and sixth-class levels). However, at sixth-class level, in some 22.0% of mixed schools, soccer is played by girls only. Rugby and hockey are also played by girls only in some cases though, as noted earlier, the number of schools which facilitate these games is small.

COMPUTER FACILITIES

In response to a question about provision for computers (APPENDIX A, Q4), principals in less than half the schools (45.0%) surveyed reported that pupils in their schools have access to computer facilities (Table 4.21). Male and female principals responded similarly (Table 4.22). The results of analyses in which provision in different sex categories of schools was examined revealed little difference between

girls' schools and boys' schools: 48.6% of the former and 52.2% of the latter have a computer. Compared to single-sex schools, mixed schools fare less well; only 35.6% have a computer. However, more than three-fifths (61.7%) of schools catering for girls and mixed infants provide computer facilities. Thus, a pupil attending a girls' school with mixed infants is 1.73 times more likely to have access to a computer than is a pupil attending a mixed school (Table 4.21).

Access to computers obviously depends on the number of workstations that are available to pupils in a school. Just over half the schools that have a computer (50.2%) have only one workstation (Table 4.23). A further 19.1% have two workstations, 22.7% have three to six workstations, and 8.0% have seven or more. The number of workstations is less in mixed schools than in single-sex schools. This is to be expected since, on average, there are only half the number of pupils in mixed schools as in single-sex schools. According to the Department of Education's (1991) Statistical Report, the average number of pupils in the year 1989-90 was 265.77 in single-sex schools and 134.04 in mixed schools. Reflecting their smaller numbers, mixed schools are more likely to have only one workstation. On the other hand, single-sex schools because they are larger, more often have three or more workstations. In fact, 44.2% of boys' schools and 31.3% of girls' schools, but only 14% of mixed schools, are in this position. As these figures also indicate, boys' schools have better provision for workstations than girls' schools.

CONCLUSION

There are large gender imbalances in the representation of men and women at all grades in primary schools. The imbalances are greater at the beginning and end of the primary cycle and vary according to sex category of school. While the absence of male teachers is striking in girls' schools, in boys and mixed schools there is a concentration of female teachers in the junior grades and of male teachers in the senior grades. Few differences between schools of different sex composition or between male and female teachers were found in relation to the amount of time teachers say they spend at subjects in the formal curriculum. However, evidence of

differential provision for boys and girls was found in the play activities of senior-infant pupils and in the extra-curricular activities of third- and sixth-class pupils. Sex-stereotyping in these aspects of provision was found to be greater in mixed schools than in single-sex schools. Significant differences between schools of different sex composition were also found in relation to the availability of, and access to, computers in schools. While provision is limited in all schools, the number of workstations is highest in girls' schools with mixed infants. Single-sex schools, and boys' schools in particular, are also better equipped than mixed schools.

In curricular provision, the only subject in which pupils in different sex categories of school were found to receive varying amounts of instruction is art and craft. At both third- and sixth-class levels, girls' schools and girls' schools with mixed infants devote more time to this aspect of the curriculum than boys' schools. This finding is hardly surprising in view of the fact that it is female teachers (disproportionately represented in girls' schools) who spend more time than their male colleagues at the subject. In mixed schools, the amount of time devoted to art and craft activities is more than in boys' schools but less than in girls' schools.

Gender of teacher was also found to influence the allocation of time to curriculum subjects. Female teachers spend more time at music than their male colleagues while male teachers spend more time at Irish. However, since neither of these differences is confounded with sex category of school, we may conclude that pupils attending schools with different sex compositions have broadly similar types of curricular experiences.

A somewhat different picture emerges when teachers were asked about the play activities of senior infants. While several activities are available in the vast majority of schools (e.g., drawing and colouring pictures, and play with jigsaws, soft toys, toy cars, lego, and dolls), provision is generally poorer in single-sex than in mixed schools. Fewer girls' schools provide toy cars or lego while fewer boys' schools provide dolls, soft toys, teasets, or a home corner.

In general, girls compared to boys, are perceived by teachers to choose more often imaginative play, play in the home corner, and to engage in dressing up and play with soft toys, dolls, and teasets. Boys, compared to girls, choose more often to play with lego, toy cars, and sticklebricks. Most of these differences are found in the behaviour of boys and girls in single-sex schools and in mixed schools. Boys in mixed schools, and in girls' schools with mixed infants, are somewhat less sex-stereotyped in their choice of play activities than boys in single-sex schools. By contrast, girls in mixed settings, compared to girls in single-sex schools, are more sex-stereotyped in their play preferences. Comparing boys with girls, we find that girls generally tend to engage in classroom play activity more than boys in both mixed and single-sex settings. Moreover, all of the extra play activity of girls reflects traditional gender-role preferences with greater polarization between the sexes occuring in mixed settings.

Provision for activities offered on an extra-curricular basis is best in mixed schools, especially at third-class level. Provision in girls' schools is superior to that in boys' schools. In single-sex schools, however, girls do not have the same opportunities as boys to participate in team sports or to enjoy the recognition that may accrue from achievement in sport. On the other hand, boys do not have the same access as girls to a range of activities. Significantly fewer boys' schools provide cookery, nature study, sex education, dance, drama, and needlework. When this information is combined with the information on time devoted to art and craft activities in the formal curriculum, it is clear that expressive and aesthetic activities receive more attention in girls' schools than in boys' schools. In mixed schools, while some segregation of the sexes occurs in the take-up of homecraft activities and in what are traditionally regarded as male and female-preferred sporting pursuits, the differences which boys and girls experience in the availability and range of provision are much fewer than in single-sex schools.

Finally, pupils in less than half the schools surveyed have access to a computer. Provision is best in girls' schools with mixed infants and poorest in mixed schools. Boys' schools fare marginally better than girls' schools.

CHAPTER FIVE

CLASSROOM PRACTICES AT SENIOR-INFANT,
THIRD-CLASS, AND SIXTH-CLASS GRADES

Practices in the primary-school classroom are examined in Chapter Five. The focus of inquiry is on the informal norms of the school which can be more powerful than official rules in shaping practice if for no other reason that they are often taken for granted, not reflected on, and so not challenged in the way that formal regulations sometimes are. The chapter is based on information provided by teachers at senior-infant, third-, and sixth-class grades. Task allocation and the actions taken by teachers to discipline pupils at classroom level receive particular attention. Pupils' code of dress for physical education is also investigated and, in mixed schools, the integration of pupils in seating and lining up arrangements is examined.

ALLOCATION OF TASKS

Guidelines on eliminating gender divisions in the primary classroom underline the importance of assigning the same kinds of tasks to boys and girls (see, for example, Cole, 1991; Marland, 1983; Whyte, 1983). In the literature, it is generally accepted that girls tend to be associated with caring tasks while boys often carry out tasks which involve physical strength or getting themselves dirty (Robinson, 1989). The present study focussed on the allocation of a range of specified tasks to boys and girls and the extent to which schools with different gender composition might vary in this regard. The practices of male and female teachers in this regard were also of interest.

Information was obtained on tasks typically associated with boys (emptying the bin, carrying chairs/ tables, and picking up litter in the school yard), on tasks typically associated with girls (tidying up the classroom, watering plants/ flowers, and minding children in junior classes) and on tasks which might be regarded as

gender-neutral (cleaning the blackboard, looking after pets and taking messages to other parts of the school). Teachers indicated the frequency ('frequently', 'sometimes', 'rarely', 'never') with which each of the tasks was performed by pupils in their charge. A response option indicating that the task did 'not arise' was also provided. In mixed schools, the tasks allocated to boys and girls were recorded separately (APPENDIX B, Q8).

The results of preliminary analyses with frequency distributions are presented separately for boys and girls at senior-infant (Tables 5.1-2), third- (Tables 5.3-4), and sixth-class grades (Tables 5.5-6). The data indicate that the response patterns across grades, school type, and gender of pupil are fairly consistent in a number of respects. Looking at aggregated data by grade without reference to school type, it is clear in the first instance that the bulk of responses on several tasks fall into the options 'frequently' or 'sometimes'. This is true for tidying up the classroom, taking messages to other parts of the school, cleaning the blackboard, and picking up litter in the school yard, which are the four most frequently performed tasks by boys and girls at all grades. Secondly, carrying chairs/ tables, emptying the bin, and watering plants/ flowers are the tasks least frequently performed by pupils, though boys more frequently carry furniture and girls more often water flowers/ plants. Thirdly, certain tasks do not arise for the vast majority of pupils. Looking after a classroom pet is a task which does not arise for pupils (either boys or girls) in any of the grades examined in the great majority of schools. In a much smaller majority of schools, the task of looking after children in junior classes does not arise for senior-infant pupils or third-class boys. However, third-class girls and sixth-class boys look after younger children to some extent while sixth-class girls are frequently asked to carry out this task.

Frequency of Allocation of Tasks to Boys in Different Types of School

Chi-square tests were carried out to examine the significance of differences between sex categories of schools for boys in each grade. At senior-infant level, the results of the tests revealed significant differences between school types on three

tasks. In girls' schools with mixed infants, boys empty the bin and carry chairs/ tables more frequently than boys in mixed or boys' schools (Table 5.1). The differences between girls' schools with mixed infants and boys' schools are particularly marked. In mixed schools, boys at senior-infant level are more likely to be asked to mind children in junior classes than are their peers in other sex categories of school.

Significant differences between mixed and single-sex schools were found on three tasks at third-class level (Table 5.3). In mixed schools, boys carry chairs/ tables more frequently than boys in single-sex schools; they also pick up litter in the school yard and mind children in junior classes more frequently.

At sixth-class level, differences were found to be significant on five tasks (Table 5.5). Boys in mixed schools empty the bin, carry chairs/ tables, and pick up litter in the school yard more frequently than boys in single-sex schools. They also water plants/ flowers and mind children in junior classes more frequently than boys in single-sex schools. Thus, we may conclude that boys in mixed school/ class settings are asked to perform tasks more frequently than boys in single-sex schools.

Frequency of Allocation of Tasks to Girls in Different Types of School

Chi-square tests revealed significant differences on three tasks performed by girls at senior-infant level (Table 5.2). In girls' schools with mixed infants and in girls' schools, to a lesser extent, pupils empty the bin more frequently than pupils in mixed schools. A similar pattern is found in relation to picking up litter in the school yard. In mixed schools, however, girls at this level mind children in junior classes more often than their peers in other sex categories of school.

Significant differences between single-sex and mixed schools occur on four tasks carried out by girls at third-class level (Table 5.4) While girls in mixed schools mind children in junior classes more frequently than girls in single-sex schools, they empty the bin and clean the blackboard less frequently. Also, the task of looking

102

after classroom pets does not arise for girls in a greater majority of mixed than of single-sex schools.

At sixth-class level, significant differences were found on four tasks (Table 5.6). Girls in single-sex schools empty the bin, clean the blackboard, carry chairs/ tables, and water plants/ flowers more frequently than girls in mixed schools. Thus, in contrast to the experiences of boys, girls in single-sex schools are asked to perform tasks more frequently than girls in mixed schools.

Frequency of Allocation of Tasks to Boys and Girls in Single-Sex Schools

The following values ('frequently' = 1, 'sometimes' = 2, 'rarely' = 3, and 'never' = 4) were assigned to responses and a series of t-tests was carried out to test the significance of differences between boys and girls in single-sex schools in the frequency with which teachers ask them to perform tasks. In the first comparison, task allocation at senior-infant level was examined. The results of the t-tests show that teachers in single-sex schools treat very young boys and girls similarly in terms of task allocation (Table 5.7). However, by the time pupils in single-sex schools reach third class, significant differences between boys and girls are found on several tasks: emptying the bin; cleaning the blackboard; tidying up the classroom and watering plants/ flowers (Table 5.8). In all cases, teachers report that girls perform the task more frequently than boys. The pattern is identical at sixth-class level in which case the task of minding children in junior classes is also more often performed by girls (Table 5.9). Thus, girls in single-sex schools are assigned tasks more frequently than boys in single-sex schools.

Frequency of Allocation of Tasks to Boys and Girls in Mixed Schools

The same procedure for scoring teachers' responses was used in t-tests carried out to examine task allocation practices in mixed school/ class settings. In the first set of t-tests, data provided by teachers in girls' schools with mixed infants and mixed schools were combined. The results reveal significant gender differences on

six tasks (Table 5.10). While boys empty the bin and carry chairs/ tables significantly more often than girls, girls clean the blackboard, tidy up the classroom, water plants/ flowers, and mind children in junior classes significantly more often than boys. When the data for girls' schools with mixed infants were analysed separately, however, the results of the t-tests revealed significant differences only in relation to the greater frequency with which boys carry chairs/ tables (Table 5.11). In mixed schools, at senior-infant level, significant gender differences are found on as many as seven tasks (Table 5.12). In stereotypical fashion, boys empty the bin, carry chairs/ tables, and pick up litter in the school yard more often than girls. Girls clean the blackboard, tidy up the classroom, water plants/ flowers, and mind children in junior classes more often than boys.

The results of the t-tests at third-and sixth-class grades are identical (Tables 5.13-14). Significant gender differences are found on six tasks. Boys more often empty the bin, carry chairs/ tables and pick up litter in the school yard, while girls more often tidy up the classroom, water plants/ flowers, and mind children in junior classes. Thus, we may conclude that there is greater balance in the number of tasks assigned to boys and girls in mixed schools/ class settings than in single-sex schools. However, it is also true that in mixed settings task allocation practices strongly reflect traditional gender-role expectations.

Frequency of Allocation of Tasks to Boys and Girls in Mixed Schools
by Male and Female Teachers (Sixth Class)

Finally, the allocation of tasks to male and female pupils by male and female teachers was examined at sixth-class level in mixed schools. A 2x2 factorial analysis of variance with a repeated measure on the second factor was performed on the scores obtained for each task (see Chapter Three, p.82). This procedure permitted investigation of the separate and combined influences of two independent variables, teacher gender (male and female) and pupil gender (male and female) on each of the dependent variables (tasks performed). The repeated measure was obtained by including in the analysis teachers' ratings of both boys and girls.

The results of analyses indicate a significant main effect of teacher gender for five of the nine tasks examined (Table 5.15). In all cases, the pupils of female teachers are asked more frequently than those of male teachers to perform the tasks involved (emptying the bin, cleaning the blackboard, tidying up the classroom, carrying chairs/ tables, and minding children in junior classes). Confirming the stereotypical pattern revealed in the t-test results reported in the previous section for sixth-class pupils in mixed schools (Table 5.14), a significant pupil gender effect was found for six of the nine tasks examined. Interaction effects, indicating that the treatment of male and female pupils changes according to teacher gender, occur only for three tasks, however. In two cases, the mean ratings of male and female teachers for boys and girls show that the differences are greatest in relation to male teachers' treatment of boys and girls. While, in general, female teachers ask pupils more often to empty the bin and pick up litter in the school yard, and boys are asked more often than girls, it is male teachers who tend not to impose these tasks on girls to the same extent as they impose them on boys. In the third case, which relates to the task of minding children in junior classes, both male and female teachers differentiate between girls and boys. While female teachers assign this task to pupils more often than male teachers, and girls are asked more often than boys, both male and female teachers assign greater responsibility to girls in this regard.

Thus, there is a good deal of evidence that female teachers are more directive than male teachers in assigning tasks to pupils. There are also indications that male teachers exhibit a tendency to 'shield' girls from tasks traditionally associated with males.

DISCIPLINARY ACTIONS

Issues relating to classroom control and discipline have received a fair amount of consideration in studies of interaction between teachers and pupils. The findings generally underline boys' negative behavioural characteristics and their tendency to monopolize teachers' time and attention (see, for example, Hartley, 1989; Maccoby & Jacklyn, 1974; Morgan & Dunn, 1988; Serbin 1983; Wheldall &

Merrett, 1989; Windass, 1989). A similar conclusion emerged from the limited amount of research evidence that is available about disciplinary practices in primary schools in this country. In a study conducted in the late 1970s, significant differences were found between boys' and girls' schools both in the extent to which teachers relied on corporal punishment (a practice that has since been abolished) and assigned extra work to pupils as a disciplinary measure. In both cases, pupils in boys' schools were more severely disciplined (Burke & Fontes, 1986).

In the present study, information was obtained on disciplinary practices in single-sex and mixed schools. Teachers indicated the frequency ('frequently', 'sometimes', 'rarely', 'never') with which they rely on a number of disciplinary actions to secure co-operation from pupils in their charge. They were asked to report the extent to which they use verbal reproof, assign extra homework, withdraw privileges, put pupils standing, exclude pupils from activities, send pupils out of the room, send pupils to the headteacher, send letters home, send pupils home, and inform parents about pupils at parent-teacher meetings. At senior-infant level, taking into account the age of pupils, the options of assigning extra homework and sending pupils home were omitted. In mixed schools, teachers responded separately for boys and girls (APPENDIX B, Q7).

The results of preliminary analyses with frequency distributions are presented separately for boys and girls at senior-infant (Tables 5.16-17), third- (Tables 5.18-19) and sixth-class grades (Tables 5.20-21). Looking first at practice for boys and girls in each grade without reference to school type, the action most often taken by teachers to secure co-operation from pupils is verbal reproof. The vast majority of responses fall into the options 'frequently' or 'sometimes'. This is true for boys and girls in each of the grades examined. Other methods commonly used to discipline boys and girls are withdrawal of privileges and informing parents of pupil behaviour at parent-teacher meetings. Above senior-infant level, and at sixth-class level in particular, the practice of assigning extra homework to boys and girls is also common.

In contrast, teachers generally say that they put pupils standing and/ or exclude them from activities only sometimes or rarely. However, boys at senior-infant and third-class level are put standing more often than boys at sixth-class level. This is also true for girls. While there is virtually no difference in the frequency with which boys in each grade are excluded from activities, in the case of girls, this happens less frequently in sixth class than in either of the more junior grades.

In the great majority of schools, teachers in the grades examined reported that they rarely or never send a pupil out of the room, send a pupil to the headteacher, or send a pupil home. In the vast majority of schools, also, teachers indicated that they tend not to send letters to parents.

At senior-infant level, there is virtually no difference in the frequency with which boys and girls are disciplined, though girls are more often sent out of the room. Boys in third class are more often assigned extra homework, sent to the headteacher, and reported to parents in a letter and at a parent-teacher meeting; they also have privileges withdrawn more often than girls. Girls, on the other hand, are more often sent out of the room and sent home. At sixth-class level, differences in the extent to which teachers rely on these methods to secure co-operation from girls and boys are considerable. Boys are more often assigned extra homework, put standing, excluded from activities, sent out of the room, sent to the headteacher, sent home, and reported to parents in a letter; they also have privileges withdrawn more often.

Frequency of Use of Disciplinary Actions against Boys and Girls
in Different Types of School

In comparisons of boys in different types of schools and of girls in different types of school, chi-square analyses revealed significant differences for pupils (both boys and girls) at senior-infant level on three types of disciplinary action (Tables 5.16-17). In single-sex schools, compared to mixed schools, boys and girls are more often sent to the headteacher, letters are sent home to parents more often, and parents

are more often informed in parent-teacher meetings about the behaviour of pupils. Girls' schools with mixed infants are more like single-sex schools in the extent to which pupils (both boys and girls) are sent to the headteacher and reported to parents at parent-teacher meetings. However, neither boys nor girls in girls' schools with mixed infants tend to be sent home to the same extent as their same-sex peers in single-sex schools.

At third-class level, several disciplinary actions are taken more frequently against pupils in single-sex schools than against pupils in mixed schools (Tables 5.18-19). Differences between both types of school are significant in the extent to which both boys and girls are put standing, sent to the headteacher, and reported to parents in a letter and at parent-teacher meetings. A significant difference between mixed and single-sex schools also occurs in the extent to which teachers assign extra homework to boys. Boys in single-sex schools are more often disciplined in this way.

Significant differences on all but one type of disciplinary action (withdrawal of privileges) were found between single-sex and mixed schools for boys at sixth-class level (Table 5.20). The pattern is consistent with that found at both senior-infant and third-class levels. In the case of sixth-class girls, significant differences occur on just three types of action (Table 5.21) In single-sex schools, girls are more frequently sent to a headteacher. They are also more frequently reported to parents in a letter and at parent-teacher meetings. Thus, we may conclude that pupils in single-sex schools (both boys and girls) are more frequently disciplined than their same-sex peers in mixed schools and that the differences between both types of school increase as pupils, boys, in particular, progress through the primary school.

Frequency of Use of Disciplinary Actions against Boys and Girls
in Single-Sex Schools

Teachers' responses were assigned the following values ('frequently' = 1, 'sometimes' = 2, 'rarely' = 3, 'never' = 4) and a series of t-tests was carried out to

compare the frequency of teachers' use of disciplinary actions against boys and girls in single-sex schools.

The results of the t-tests comparing the treatment of boys and girls at senior-infant level show that there are no significant differences between single-sex schools in the ways that teachers discipline pupils (Table 5.22). At third-class level, however, significant gender differences were found for six out of ten disciplinary actions. Boys are more often assigned extra homework, excluded from activities, and are more often sent out of the room, sent to the headteacher, or reported to parents in a letter; they also have privileges withdrawn significantly more often than girls (Table 5.23). With the exception of being sent to the headteacher, the differences that boys and girls experience at third-class level are also experienced by boys and girls at sixth-class level. Additionally, boys in the top grade of primary school are put standing and sent home significantly more often than girls (Table 5.24). Thus, in single-sex schools, boys are more frequently disciplined than girls.

Frequency of Use of Disciplinary Actions against Boys and Girls in Mixed Schools

Using the same scoring procedure as in the single-sex comparisons, t-tests comparing disciplinary actions taken by teachers against boys and girls in mixed schools were also carried out. In the first of three sets of t-tests involving senior-infant pupils, the treatment of boys and girls in both girls' schools with mixed infants and mixed schools was compared. The results reveal significant gender differences on five types of disciplinary action. Boys are more frequently put standing, excluded from activities, and reported to parents at parent-teacher meetings. Verbal reproof and the withdrawal of privileges are also used more frequently to discipline boys (Table 5.25). When the data for mixed schools were excluded, however, and the treatment of boys and girls in girls' schools with mixed infants is examined, the results of the t-tests reveal a pattern in which there are virtually no gender differences. The only exception is that boys are put standing more often than girls (Table 5.26). When the data involving mixed schools were analysed separately, a different picture emerges. Significant differences are found on as many as six types

109

of disciplinary action (Table 5.27). Teachers rely more often on verbal reproof and withdraw privileges to discipline boys. They also put boys standing more often, exclude them from activities, send them to the headteacher, and report them more often than girls to parents at parent-teacher meetings.

These differences also emerged in the results of the t-tests comparing boys and girls at third- and sixth-class levels (Tables 5.28-29). However, the number of disciplinary actions on which significant gender differences occur increases to nine at third-class level and to ten at sixth-class level. At both levels, boys are disciplined more often than girls. They are more often assigned extra homework, sent out of the room, and reported to parents in a letter. At sixth-class level, boys are also sent home more often than their female peers.

Frequency of Use of Disciplinary Actions against Boys and Girls in Mixed Schools by Male and Female Teachers (Sixth Class)

Finally, the actions taken against boys and girls by male and female teachers at sixth-class level in mixed schools were examined. The results of the 2x2 factorial analysis of variance yielded a significant main effect of pupil gender in all cases (Table 5.30, thus confirming the findings reported in the previous section). No main effects of teacher gender emerged, however; neither did the analysis yield any interaction effects. Thus, we may conclude that while boys and girls are disciplined differently by teachers, male and female teachers are similar in their treatment of both boys and girls in this regard.

DRESS CODE FOR PHYSICAL EDUCATION

Attention to dress and personal appearance generally is a feature of educational practice which tends to be associated more with the instruction of girls than of boys. Lynch (1989), for example, in her study of 90 Irish secondary schools presents evidence that strict control of dress is more likely to be practised in girls' schools than in boys' schools. In the present study, given the space constraints of

postal questionnaires, it was not feasible to include detailed questions about school uniforms. However, some information on the standards expected of pupils in matters concerning personal appearance and presentation was obtained from teachers' reports of practice relating to the wearing of sports gear. In single-sex schools and in girls' schools with mixed infants (third- and sixth-class levels), teachers indicated 'yes', 'no', or 'unsure' to questions about whether pupils in their charge changed a) their shoes and b) their clothing for physical education (P.E.). In mixed schools and in girls' schools with mixed infants (senior-infant level), teachers responded to the same questions by indicating 'all pupils', 'only boys', 'only girls', 'no pupils', or 'unsure' (APPENDIX B, Q11).

Frequency distributions indicate that, during P.E. instruction, sports shoes are worn in the majority of schools above senior-infant level. This practice was reported in approximately three-quarters of schools at third- (71.7%) and sixth-class (75.4%) levels but in only half the schools (52.8%) surveyed at senior-infant level (Table 5.31). In a smaller majority of schools, 61.8% at third-class level and 63.2% at sixth-class level, sports clothing is worn during P.E. instruction. At senior-infant level, something under two-fifths of schools (39.2%) adhere to this practice (Table 5.32).

Examining the distribution of frequencies by sex category of school, it is clear that sports gear is worn in much higher proportions of single-sex schools than of mixed schools. It is worn to a greater extent in girls' schools and girls' schools with mixed infants than in boys' schools (Tables 5.31-32). In more than nine out of ten girls' schools, and in more than eight out of ten girls' schools with mixed infants, it was reported that pupils at third- and sixth-class levels change their shoes and clothing for P.E. instruction. These practices are adopted by pupils in the same grades in only about half to two-thirds of mixed schools, however. Boys' schools approximate to mixed schools in relation to sports clothes but are more like the other categories of single-sex schools when it comes to changing shoes for P.E.

The results of chi-square analyses indicate that the differences between mixed schools and all other sex categories of school are significant for both practices at each

of the grades examined (Table 5.31-32). Boys' schools at senior-infant level, and only in relation to clothing for P.E., are the only exception to this. Comparing single-sex schools, there are no significant differences in the extent to which sports shoes are worn by pupils in the grades examined. However, at both third- and sixth-class grades, pupils in significantly higher proportions of girls' schools and of girls' schools with mixed infants than of boys' schools change their clothing for P.E. Thus, it would appear that a stricter code of practice in relation to the wearing of sports gear is adopted in single-sex schools than in mixed schools. As expected, girls' schools and girls' schools with mixed infants apply stricter standards than boys' schools.

PUPIL INTERACTION

The organization of pupils in mixed schools is an issue which has received some attention in the research literature on coeducation. The seemingly harmless practice of dividing pupils by gender for certain purposes may have implications for how pupils see themselves and others. Such divisions, it is claimed, may have the effect of confirming and giving official sanction to the idea that gender is an important aspect of one's personality even in situations where it would appear to be irrelevant (Whyte, 1983). In the present study, interaction between boys and girls in mixed schools was examined in terms of arrangements for forming lines and seating in the classroom. Teachers at senior-infant, third-, and sixth-class levels provided information on practice (mixed, segregated, varied, or other) and also indicated who (they themselves, the pupils, the principal, or other) is responsible for deciding practice (APPENDIX B, Qs 12-15).

Frequency distributions indicate that in the great majority of mixed schools, boys and girls sit together at each of the grades examined (Table 5.33). However, by the time pupils reach sixth class, the practice of sitting together is less common (it was reported by teachers in 77.3% of schools at this level compared to 89.3% and 84.2% of schools at senior-infant and third-class levels). In more than two-thirds of mixed schools, pupils in each of the grades examined also line up together (Table

5.34). This proportion remains fairly constant as pupils progress through primary school.

In most mixed schools (i.e., in more than nine in ten cases), decisions about seating arrangements are made by the class teacher. This is true for each of the grades examined (Table 5.35). While the class teacher is also mainly responsible for deciding how pupils line up at senior-infant and third-class levels (in 73.1% and 57.9% of cases respectively), the decision-making role of both pupils and principals in this regard increases in the more senior grades (Table 5.36). In fact, at sixth-class level, principals are the main decision-maker in nearly one in five cases (18.5%), while pupils are accorded this privilege in more than a quarter of cases (28.3%).

CONCLUSION

The findings presented in this chapter show some similarities but also marked differences in the ways that boys and girls are treated in primary schools, an increase in the differences as pupils progress through school, and significant variation between schools with different gender compositions.

An examination of the task allocation practices of teachers reveals evidence of gender differentiation occuring within a context of frequent pupil involvement in a limited number of tasks: tidying up the classroom, taking messages to other parts of the school, cleaning the blackboard, and picking up litter in the school yard. Pupils do not carry classroom furniture (though boys do this more frequently than girls), empty the bin, or water plants/ flowers (though girls do this more frequently than boys) to the same extent. Looking after a classroom pet is a task which pupils are rarely asked to take responsibility for and, in the junior grades, they tend not to be asked to look after younger pupils.

The responsibilities assigned to boys and girls vary depending on which type of school they attend. Boys in mixed schools are more often involved in a wider range of tasks, including those traditionally associated with girls, than boys in single-

113

sex schools. Conversely, girls in single-sex schools perform more tasks more frequently than girls in mixed schools including tasks which tend to be associated with boys.

Comparing boys with girls in single-sex schools, the much greater involvement of girls in a wide range of classroom tasks at the middle and senior grades of primary school is evident; so also is the increasing tendency for girls to assume more responsibility for what are traditionally regarded as feminine tasks towards the end of primary school. These findings reveal important gender differences between single-sex boys' and girls' schools in the experiences of pupils and suggest that expectations are higher for girls.

In mixed schools, the stereotypical basis on which boys and girls perform classroom tasks is striking. While there is greater balance in terms of the number of tasks boys and girls take responsibility for, marked gender differentiation is a feature of pupils' experiences throughout primary school. An exception to this pattern is found only in the case of girls' schools with mixed infants in which senior-infant boys and girls perform virtually all tasks with more or less the same frequency.

The findings relating to disciplinary practices show that teachers rely mostly on a few types of action to secure co-operation from pupils, that pupils (both boys and girls) in single-sex schools are more severely treated than those in mixed schools and that boys, compared to girls, in both single-sex and mixed schools are disciplined significantly more often. The differences found between and within schools in the treatment of pupils increase at the end of primary schooling.

Verbal reproof, followed by withdrawal of privileges and informing parents of pupils' behaviour at parent-teacher meetings, are the actions most frequently relied on by teachers to discipline pupils. In the majority of schools, teachers rarely send a pupil out of the room, send a pupil to the headteacher, send a pupil home, or write a letter to parents. There is a tendency to assign extra homework to older pupils while

younger pupils are more frequently put standing or excluded from activities. From third-class upwards, boys are more frequently disciplined than girls.

Pupils (both boys and girls) in single-sex schools are significantly more often disciplined than their same-sex peers in mixed schools. The differences are particularly marked in the treatment of sixth-class boys who, in single-sex schools, are more often disciplined in several ways than their same-sex peers in mixed schools. Comparing boys with girls in single-sex schools, it is evident that, above senior-infant level, boys are more often disciplined in several ways than girls. In mixed schools also, excluding girls' schools with mixed infants, boys at all levels of primary school are significantly more often disciplined than girls in several ways.

Male and female teachers do not differ in their disciplinary practices. Teachers of both sexes discipline boys more frequently than girls. However, female teachers assign tasks to pupils (both girls and boys) more often than male teachers, while male teachers tend not to ask girls to perform tasks traditionally associated with males.

The practice of wearing sports shoes and clothes for P.E. instruction is adopted in the large majority of schools from third class upwards. Sports shoes are worn to a greater extent than sports clothes. Practice varies significantly with the type of school pupils attend. Pupils in significantly higher proportions of single-sex schools including girls' schools with mixed infants than of mixed schools wear sports gear (shoes and clothing) from third class upwards. Significant differences between single-sex schools in the extent to which pupils change their clothing for P.E. are also found from third class upwards: this practice is more often a feature of girls' schools and girls' schools with mixed infants than of boys' schools.

Finally, an examination of pupil interaction in mixed schools reveals that, in the majority of cases, boys and girls line up together and sit in mixed groups. There is a tendency for segregated seating to occur in the senior grades and for pupils in the senior grades to have a greater say in how they line up or where they sit. The role of

the principal in such matters also increases by the time pupils reach third class. In the majority of schools, however, the class teacher is mainly responsible for decisions about lining up and seating arrangements.

CHAPTER SIX

TEACHERS' PERCEPTIONS OF PUPILS IN SENIOR-INFANT, THIRD-CLASS, AND SIXTH-CLASS GRADES

Teachers' perceptions of girls and boys, and the implications of these for pupils' academic and social development, are the focus of study in Chapter Six. The chapter is based on information provided by teachers at senior-infant, third-, and sixth-class grades. Most of the discussion is about academic expectations, but pupils' classroom behavioural characteristics also receive attention.

THE LEARNING CHARACTERISTICS OF PUPILS

In Chapter Two, we saw that gender differences in personal characteristics associated with achievement have been found in pupils attending Irish primary schools (Kellaghan & Fontes, 1988; Martin & Kellaghan, 1989). Such differences may result in teachers developing gender-based expectations for performance which, in turn, may reinforce the development of different academic aptitudes and behaviours in boys and girls. In the present study, teachers' expectations for the academic performance of male and female pupils were examined in three ways. First, teachers' perceptions of boys' and girls' interest in subject areas associated with the opposite sex were investigated. Second, teachers were asked about the subjects in which they considered boys and girls to need additional assistance. Third, teachers' views about the learning characteristics of boys and girls were considered.

Pupils' Interest in Subject Areas

Teachers who took part in the survey indicated the extent to which they agreed with two statements (APPENDIX B; Q17): 1) that boys show little interest in subject areas which are often associated with girls (e.g., cooking, sewing); and 2) that girls show little interest in subject areas which are often associated with boys (e.g.,

science, computers). Their responses, 'strongly agree', 'agree', 'unsure', 'disagree', and 'strongly disagree', were scored on a scale of 1 to 5 (high scores denoting disagreement).

In analyses, mean ratings were obtained for senior-infant, third-, and sixth-class grades. The means show that teachers in the middle and senior grades tend to agree that boys show little interest in subjects associated with girls (Table 6.1). Conversely, teachers at each of the grades examined tend to disagree that girls show little interest in subject areas associated with boys. Thus, teachers are more stereotyped in their perceptions of boys than of girls.

In one-way analysis of variance, significant differences between sex categories of school emerged in relation to teachers' perceptions of boys' subject interests (Table 6.2). The results of Scheffé post-hoc analyses indicate that the differences lie between boys' schools and girls' schools with mixed infants at third-class level and between boys' schools and both girls' and mixed schools at sixth-class level. In each case, teachers in boys' schools agree to a greater extent than teachers in other sex categories of school that boys show little interest in subject areas associated with girls.

A similar picture emerges in relation to teachers' perceptions of girls' interest in subjects associated with boys. Teachers in the middle and senior grades in boys' schools again differ from their colleagues in both girls' schools and mixed schools. In boys' schools, but not in girls' or mixed schools, teachers have a tendency to agree that girls show little interest in subjects associated with boys (Table 6.3). Thus, compared to their colleagues in other sex categories of school, teachers in boys' schools are more stereotyped in their perceptions of the subject interests of both boys and girls.

Subject Areas in Which Pupils Require Additional Help

Gender differences in teachers' expectations of pupils' academic performance were also examined in terms of teachers' judgments about boys' and girls' competence in specific areas of the curriculum. Accordingly, teachers at senior-infant, third-, and sixth-class grades indicated which of the prescribed curriculum subjects pupils in their class tend to need extra help with. In mixed schools, responses were recorded separately for boys and girls (APPENDIX B, Q5).

The results of analyses with frequency distributions are presented separately for boys and girls at senior-infant (Tables 6.4-5), third- (Tables 6.6-7), and sixth-class (Tables 6.8-9) grades. In general, the data indicate that the subjects in which pupils, both boys and girls in all grades, in large numbers of schools need additional help are Irish, mathematics, and English/ reading and writing (at senior-infant level). In all cases, girls, compared to boys, are more often perceived as needing help in mathematics while boys, compared to girls, are more often perceived as needing help in Irish and English. In a sizeable proportion of schools, teachers indicated that pupils, particularly boys, need additional help in art and craft. Boys also differ from girls in the greater frequency with which they are perceived to need additional help in music while girls, compared to boys, are more often perceived as needing help in P.E.

Subjects in Which Boys and Girls in Different Types of School
Require Additional Help

In chi-square tests performed on the frequency distributions, the significance of differences between single-sex and mixed schools was examined (Tables 6.4-9). The results show that in five of the six subjects (Irish, mathematics, reading, writing, and English) on which differences between sex categories of school are significant, the pattern is consistent: pupils (both boys and girls) in much higher proportions of single-sex than of mixed schools are perceived by their teachers as requiring extra help (this is true of mathematics in each of the grades examined). Moreover, the

number of subjects in which significant differences occur is greater for girls than for boys. In particular, it is worth noting that, in all of the grades examined, English (reading and writing) was identified as a subject in which girls, but not boys, in single-sex schools (compared to their same-sex peers in mixed schools) were perceived as needing additional help.

Looking at the results for each grade separately, we find that at senior-infant level, significant differences emerge between single-sex and mixed schools in teachers' perceptions of both boys' and girls' need for extra help in reading and mathematics and of girls' need for extra help in writing (Tables 6.4-5). At third-class level, significant differences between sex categories of school occur in teachers' perceptions of girls' need for extra help in Irish and English and of both boys' and girls' need for extra help in mathematics (Tables 6.6-7). At sixth-class level, significant differences were found for teachers' perceptions of boys' and girls' need for extra help in both Irish and mathematics and of girls' need for extra help in English (Tables 6.8-9). In all cases, pupils in higher proportions of single-sex schools than of mixed schools are perceived as requiring additional help with their school subjects. The pattern is reversed in the case of music, and for boys only, at sixth-class level (Table 6.8).

Subjects in Which Boys and Girls in Single-Sex Schools Require Additional Help

Constraints arising from the nature of the data meant that it was not possible to combine responses for boys and girls in the same analyses.[7] However, the numbers of pupils needing additional help and not needing additional help in each curriculum subject were compared separately for boys and girls. A chi-square test was used to test the significance of differences between both response categories. The results of the tests for boys and for girls in single-sex schools are presented separately for senior-infant, third-, and sixth-class grades (Tables 6.10-12).

---

[7] The absence of a scale-type response format meant that t-tests could not be performed on comparisons involving boys and girls in single-sex or mixed schools. A 2x2 chi-square test might have been used for the single-sex comparisons. This test was, however, not suitable for the mixed-school/ class comparisons which involve one teacher responding for boys and girls.

At senior-infant level, pupils (both boys and girls) are more often than not perceived as needing additional help in mathematics, reading, and writing (Table 6.10). A similar pattern is found in relation to Irish and mathematics at both third- (Table 6.11) and sixth-class grades (Table 6.12). At senior-infant level, significant differences also occur in the case of social and environmental studies, free play, P.E., and music. In these subjects, however, pupils (both boys and girls) tend not to need additional help according to their teachers. With the addition of music and art and craft, this pattern is maintained at both third- and sixth-class grades. It is also found in English but, with the exception of boys at sixth-class level, the differences are not significant. Differences in the extent to which pupils are perceived as needing additional help are also not significant in the case of Irish and art and craft at senior-infant level (Table 6.10). Thus, we may conclude that, in single-sex schools, mathematics and Irish are the main subjects in which pupils (boys and girls) need additional help. Additional help with English (reading and writing) is also perceived as necessary for pupils of both sexes at senior-infant level.

Subjects in Which Boys and Girls in Mixed Schools Require Additional Help

Chi-square tests were also carried out to examine the significance of differences between teachers' responses for boys and for girls in mixed school/ class settings. In the first set of analyses at senior-infant level, data from girls' schools with mixed infants and mixed schools were combined (Table 6.13). The results reveal significant differences in the case of girls for all subjects and in the case of boys for all subjects excluding Irish and mathematics. Looking first at the results for girls, it is clear that mathematics is the only subject in which they are more often than not perceived as needing additional help. In all other subjects, girls tend not to be perceived by their teachers as needing additional help. This experience is also shared by boys in social and environmental studies, free play, P.E., music, and art and craft. However, in reading and writing, boys are more often than not perceived as requiring additional help while, in mathematics and Irish, the chances of boys requiring or not requiring additional help are fairly even.

121

Looking at the results for girls' schools with mixed infants, significant differences occur for both boys and girls in social and environmental studies, free play, P.E., music, and art and craft (Table 6.14). The pattern is the same in all cases: additional help is more often judged by teachers as unnecessary. A similar result emerged in the case of Irish for girls. Boys also tend not to need help in Irish, though the difference between the frequency of teachers' ratings (needing and not needing help) is not significant. The main gender differences in these analyses occur in reading and writing. Boys more often than not are perceived as needing additional help in these subjects, whereas girls' need for such help is indicated in only about half the cases involved. In mathematics, there is no significant difference in the extent to which either boys or girls are perceived to require additional help though the difference (favouring additional help) is much greater in the case of girls.

The results of chi-square tests for mixed schools are similar to those obtained in each of the previous sets of analyses in a number of respects (Table 6.15). In social and environmental studies, free play, P.E., music, and art and craft, teachers indicated, in the case of both boys and girls, that pupils tend not to need additional help. Again, boys tend to need additional help in writing and in reading (though in this case the difference is not significant). As often as not they are also reported as needing additional help in mathematics and Irish. In accordance with the results pertaining to the previous sets of analyses, girls tend to require additional help in mathematics but not in Irish or writing. Matching the results obtained for mixed schools and girls' schools with mixed infants combined (but contrary to those obtained for girls' schools with mixed infants) girls also tend not to require additional help in reading.

At third- and sixth-class grades, the results of the chi-square tests are identical (Tables 6.16-17). Boys and girls tend not to require additional help in English, social and environmental studies, P.E., music, and art and craft -- the differences in the frequency of teachers' ratings (needing and not needing help) are significant in each case. The only subject in which boys need additional help more often than not is Irish while the only subject in which girls need additional help more often than not is

mathematics. Girls are as likely as not to need help in Irish while boys are as likely as not to need help in mathematics.

Thus, we may conclude, on the basis of teachers' judgments, that pupils in mixed schools (both boys and girls) tend not to require additional help in most school subjects. Further, the subjects in which they do require additional help are mathematics, Irish, and English. Finally, teachers' ratings of pupils' academic performance in mixed schools reveal traditional gender-role expectations. Girls, but not boys, tend to require additional help in mathematics, while boys, but not girls, tend to require additional help in Irish. Boys are also perceived as needing more help in English (reading and writing) at senior-infant level but appear to make good their deficit in this subject by the time they reach third class.

Subjects in Which Boys and Girls in Mixed Schools Require Additional Help According to Male and Female Teachers (Sixth Class)

To conclude this section, teachers' perceptions of pupils' need for additional help in curriculum subjects at sixth-class level in mixed schools were examined. The results of the chi-square tests (performed separately for boys and girls on each subject) indicate that, in the case of boys, male and female teachers are more or less in agreement about the extent of additional help required (Table 6.18). With the exception of P.E., a similar conclusion may be drawn from the results for girls. In this case, a significantly higher proportion of male teachers indicated that additional help is required.

Approaches to Learning

Evidence from observational studies indicates that boys and girls develop quite different approaches to learning. Askew and Ross (1988) document how boys and girls from an early age tend to use resources (equipment and space) differently and to value activities differently depending on whether these involve, for example, verbal or physical communication, co-operation, or competition. Based on Askew

and Ross's (1988) analysis of classroom dynamics, eight learning approaches were identified, four of which are typically associated with boys (physically active, competitive, problem-solving, and independent) and four of which are associated with girls (collaborative, creative, questioning, and communicative). Teachers were asked to indicate on a scale of 1 to 5 ('strongly agree' = 1, 'agree' = 2, 'unsure' = 3, 'disagree = 4, 'strongly disagree' = 5) the extent to which they agreed that each adjective is an accurate description of the learning approaches typically adopted by pupils in their class (APPENDIX B, Q4). In each case, an explanation of what was meant by the adjective was provided: physically active (using physical space for classwork); collaborative (working with classmates); creative (showing imagination); competitive (keen to do better than other people); questioning (asking teacher questions); problem-solving (applying principles to concrete situations); independent (working alone); and communicative (talking about work with classmates). Teachers in mixed schools responded separately for boys and girls.

Frequency distributions were obtained on the learning approaches adopted by pupils in different sex categories of school for boys and for girls at senior-infant (Tables 6.19-20), third- (Tables 6.21-22) and sixth-class (Tables 6.23-24) grades. At all grades, for most of the characteristics examined, the great majority of responses fall into the 'agree' or 'strongly agree' categories. A somewhat more dispersed response pattern is evident in relation to both problem-solving and independent learning approaches in which cases the 'unsure' and/ or 'disagree' categories were also ticked by sizeable proportions of teachers.

Looking at the results without reference to sex category of school, it is clear that boys in all grades are perceived to be more physically active than their female peers. Girls are considered to be more creative, communicative, and competitive. In addition, girls are perceived to be more independent (at senior-infant and third-class levels) and collaborative (at third- and sixth-class levels). A problem-solving approach to learning is more often observed in boys than in girls but only at third-class level. Teachers reported similar amounts of questioning behaviour in both sexes.

Learning Approaches Adopted by Boys and Girls in Different Types of School

Chi-square tests performed on the frequency data revealed few significant differences between sex categories of school for either male or female pupils. Moreover, the differences found are not consistent across grades. Looking at the results obtained for boys, it is apparent that teachers in single-sex schools tend to agree more strongly than their peers in mixed schools that pupils are creative at senior-infant and third-class levels and competitive at third- and sixth-class levels (Tables 6.19; 6.21; 6.23). In mixed schools, teachers more often describe third-class boys as communicative and sixth-class boys as physically active.

In the case of girls, significant differences were found only at senior-infant (Table 6.20) and third-class (Table 6.22) levels. In single-sex schools, compared to mixed school/ class settings, teachers tend to agree more that senior-infant girls adopt a physically active approach to learning. Significant differences between sex categories of school also emerged at senior-infant level in relation to the extent to which both questioning and problem-solving approaches are adopted by girls. Whereas teachers in mixed settings tend to agree that both of these approaches are associated with girls, teachers in single-sex schools are more divided in their opinions -- some strongly agree but others disagree. Teachers in mixed schools also agree more strongly than their colleagues in single-sex schools that girls adopt a competitive learning approach at both senior-infant and third-class levels.

Learning Approaches Adopted by Boys and Girls in Single-Sex Schools

The significance of differences between single-sex schools was examined in a series of t-tests performed on the mean scores obtained for teachers' ratings of boys and girls on each learning characteristic. At senior-infant level, the results indicate that, with one exception, teachers in boys' schools (in assessing boys' approaches to learning) do not differ from teachers in girls' schools (in their assessment of girls' approaches to learning). Surprisingly, the exception is that girls are perceived by their teachers to be more physically active in the classroom than boys are perceived

by theirs (Table 6.25). At third-class level, teachers in boys' and girls' schools differ significantly in their perceptions of male and female pupils' keenness to do better than other pupils: boys, compared to girls, are perceived to be more competitive (Table 6.26). Differences between single-sex schools are significant on two approaches at sixth-class level. Girls, compared to boys, are perceived to adopt more creative and communicative approaches to learning (Table 6.27). Thus, no consistent pattern emerges from the comparisons involving girls and boys in single-sex schools.

Learning Approaches Adopted by Boys and Girls in Mixed Schools

In a second series of t-tests, the judgments of teachers in mixed schools regarding the learning approaches of boys and girls were compared. In the first of three sets of analyses at senior-infant level, data for girls' schools with mixed infants and mixed schools were combined. The results show significant differences for each characteristic examined, with the exception of problem-solving (Table 6.28). Girls, compared to boys, are perceived to be more collaborative, creative, competitive, questioning, and communicative. Boys, compared to girls, are perceived to be more physically active and independent. The results of t-tests involving senior-infant boys and girls in girls' schools with mixed infants are similar, with one exception. Whereas in mixed schools and in girls' schools with mixed infants combined, teachers perceive boys to be more independent, teachers in girls' schools with mixed infants tend to associate this characteristic more with girls than with boys (Table 6.29). In the third set of t-tests involving senior-infant pupils, differences between boys and girls in mixed schools were found to be significant in all cases. Girls, compared to boys, are perceived to be more collaborative, creative, competitive, questioning, independent, and communicative, whereas boys are perceived to be more physically active and to adopt a more problem-solving approach to learning than girls (Table 6.30).

The results of t-tests comparing teachers' judgments of boys and girls in mixed schools at third- and sixth-class levels are identical. Significant differences were found for all but one learning characteristic. Girls are perceived to be more

collaborative, creative, competitive, independent, and communicative than boys. Boys, compared to girls, are perceived to adopt more problem-solving and physically active approaches in their learning activities (Tables 6.31-32). Thus, teachers in mixed schools tend to associate girls and boys with very different learning styles. Girls are seen as more involved (and more independent) in their approach to learning, while boys adopt an approach which demands greater interaction with their surrounding physical space and more engagement with problem-solving activity.

Learning Approaches Adopted by Boys and Girls in Mixed Schools
According to Male and Female Teachers (Sixth Class)

Finally, male and female teachers' perceptions of the learning approaches adopted by boys and girls in sixth class in mixed schools were examined. The results of the 2x2 factorial analysis of variance yielded a significant main effect for pupil gender in all cases (Table 6.33), thus confirming the findings reported in the previous section. The analysis yielded only one significant main effect for teacher gender, with female teachers tending to agree more than male teachers that pupils are communicative, and no significant interaction effects. Thus, we may conclude that male and female teachers largely agree that boys and girls adopt different approaches to learning.

PUPILS' BEHAVIOURAL CHARACTERISTICS

The classroom behaviour of girls and boys in primary schools has received considerable attention in observational studies. The findings are unambiguous: boys are consistently reported as presenting more problems than girls. Studies show that boys are not only more physically and verbally aggressive than girls; they are also 'referred' more often for adjustment and emotional problems (see, for example, Maccoby & Jacklyn, 1974; Serbin, 1983; Wheldall & Merrett, 1989). In the present study, teachers were asked to indicate the extent ('frequently', 'sometimes', 'rarely', or 'never') to which they had observed each of several behavioural characteristics in pupils in senior-infant, third-, and sixth-class grades. The characteristics examined

are attentiveness, insolence, helpfulness, fighting, obedience, excessive talk, object-throwing, telling tales, interfering with other pupils' learning, resentment of correction, heedlessness, daydreaming, and conscientiousness. Teachers in mixed schools responded separately for boys and girls (APPENDIX B, Q6).

Frequency distributions were obtained for boys and for girls in senior-infant (Tables 6.34-35), third- (Tables 6.36-37), and sixth-class (Tables 6.38-39) grades. The distributions show that, in the great majority of schools, the most frequently observed characteristics in boys and girls at all grades are attentiveness, helpfulness, obedience, excessive talk, and conscientiousness. Other characteristics were observed to a lesser extent.

Teachers' perceptions of pupils' behaviour varies according to pupil gender and age. Attentiveness, helpfulness, obedience, and conscientiousness were more often observed in girls than in boys at all levels. Telling tales was more frequently observed in senior-infant pupils (boys and girls) and in third-class girls. Fighting was more frequently observed in senior-infant pupils and more often observed in boys than in girls at all levels. Heedlessness, insolence, interference with other pupils' learning, and object-throwing were also more frequently observed in boys than in girls at all levels, though boys at senior-infant level are 'rarely' or 'never' insolent according to teachers in the majority of schools.

Behavioural Characteristics of Boys and of Girls in Different Types of School

In chi-square analyses performed on the frequency distributions, significant differences between sex categories of school emerged on several behavioural characteristics. Overall, the results indicate that pupils (both boys and girls) in single-sex schools are more negatively perceived by their teachers than pupils in mixed schools are perceived by theirs.

Looking first at the comparisons of boys attending different sex categories of school, teachers in single-sex schools more often than teachers in mixed school/ class

128

settings observed the characteristics of helpfulness, telling tales, heedlessness, and daydreaming at senior-infant level. Teachers in mixed schools observed fighting among senior-infant boys less often than teachers in girls' schools with mixed infants or than teachers in single-sex schools (Table 6.34). At both third- and sixth-class levels, the characteristics of insolence, fighting, telling tales, interfering with other pupils' learning, heedlessness, and daydreaming are more frequently observed in boys in single-sex schools than in boys in mixed schools (Tables 6.36; 6.38). Moreover, at sixth-class level, boys in single-sex schools are more often perceived as engaging in excessive talk and as resentful of correction.

Turning next to teachers' observations of girls, the data indicate that senior infants in single-sex schools, compared to their peers in mixed schools, are more often perceived to engage in fighting and daydreaming, to be heedless, and to cause interference with other pupils' learning (Table 6.35). In girls' schools with mixed infants, while girls are more often perceived by their teachers to be attentive, they are also more often perceived to be resentful of correction than pupils in single-sex and/ or mixed schools are perceived by theirs.

At both third- and sixth-class levels, differences between single-sex and mixed schools in teachers' observations of the behaviour of girls are significant on three characteristics (Tables 6.37; 6.39). Fighting, interfering with other pupils' learning, and heedlessness, are more commonly observed by teachers in single-sex schools. Additionally, teachers in single-sex schools, compared to their colleagues in mixed schools, more often indicated that girls engage in daydreaming (at third-class level) and are insolent and resentful of correction (at sixth-class level).

Behavioural Characteristics of Boys and Girls in Single-Sex Schools

To compare teachers' perceptions of the behavioural characteristics of boys and girls in single-sex schools, the frequency data were assigned the following values 'frequently' = 1, 'sometimes' = 2, 'rarely' = 3, and 'never' = 4 and a series of t-tests was carried out. The results of the first set of t-tests in which boys and girls at

senior-infant level were compared show that the genders differ significantly in one respect only: boys, compared to girls, are more often perceived to engage in object-throwing behaviour (Table 6.40).

At both third- and sixth-class grades, boys and girls differ significantly in several ways (Tables 6.41-42). Girls are more often perceived by their teachers as attentive and conscientious, while boys are more often reported to be insolent, and to engage in object-throwing and fighting. At third-class level, girls are more often reported to be obedient while boys are more often reported to talk excessively. Finally, at sixth-class level, girls are more often perceived as helpful, while boys are more often perceived as heedless, and given to daydreaming and interference with other pupils' learning. Thus, while there is no consistent pattern concerning specific behavioural characteristics, we may conclude from the comparisons of boys and girls in single-sex schools that, in the opinions of teachers, girls are better behaved than boys.

Behavioural Characteristics of Boys and Girls in Mixed Schools

To compare the behaviour of boys and girls in mixed school/ class settings, t-tests were also used. The first set of t-tests involving senior-infant pupils combines data from girls' schools with mixed infants and mixed schools (Table 6.43), the second set is based on data from girls' schools with mixed infants (Table 6.44) and the third set involves comparisons between boys and girls in mixed schools (Table 6.45). The results of all three sets are similar for virtually all of the behavioural characteristics examined. In all cases, girls are significantly more often perceived as attentive, helpful, and conscientious while obedience is a characteristic more often observed in girls in mixed schools and in girls' schools with mixed infants and mixed schools combined. Girls, in all cases, are also reported as engaging in telling tales more often than boys. Boys, on the other hand, are more often perceived as insolent, heedless, and interfering with other pupils' learning. They are more often seen to engage in fighting and object-throwing. There are no gender differences in the extent to which excessive talk or resentment of correction was observed in pupils; neither is

there a significant difference in the extent to which day dreaming was observed in girls' schools with mixed infants and mixed schools combined or in girls' schools with mixed infants -- this tendency was, however, more frequently observed in boys in mixed schools.

With few exceptions, boys and girls were observed in the same way at third- and sixth-class grades as at senior-infant level (Tables 6.46-47). However, boys in the middle and upper grades are significantly more often perceived to be resentful of correction. While girls at third-class level are more often seen as obedient, at sixth-class level there is no difference between boys and girls in this respect. Thus, it is apparent that teachers in mixed settings tend to associate girls at each of the grades examined with good conduct while the opposite is true for boys.

Behavioural Characteristics of Boys and Girls in Mixed Schools
According to Male and Female Teachers (Sixth Class)

Finally, male and female teachers' perceptions of the behavioural characteristics of boys and girls in sixth class in mixed schools were examined. The results of the 2x2 factorial analysis yielded a significant main effect for pupil gender in eleven of the thirteen characteristics examined, as reported in the previous section (Table 6.48). The analysis yielded two significant main effects for teacher gender, with male teachers tending to agree more that pupils engage in object-throwing and telling tales. A significant interaction effect was found in the results relating to teachers' observations of daydreaming. Male teachers observed this characteristic more frequently in boys than in girls. Thus, we may conclude that while male and female teachers are in agreement about differences in the behavioural characteristics of boys and girls, male teachers have a tendency to report more negative characteristics.

CONCLUSION

The findings presented in this chapter reveal marked gender differences in how teachers perceive pupils in terms of both their academic and behavioural characteristics. With a few exceptions, the differences reflect gender stereotypes. Overall, girls fit much more closely the stereotype of the 'good pupil' (both in their approaches to learning and in their classroom behaviour) and boys the stereotype of the 'difficult pupil'. In general, the differences increase as pupils progress through primary school and are greater in mixed than in single-sex schools.

Turning first to the academic expectations of teachers, in general we may conclude that the subjects in which pupils are most frequently perceived as requiring additional help in are mathematics, Irish, and English/ reading and writing (at senior-infant level). Boys, compared to girls, are perceived as needing help more often in Irish, English, art and craft, and music, while girls are perceived as needing help more often in mathematics and P.E. In single-sex schools, no significant differences emerged in teachers' ratings of boys or of girls in their need for additional help with school subjects. The exceptions for pupils of both sexes are mathematics and Irish at each of the grades examined and English (reading and writing) at senior-infant level. In mixed schools also, the only subjects in which pupils tended to need additional help significantly more often than not are mathematics, Irish, and English. Compared to single-sex schools in which pupils of both sexes were considered to be in need of additional help, the responses of teachers in mixed schools suggest a more polarized attitude to boys and girls. The latter is reflected in the tendency of teachers to associate the need for additional help in mathematics with girls and the need for additional help in Irish (and English/ reading and writing at senior-infant level) with boys. Evidence that the academic expectations of teachers may be higher for pupils in single-sex schools than for those in mixed schools was reflected in the findings that both boys and girls in single-sex schools, when compared to pupils of their own sex in mixed schools, are more often perceived as requiring additional help with school subjects.

In some respects, boys may be more at risk than girls from gender bias in the academic expectations of teachers. Evidence to support this conclusion can be gleaned from the finding that boys, particularly from third class upwards, are considered to show little interest in subjects associated with girls. This view is most prevalent among teachers in single-sex boys' schools. The opposite is true for girls: teachers and principals generally do not agree that girls show little interest in subjects associated with boys. In boys' schools, however, teachers (and principals in this case also) take the opposite view again suggesting that staff in such schools are more traditional in their expectations of pupils than their colleagues in other school types.

Some learning approaches are associated with boys and others with girls. A consistent finding for all grades is that boys are perceived to be more physically active while girls are considered to be more creative, communicative, and competitive. Gender differences in teachers' observations of the learning approaches adopted by girls and boys in mixed schools are fairly consistent at all grades. Boys are perceived to adopt more physically active and problem-solving approaches to learning and girls to adopt more collaborative, creative, competitive, independent, and communicative approaches. In single-sex schools, the differences observed in the learning approaches adopted by boys and girls are much fewer and are not consistent across grades. Moreover, there is little consistency in the differences which emerged from comparisons of teachers' observations of girls or of boys attending different types of school. In fact, the only firm conclusion to draw from all of the analyses is that teachers in mixed schools are more polarized in their perceptions of boys' and girls' approaches to learning than teachers in single-sex schools.

Teachers tend to be positive in their appraisal of the behavioural characteristics of pupils, most often observing that both boys and girls, (though frequently given to excessive amounts of talking in class) are attentive, helpful, obedient, and conscientious. However, boys are generally regarded as being more troublesome than girls. Teachers frequently observe object-throwing, fighting, insolence, interference with other pupils' learning, and heedlessness in male pupils.

This tendency was most clearly revealed in comparisons of boys and girls in mixed schools but is also evident in comparisons between the genders in single-sex schools from third class upwards. Again, as we saw in the case of teachers' academic expectations, the evidence suggests that behavioural expectations for pupils in single-sex schools may be higher than those for pupils in mixed schools. The picture which emerges is that pupils (both boys and girls) in single-sex schools are more negatively perceived than their same-sex peers in mixed schools.

Finally, there is little evidence to support the view that male and female teachers differ in their academic or behavioural expectations of pupils. At the same time, it may be noted that female pupils may experience expectations for their performance in physical education that are affected by teacher gender. A significantly higher proportion of male teachers than of female teachers indicated that additional help in this subject is required for girls. Male teachers are also more inclined than their female counterparts to report negative aspects of pupils' classroom behaviour.

CHAPTER SEVEN

THE DYNAMICS OF SINGLE-SEX AND MIXED EDUCATION

Assuming that attempts to eliminate gender inequality from primary schools in Ireland will need to be sensitive to both single-sex and mixed settings, Chapter Seven explores the relative advantages and disadvantages of both types of school organization, as perceived by teachers and school principals. Most of the chapter is devoted to comparing aspects of pupils' performance in both settings using information obtained from principals and from teachers at senior-infant, third-, and sixth-class grades. Access to sex-stereotyped subjects, academic performance and confidence, discipline and pupil controllability, participation in discussion, willingness to demonstrate knowledge, and relations with the opposite sex are considered in this context. The final part of the chapter focusses on pupils in mixed settings and the influence of the opposite sex on classroom interaction and academic performance.

THE BENEFITS OF SINGLE-SEX AND MIXED EDUCATION

The Department of Education is committed to coeducation. However, as we saw in Chapter Two, the research evidence suggests that the adoption of this policy may not be entirely justified, particularly from an achievement point of view. In the survey, school principals were asked to state their preferences taking pupil gender into account.

A measure of principals' preferences for single-sex and mixed education was obtained from their responses to the following pairs of statements: 'single-sex education benefits boys (girls) at primary level'; 'coeducation benefits boys (girls) at primary level'. Respondents were asked to indicate the extent to which they agreed with each of the four statements by selecting one of five response options: 'strongly agree', 'agree', 'unsure', 'disagree', and 'strongly disagree' (APPENDIX A, Qs 5-6).

Scores ranging from 1 to 5 were assigned to the responses, low scores denoting agreement.

The mean scores for principals' perceptions of the benefits of coeducation are relatively low, thus signalling fairly strong support for this type of school organization, particularly for boys (Table 7.1). Consistent with this position, the scores of principals also revealed a tendency to disagree that single-sex education is beneficial to pupils, again particularly in the case of boys.

To compare responses across sex categories of school, a one-way analysis of variance was performed on the means obtained for principals in single-sex boys' and girls' schools, girls' schools with mixed infants, and mixed schools (Table 7.2). Significant differences between school types were found in the case of all four statements. In each case, Scheffé post-hoc analyses revealed the source of difference to lie between mixed schools and each of the other school types. Principals in mixed schools agree more strongly that coeducation benefits boys and girls and disagree more strongly that single-sex education benefits boys and girls. A significant difference between both categories of single-sex school also emerged in relation to the perceived benefits of single-sex education for girls. Unlike their counterparts in boys' schools, principals in girls' schools tend to agree that single-sex education benefits girls. Thus, overall, there is a strong tendency on the part of school principals to support their own type of school organization. An exception occurs in girls' schools with mixed infants. In these schools, which cater for pupils in mixed and single-sex classes, principals express a clear preference for mixed education in the case of both boys and girls.

The influence of principals' gender on their preferences for single-sex and coeducational provision taking sex category of school and pupil gender into account was examined using a 2x2x2 factorial analysis of variance procedure with a repeated measure on the third factor (i.e., on pupil gender). In this analysis (and in subsequent ones involving this procedure), both categories of single-sex school were treated as one 'single-sex' category (girls' schools with mixed infants were treated as girls'

schools). The analysis yielded significant main effects of sex category of school and of pupil gender but not of principal gender (Tables 7.3-4). Several significant interaction effects involving principal gender also emerged. The results suggest that the main effect differences which occur in the mean scores for mixed and single-sex schools, and for boys and girls, are largely explained by differences in the responses of female principals. This is particularly true in the case of single-sex preferences. Thus, while single-sex provision is favoured to a greater extent in single-sex schools and for girls more than for boys, and coeducation is favoured to a greater extent in mixed schools and for boys more than for girls, it is female principals who adhere most strongly to these views.

COMPARISONS OF PUPILS IN SINGLE-SEX AND MIXED CLASSES

In further examination of the relative advantages and disadvantages of single-sex and mixed provision, pairs of statements comparing aspects of pupils' experiences in both types of school organization were presented to principals and teachers at senior-infant, third-, and sixth-class grades. In the statements, the single-sex and mixed-class situation is compared separately for boys and girls in terms of pupils' access to sex-stereotyped subjects, academic performance, academic confidence, willingness to demonstrate knowledge, participation in discussion, relations with the opposite sex, and discipline and controllability. Principals and teachers were asked to indicate the extent to which they agreed with each statement on a scale of 1 to 5, low scores denoting agreement (APPENDIX A, Q7; APPENDIX B, Q17).

Access to Sex-Stereotyped Subjects

Gender bias in curriculum implementation in both types of school organization is the first issue which received attention in this context. Principals and teachers indicated the extent to which they agreed that pupils (boys and girls) in single-sex classes are less likely than pupils in mixed classes to have access to subject areas associated with the opposite sex. Cookery and sewing were presented as examples of subjects associated with girls/ 'female-preferred' subjects, while computers and

science were presented as examples of subjects associated with boys/ 'male-preferred' subjects.

The mean scores for principals and teachers at each grade indicate that the responding groups are similar in their perceptions of pupils' access to sex-stereotyped subjects (Table 7.5) All four groups tend to agree that boys in single-sex classes are less likely than boys in mixed classes to have access to subject areas associated with girls. Similarly, all four groups are united in their rejection of the view that girls in single-sex classes are less likely than girls in mixed classes to have access to subject areas associated with boys. Thus, single-sex schools are perceived both as placing boys at a disadvantage in terms of access to 'female-preferred' subjects and as providing girls with greater access to 'male-preferred' subjects.

The results of one-way analysis of variance revealed significant differences between sex categories of school for principals', senior-infant, third-, and sixth-class teachers' perceptions of boys' access to sex-stereotyped subjects (Table 7.6). Scheffé post-hoc analyses indicate that the differences between any two sex categories of school are not significant at senior-infant level. Above senior-infant level, however, the post-hoc analyses consistently show that the source of difference is between schools catering for boys and mixed schools. At principal level, an additional source of difference is found between mixed schools and girls' schools. At all levels, the direction of difference is the same: teachers in boys' schools and principals in both categories of single-sex school agree to a greater extent than their colleagues in mixed schools that boys in single-sex classes, compared to those in mixed classes, are less likely to have access to a curriculum which includes 'female-preferred' subjects.

Significant overall differences between sex categories of school on perceptions of girls' access to 'male-preferred' subjects are found at principal, senior-infant, and sixth-class teacher levels (Table 7.6). In post-hoc analyses, a significant difference between pairs of school types was revealed at principal level only. The result suggests that principals of both boys' and mixed schools do not hold strong views about this issue. They differ from their colleagues in girls' schools and in girls' schools with

mixed infants who tend to disagree that girls in single-sex classes are less likely than girls in mixed classes to have access to a curriculum which includes 'male-preferred' subjects.

To examine whether teachers' opinions on this issue are influenced by their gender, and by the gender of pupils, a 2x2 factorial analysis of variance, with a repeated measure on the second factor, was performed on the ratings of sixth-class teachers in mixed schools for boys and girls. Results show a significant main effect of pupil gender but not of teacher gender (Table 7.7). A significant interaction effect also emerged from the analysis. The means indicate that teachers of both sexes differentiate between boys and girls with both male and female teachers agreeing more strongly in the case of boys that access to subject areas associated with the opposite sex is more restricted in single-sex schools. However, it is the scores of female teachers which differentiate most between boys and girls, with rejection of the statement occurring exclusively in the case of girls.

Finally, a 2x2x2 factorial analysis of variance was carried out to examine the influence of principals' gender on their perceptions of this issue taking into account pupil gender and sex category of school. Results revealed significant main effects of principal gender and pupil gender but not of sex category of school (Table 7.8). Significant interaction effects involving principal gender also emerged from the analysis. The main indications are that male principals agree more strongly than their female counterparts that single-sex provision disadvantages pupils in terms of access to subjects associated with the opposite sex. This perception is stronger in the case of boys. Looking at the significant interactions, it is clear that most of the divergence between male and female principals occurs in single-sex schools with male principals tending to acknowledge the curriculum limitations of single-sex provision for boys and female principals strongly rejecting similar limitations for girls. At the same time, it should be noted that the reservations of male principals about single-sex provision for boys are largely shared by female principals. Thus, it is mainly in respect of girls that male and female principals differ. Specifically, the data indicate that while male

139

principals are not as in favour of single-sex provision for girls as are their female counterparts, neither are they particularly against it.

Academic Performance

Principals and teachers at each of the grades examined tend to disagree that pupils (both boys and girls) do better academically in single-sex than in mixed classes (Table 7.9). Moreover, the level of disagreement among each of the responding groups is higher for boys than for girls.

The results of one-way analysis of variance reveal significant overall differences between school types in the perceptions of principals and teachers at each of the grades examined in relation to both boys and girls (Table 7.10). In the case of boys, Scheffé post-hoc analyses reveal differences between mixed schools and some combination of other sex categories of school including boys' schools at principal, third-, and sixth-class levels. In all cases, the direction of difference is similar. In mixed schools, principals and teachers disagree to a greater extent than their colleagues in other school categories that boys in single-sex classes perform better than boys in mixed classes. At principal level, the difference occurs between mixed schools and both boys' schools and girls' schools with mixed infants while, at third-class level, the difference is between teachers in mixed schools and girls' schools with mixed infants. There are no significant differences between any two categories of school at senior-infant level.

Mixed schools also differ significantly from one or more of the other school categories in relation to the academic performance of girls (Table 7.10). Teachers and principals in mixed schools disagree to a greater extent than their colleagues in other types of school that girls do better in single-sex than in mixed classes. At both principal and sixth-class level, the post-hoc analyses show that mixed schools differ significantly from each of the other three school categories. At third-class level, mixed schools differ from girls' schools with mixed infants while, at senior-infant level, the source of difference is between teachers in mixed schools and boys' schools.

140

In a 2x2 factorial analysis of variance, the responses of male and female sixth-class teachers in mixed schools were compared for boys and girls. The analysis yielded a significant main effect of pupil gender but not of teacher gender and no significant interaction effect (Table 7.11).

Finally, the perceptions of male and female principals regarding this issue were examined taking into account pupil gender and gender of pupil. The results of the 2x2x2 factorial analysis of variance indicate significant main effects of sex category of school and of pupil gender but not of principal gender (Table 7.12). Significant interaction effects involving gender of principal emerged from the analysis, however. The results suggest that while male and female principals disagree to the same extent that boys do better academically in single-sex classes, they differ in respect of girls with male principals disagreeing to a greater extent. This difference is found mainly between principals in single-sex schools. However, most of the difference in the scores of respondents occurs not between male and female principals but between female principals in their ratings of boys and girls. In this case also, the difference is more pronounced in single-sex schools with (female) principals agreeing that girls, but not boys, do better in single-sex classes.

Academic Confidence

The following examination of principals' and teachers' perceptions of pupils' academic confidence in single-sex and mixed settings is based on their responses to two pairs of statements. Respondents indicated 1) the extent to which they agreed that pupils (boys and girls) in single-sex classes are less confident academically than pupils in mixed classes, and 2) the extent to which they agreed that pupils (boys and girls) in single-sex classes, compared to those in mixed classes, are less inhibited showing what they know. The results of analyses for each pair of statements are discussed separately.

Looking at the results for the first pair of statements, there are clear indications from the mean scores that principals and teachers at each of the grades

examined tend to disagree that pupils (boys and girls) in single-sex classes are less confident academically than pupils in mixed classes (Table 7.13). While the means are somewhat higher in the case of girls (denoting stronger levels of disagreement), there is little variation between the groups in their responses for boys or girls.

The results of one-way analysis of variance show that there are no significant differences between sex categories of school regarding either principals' or teachers' perceptions of boys' academic confidence. While significant differences were found in relation to the academic confidence of girls at both principal and senior-infant levels, the difference between any pair of school categories is not significant (Table 7.14).

The responses of male and female teachers at sixth-class level in mixed schools were subsequently compared for boys and girls in a 2x2 factorial analysis of variance. No significant effects emerged from the analysis (Table 7.15).

Finally, male and female principals' responses were examined taking into account pupil gender and sex category of school. The results of the 2x2x2 factorial analysis of variance indicate a significant main effect of pupil gender and of sex category of school but not of principal gender (Table 7.16). Significant interaction effects involving principal gender emerged from the analysis, however. The results indicate that it is the responses of female principals which contribute almost entirely to the main effect difference between boys and girls. Further, it is largely between female principals in single-sex schools that differences in the ratings for girls and boys occur. While principals disagree more for girls than for boys that pupils are less confident academically in single-sex than in mixed classes, it is female principals in single-sex schools who differentiate most between boys and girls in this regard.

Turning to the second measure of pupils' academic confidence, the mean scores for principals and teachers indicate a tendency to disagree that pupils (boys and girls) in single-sex classes are less inhibited showing what they know than pupils in mixed classes (Table 7.17). The means are similar in the case of boys and girls and again there is little variation between responding groups.

In one-way analysis of variance, significant differences between sex categories of school were found for principals' and teachers' perceptions of boys' willingness to demonstrate knowledge (Table 7.18). Scheffé post-hoc analyses show that the source of difference lies between mixed schools and some combination of other school categories. At principal and sixth-class levels, mixed schools differ significantly from all other sex categories of school. At senior-infant and third-class levels, the differences are significant between mixed schools and boys' schools. The direction of difference is similar in all cases. In mixed schools, principals and teachers disagree to a greater extent than their colleagues in other school types that 'boys in single-sex classes are less inhibited showing what they know than boys in mixed classes'.

Significant differences between sex categories of school are also found in principals' and teachers' perceptions of girls' willingness to demonstrate knowledge (Table 7.18). As in the comparison relating to boys, the differences occur between mixed schools and other school categories. Specifically, the differences lie between mixed schools and both categories of single-sex school at principal and sixth-class level; between mixed schools and both boys' schools and girls' schools with mixed infants at third-class level; and between boys' schools and both mixed schools and girls' schools with mixed infants at senior-infant level. In all cases, principals and teachers in mixed schools disagree to a greater extent than their colleagues in other school types that 'girls in single-sex classes are less inhibited showing what they know than girls in mixed classes'.

In a 2x2 factorial analysis of variance, the responses of male and female teachers at sixth-class level in mixed schools were compared for boys and girls. No statististically significant effects emerged from the analysis (Table 7.19).

Finally, the views of male and female principals on this issue taking into account sex category of school and pupil gender were examined in a 2x2x2 factorial analysis of variance. The results of the analysis yielded a significant main effect only in the case of sex category of school and no significant interaction effects (Table 7.20).

Participation in Discussion

Principals and teachers tend to disagree that pupils (both boys and girls) in single-sex classes are more likely to participate in discussion than pupils in mixed classes (Table 7.21). The level of disagreement is similar for boys and girls among principals and teachers at each of the grades examined.

Results of one-way analysis of variance indicate significant differences between schools with different sex compositions for all responding groups in their perceptions of boys and girls (Table 7.22). While, at senior-infant level, the differences between any pair of school types are not statistically significant, at principal, third-, and sixth-class levels significant differences occur between mixed schools and some combination of other school categories. In the case of boys, differences are found between mixed schools and each of the other three categories of school at principal and sixth-class levels and between mixed schools and girls' schools with mixed infants at third-class level. In the case of girls, mixed schools differ from both categories of single-sex school at principal level, from each of the other three sex categories of school at sixth-class level, and from boys' schools and girls' schools with mixed infants at third-class level.

The direction of difference is the same in all cases. Principals and teachers in mixed schools disagree to a greater extent than their colleagues in other school types that pupils in single-sex classes are more likely to participate in discussion than pupils in mixed classes.

In a 2x2 factorial analysis of variance, the responses of male and female teachers at sixth-class level in mixed schools were compared for boys and girls. The analysis yielded no statistically significant effects (Table 7.23).

Finally, the views of male and female principals on this issue taking into account sex category of school and pupil gender were examined in a 2x2x2 factorial

analysis of variance. Results of the analysis yielded a significant main effect only in the case of sex category of school and no significant interaction effects (Table 7.24).

Relations with the Opposite Sex

Principals and teachers tend to agree with the view that pupils in single-sex classes find it more difficult to relate to members of the opposite sex than pupils in mixed classes (Table 7.25). In fact, the means for each of the responding groups indicate a high level of agreement for pupils of both sexes. One-way analysis of variance yielded no significant differences between principals or teachers in different sex categories of school (Table 7.26).

In a 2x2 factorial analysis of variance, the responses of male and female teachers at sixth-class level in mixed schools were compared for boys and girls. No statistically significant effects emerged from the analysis (Table 7.27).

Finally, a 2x2x2 analysis of variance was carried out to examine male and female principals' views on this issue taking into account pupil gender and sex category of school (Table 7.28). The results revealed significant main effects of pupil gender (principals agree more for boys than for girls) and sex category of school (agreement is higher among principals in mixed schools than in single-sex schools) but not of principal gender. No statistically significant interactions involving gender of principal emerged from the analysis.

Discipline and Controllability

Principals and teachers tend to disagree with the view that pupils (boys and girls) in single-sex classes are easier to control than pupils in mixed classes (Table 7.29). The level of disagreement is similar among each of the responding groups and is higher for boys than for girls.

The results of one-way analysis of variance reveal significant differences between sex categories of school for boys and for girls (Table 7.30). Looking first at the results for boys, Scheffé post-hoc analyses show that the differences occur at principal and sixth-class levels. At principal level, the source of difference lies between mixed schools and girls' schools while, at sixth-class level, differences occur between teachers in mixed schools and both girls' schools and girls' schools with mixed infants. The direction of difference is the same in all cases. The tendency to disagree that 'boys in single-sex classes are easier to control than boys in mixed classes' is stronger in mixed schools.

The results for girls indicate statistically significant differences between sex categories of school at principal level and among teachers at senior-infant and sixth-class levels (Table 7.30). In the post-hoc analyses, differences between any pair of school types are not significant at senior-infant level. However, a significant difference was found between mixed schools and girls' schools at principal level and between mixed schools and each of the other three sex categories of school at sixth-class level. At both levels, the tendency to disagree that 'girls in single-sex classes are easier to control than girls in mixed classes' is stronger in mixed schools.

The responses of male and female teachers at sixth-class level in mixed schools were compared for boys and girls in a 2x2 factorial analysis of variance. The analysis did not yield statistically significant effects (Table 7.31).

Finally, in a 2x2x2 factorial analysis of variance, the views of male and female principals on this issue were examined taking into account pupil gender and sex category of school. Results indicate significant main effects of pupil gender and sex category of school but not of principal gender (Table 7.32). No significant interaction effects involving principal gender emerged from the analysis.

COMPARISONS OF OPPOSITE-SEX INFLUENCES IN MIXED SETTINGS

To complete this part of the study, teachers' perceptions of the effect of the opposite sex on the performance and interaction of boys and girls in mixed settings were examined. This issue has received attention in the literature on coeducation, particularly from feminists who take the view that the dominance of male pupils in classroom interaction is inimical to the best interests of girls. The analyses presented in this section involve comparisons of the responses of male and female teachers to four sets of matching statements for boys and girls and are based on data provided by sixth-class teachers in mixed schools. In the statements, the effects of the presence of boys on girls, and vice versa, are examined in relation to achievement levels, access to learning materials, participation in discussion, and willingness to demonstrate knowledge (APPENDIX B, Q16). Teachers indicated the extent to which they agreed with each statement on a scale of 1 to 5, low scores denoting agreement. A 2x2 factorial analysis of variance design was used to analyse their responses.

Looking at the results of the analyses, and specifically at the means for each pair of statements, it is clear that teachers chose to express strong disagreement with the view that mixed settings have an inhibiting effect on the interaction or performance of pupils (both boys and girls) (Table 7.33). This is true for each of the issues examined in the statements. Moreover, male and female teachers responded similarly. No statistically significant effects emerged from the analyses. The results suggest that teachers in mixed schools, both male and female, tend to perceive their own coeducational structure in a positive light for boys and girls.

CONCLUSION

The evidence presented in this chapter suggests that coeducation is preferred for boys and girls but particularly for boys. Support for single-sex education, to the extent that it exists, is reserved for girls. A second general finding is the tendency for staff in single-sex and mixed schools to support the gender composition of their own school organization. Thirdly, we may conclude that the views of teachers are largely

unaffected by their gender. Where differences in preferences for boys and girls occur, both male and female staff tend to agree about such differences. Thus, it would appear that whereas sex category of school is a major predictor of the views and preferences of staff, gender of teacher (though less true at principal level) is not.

The disadvantages of single-sex provision, compared to coeducation, are most keenly perceived in relation to boys' more limited access to 'female-preferred' subjects and the greater difficulty both boys and girls experience in relating to the opposite sex. In general, principals and teachers disagree that single-sex education confers any advantage on pupils (boys or girls) in terms of academic performance, confidence, willingness to demonstrate knowledge, or participation in discussion. Neither is the single-sex environment preferred for easier maintenance of classroom/ pupil control. In fact, greater access to 'male-preferred' subjects for girls is the only advantage attributed to single-sex education.

Significant differences between sex categories of school were found for most of the issues examined, though, in general, the differences are not indicative of major disagreement. Moreover, there is a high degree of consistency in the views of junior, middle, and senior staff within school types. While the views and preferences of principals and teachers for single-sex and coeducation largely reflect support for the gender composition of their own school organization, an exception occurs in girls' schools with mixed infants. In these schools, which cater mainly for girls, support is stronger for coeducation than for single-sex provision.

Data provided by teachers in mixed schools suggest that teacher gender is not an important influence on teachers' perceptions of the gender composition of school organizational structures. None of the comparisons of the effect of the opposite sex on boys and girls in mixed settings indicate that male and female teachers perceive this issue differently. Moreover, virtually all of the single-sex/ mixed class comparisons point towards similarities rather than differences between male and female teachers in mixed schools. However, while both genders agree that single-sex provision is

restrictive for boys in terms of access to 'female'preferred' subjects, female teachers (unlike their male colleagues) reject similar criticism of single-sex provision for girls.

The tendency for female principals to support single-sex provision for girls is also the main finding to emerge from the comparisons involving male and female principals. Moreover, this tendency is largely confined to female principals in single-sex schools and to issues of academic rather than social import. Support for single-sex provision is clearly reflected in matters concerning academic performance and confidence and access to 'male-preferred' subjects. Agreement between male and female principals is stronger in the case of boys. Male principals tend to reject single-sex provision for boys and their reservations are largely shared by their female counterparts. Unlike female principals, however, male principals appear to adopt a non-committal attitude about single-sex provision for girls.

CHAPTER EIGHT

GENDER AWARENESS IN SCHOOLS

In Chapter Eight, awareness of gender issues in primary-school settings is examined. Though not well explored in the literature, the available research suggests that even when there is a commitment to the principle of gender equality in schools, the gap between policy and practice may serve to impede the introduction of effective school-based reform (Adams, 1985; Pratt, 1985). In the survey, the topic was investigated from several points of view. First, an attempt was made to identify the contexts in which gender has been discussed in schools. Reports of actions taken following discussion are also considered. Second, awareness levels among parents, teachers, and pupils generally were explored. A third line of inquiry focussed on the extent to which support exists in schools for a review of practices relating to gender. On the assumption that interventions designed to promote awareness of gender issues must involve school management, this part of the survey relies to a large extent on the reports of school principals.

DISCUSSION ABOUT GENDER

Both principals and teachers were consulted about gender conversations in their schools. Principals were asked about the contexts in which discussion about gender equality had occured. The response options provided were: 'at a formal staff meeting', 'informally in the staffroom', 'with parents at a parent-teacher meeting', 'in a once-off review of school practices', 'in on-going review of school practices', and 'at pupil level'. An option catering for some 'other'/ unspecified context was also provided (APPENDIX A, Q8).

Frequency distributions for principals' responses show that gender equality had been discussed informally in the staffrooms of most schools (78.3%) (Table 8.1). The issue had been raised at a formal staff meeting in one-fifth of schools (21.4%) and with pupils in just over a quarter of schools (27.5%). In most cases, gender equality had not been discussed at parent-teacher meetings (90.7%); neither had the issue received attention in a review context, either on an on-going (84.1%) or once-off (91.7%) basis.

The responses of principals in schools with different gender compositions were compared using chi-square tests (Table 8.1). Results of the tests revealed significant differences between mixed schools and other school categories. Gender equality had been discussed with pupils in more than one-third of mixed schools (36.5%), compared to only 16.1% of boys' schools, 22.7% of girls' schools, and 20.7% of girls' schools with mixed infants. The issue had also been subject to on-going review in a higher proportion of mixed schools (22.2%) than of schools in other sex categories (6.7% of boys' schools, 12.0% of girls' schools, and 6.1% of girls' schools with mixed infants). While the findings suggest that discussion happens to a greater extent in mixed schools, the number of schools involved is small.

Chi-square tests were also used to compare the responses of male and female principals and to examine whether the responses of principals differed in relation to the length of their combined teaching and management experience. The results indicate that male and female principals do not differ in their reports of discussion about gender equality (Table 8.2). There is also little variation in the reports of principals with different lengths of service (Table 8.3). However, a higher proportion of less experienced principals (those with nine, or less than nine, years service) compared to their older/ more experienced counterparts, indicated that gender equality had been discussed in the context of on-going review. The finding suggests that younger/ less experienced principals are more aware of discussion about gender equality at staff level.

Contexts in which Gender and Teaching Materials were Discussed

Teachers were asked about the contexts in which discussion about gender-stereotypes in teaching materials (textbooks, worksheets, posters, and videotapes) had been discussed in their schools (APPENDIX B, Q18). The response options provided were: 'at a formal staff meeting', 'informally in the staffroom', 'with parents at a parent-teacher meeting', 'with pupils in your class', and 'other (please specify)'. The data were analysed separately for senior-infant, third-, and sixth-class teachers.

Looking at the frequency distributions for teachers at senior-infant level, it is clear that the only context in which gender-stereotypes and teaching materials were discussed in a majority of schools is informally in the staffroom (Table 8.4). Teachers in more than three-quarters of schools (78.2%) reported discussion in this context. In most schools, the issue had not been raised at a formal staff meeting (85.4%) or with parents (95.3%). Similar findings emerged from the data provided by third- and sixth-class teachers (Tables 8.5-6). Comparison of the data across grades indicates that discussion about gender-stereotypes is more likely with older pupils than with younger pupils. Whereas, at senior-infant level, teachers in less than one in five schools (18.1%) reported that they had discussed the issue with pupils, at third-class level the corresponding figure is 27.4% and at sixth-class level it is 39.6%.

The responses of teachers in different sex categories of school are similar (Tables 8.4-6). There is also little variation between teachers with different amounts of teaching experience (Table 8.7). The results of analyses involving chi-square tests did not reveal differences that are statistically significant in either case. When the responses of male and female sixth-class teachers were compared, a significant difference emerged from chi-square tests only in relation to discussion with pupils. A higher proportion of female teachers (45.7% compared to 33.8% of their male counterparts) indicated that they had discussed gender-stereotypes with pupils in their class (Table 8.8).

Teachers also indicated whether any action had resulted from discussion about gender and teaching materials (APPENDIX B, Q18). The frequency distribution shows that, in the great majority of schools, no action had been taken (Table 8.9). Teachers in more than four in five schools at each of the grades examined affirmed this position. Schools with different gender compositions do not vary in this regard.

Teachers who indicated that action had resulted from discussion were asked to describe, in their own words, the nature of the action (APPENDIX B, Q18). A content analysis performed on their responses produced a total of eight categories/ types of action: discussion with pupils in class; introduction of role play or reversal and task sharing; more emphasis on equal treatment of pupils (e.g., ensuring that girls and boys have equal access to sporting and craft activities); more emphasis on integration (e.g., in seating arrangements and in the school yard); adaptation of lesson content; introduction of new textbooks; and communication of complaints to publishers about school textbooks. The responses of teachers who indicated that awareness of gender issues had increased in the school but did not specify how this had been achieved were grouped separately in an 'unspecified' category (see Chapter Three for more detailed information on coding and analysis).

The frequency distribution shows that less than one-eighth of teachers (11.9%) in the responding sample (N=2,103) reported that action had been taken following discussion about gender and teaching materials (Table 8.10). Of these (N=251), a total of 74 (29.5%) implied that concern about gender was reflected in decisions regarding the replacement of textbooks, while a further 16.3% indicated that lesson content had been adapted in light of gender considerations. (It is, however, worth noting that these modifications were applied only in the case of English and Irish subject matter.) Smaller proportions of teachers indicated that increased awareness of gender issues was reflected in class discussion (13.5%), in activities involving role play/ reversal and task sharing (8.8%), and in a stronger emphasis on equality of treatment (11.5%). Virtually all of the remaining responses (14.6%) are in the 'unspecified' category.

153

Looking at the responses across sex categories of school, it is clear that the proportion of teachers reporting actions is highest in mixed schools (15.6%) and girls' schools with mixed infants (12.6%) and lowest in single-sex boys' (7.1%) and girls' (7.8%) schools (Table 8.10). However, teachers in girls' schools reported more textbook replacements than their colleagues in other sex categories of school. Moreover, some types of action were more frequently reported by teachers in both categories of single-sex school, while others were more frequently reported by teachers in mixed schools. Compared to mixed schools, higher proportions of teachers in boys' and girls' schools indicated that increased awareness of gender issues was reflected in class discussion and adaptation of lesson content. In mixed schools, however, it appears that awareness of gender issues is more likely to be emphasized in role play/ reversal and task sharing and in the implementation of equal treatment and integration strategies. Such strategies also tend to be emphasized by teachers in girls' schools with mixed infants. While teachers in girls' schools with mixed infants are also similar to their colleagues in mixed schools in the extent to which they report reliance on classroom discussion, they are more like teachers in single-sex schools in the amount of emphasis they place on adaptation of lesson content.

AWARENESS AMONG TEACHERS, PUPILS, AND PARENTS

Principals were asked about the extent to which they considered awareness of gender-related issues to be reflected in the attitudes and practice of teachers, in the attitudes and behaviour of pupils, and in the attitudes of parents (APPENDIX A, Q9). Responses were assigned the following values ('a lot' =1, 'some' =2, 'a little' =3, 'none =4', 'unsure' =5).

Mean scores obtained for principals' responses indicate that principals perceive awareness of gender issues to be high rather than low among each of the specified groups (Table 8.11). The highest levels of awareness are reflected in teacher attitudes

and practices. Awareness among pupils is lower than among teachers, but higher than among parents.

In one-way analysis of variance, the means for principals of schools with different gender compositions were compared. A significant difference between sex categories of school was found only in the case of teacher practice (Table 8.12). Scheffé post-hoc analyses revealed that the source of difference is between boys' schools and mixed schools. As might be expected, higher levels of awareness were indicated by principals in mixed schools.

The results of t-tests, in which the mean scores for male and female principals were compared, do not show differences which are statistically significant (Table 8.13). One-way analysis of variance, involving comparisons of means for principals with different lengths of service, also produced results which are not statistically significant (Table 8. 14).

SUPPORT FOR A SCHOOL REVIEW

Principals were asked about the proportion of staff members in their schools who, in their opinion, would be interested in carrying out a school-based review of gender-related practices. They responded by selecting one of the following options: 'all', 'most', 'some', 'a few', 'none', and 'unsure' (APPENDIX A, Q10).

The frequency distribution shows that responses are fairly evenly dispersed over the range of options provided (Table 8.15). In all, principals in less than two in five schools (39.9%) indicated that all or most staff members would be interested in participating in a gender review. A further 15.8% indicated that only some staff members would participate, while as many as one in five (19.8%) reported that they were unsure about staff interest. The remaining quartile of responses suggest very limited

155

support in schools for participation in a gender review. In 10.1% of schools, principals indicated that only a few staff members would participate, while, in as many as 84 schools (14.4% of the sample), principals were of the opinion that no member of staff would support this type of initiative.

The results of chi-square analyses revealed significant differences between sex categories of school (Table 8.15). In nearly half of the mixed schools (48.6%) in the sample, principals claimed that all or most staff members would be willing to participate in a gender review. This compares with one-third of boys' schools (33.5%) and a similar proportion of girls' schools with mixed infants (31.7%), and with just over a quarter of girls' schools (28.8%). There are no significant differences between male and female principals (Table 8.16) or between principals with different lengths of service (Table 8.17).

Finally, principals responded to a question on whether they themselves would be willing to support a gender review in their school. The response options provided were 'yes', 'no', and 'unsure' (APPENDIX A, Q10). The majority, almost two-thirds (65.2%), responded positively (Table 8.18). In one in five schools (19.9%), however, principals indicated that they were 'unsure', while the remainder (14.9%) responded negatively. There are no significant differences between principals in different sex categories of school (Table 8.18), between male and female principals (Table 8.19), or between principals with different lengths of service (Table 8.20).

CONCLUSION

Apart from informal discussion in staffrooms, it appears that conversations about gender are not commonplace in schools. According to most school principals, gender inequality had not been discussed with parents or pupils; neither had it been raised more formally in school-based reviews or staff meetings. While the issue had received more

attention in mixed schools than in single-sex schools (particularly at pupil level and in the context of on-going review), the number of schools involved is small. In general, neither principals' gender nor length of service were found to influence their perceptions of gender conversations. However, there are indications that younger/ less experienced principals are more aware of discussion about gender equality at staff level.

A similar picture emerges in relation to teachers' perceptions of conversations about gender roles and teaching materials. In most schools, teachers at senior-infant, third-, and sixth-class levels claimed that gender issues in teaching materials had been raised in informal discussion in staffrooms but not formally at a staff meeting or with parents. However, and presumably unbeknownst to principals, discussion between teachers and pupils was reported in a sizeable number of schools, particularly at sixth-class level. There are no differences between teachers in different sex categories of school or between teachers with different amounts of teaching experience in their perceptions of this issue. However, a higher proportion of female teachers than of male teachers reported discussion with pupils.

There has been little or no action in schools following discussion about the portrayal of gender roles in teaching materials. This situation was reported by teachers in more than four in five schools and is true of schools in each sex category. At individual teacher level also, it would seem that little has been done to introduce strategies to improve gender bias in classroom or sporting activities. Less than one-eighth of teachers indicated otherwise. Of these, most have concentrated on replacing textbooks and adapting lesson content in Irish and English. Some variations emerged in the strategies favoured by teachers in different sex categories of school. While in single-sex schools teachers reported more emphasis on influencing pupils through class discussion and adaptation of lesson content, in mixed schools attempts to increase awareness of gender issues have tended to involve role play/ reversal and task sharing and the implementation of equal treatment and integration strategies.

157

School principals tend to be positive about awareness levels of gender issues among teachers, parents, and pupils, but particularly among teachers. Male and female principals and principals with different lengths of service are similar in this regard. Reports from mixed schools were more positive than from single-sex schools, but only in relation to teacher practice.

There was some reluctance on the part of principals to commit staff members to a school-based review of practice relating to gender. Less than two in five indicated that all or most staff members would support an initiative of this type. Feedback did not vary according to gender or length of service, but was more positive from mixed schools than from single-sex schools. Principals' were, however, more forthcoming about their own commitment, with two-thirds indicating personal support for a school-based review. This response did not vary by gender, by sex category of school, or by length of service.

CHAPTER NINE

CONCLUSIONS

The study on which this thesis is based was carried out in the knowledge that most of the concern about gender issues has been directed at later stages in the life cycle and in the belief that changing or broadening gender roles has to begin in early childhood. In focussing on primary schools, it was recognized that what children learn or absorb in these environments will affect not only later educational and vocational choice; it will also affect judgment about what are considered to be appropriate roles and activities for boys and girls and for men and women.

To highlight differences in the treatment of girls and boys in primary schools in Ireland, a survey of more than 600 primary schools was conducted by postal questionnaire. In the survey, which involved principals and teachers at three points in the primary cycle (senior-infant, third, and sixth class), information was obtained on educational provision, classroom practice, and teachers' perceptions of pupils. The data were analysed with a view to examining the treatment of girls and boys in different sex categories of school (single-sex boys', girls', girls' schools with mixed infants, and mixed schools). A second line of inquiry focussed on the extent to which treatment varied according to teacher gender and principal gender.

GENDER IN THE STRUCTURES OF PRIMARY SCHOOLS

Disparities in the representation of males and females in the teaching profession (in favour of females) and in the position of school principal (in favour of males) had been documented before the survey was carried out. The survey confirms this situation as well as showing that women are over-represented in the junior grades of schools and under-represented in the senior grades. Thus, a number of messages may be conveyed to pupils by the gender composition of staffing structures in primary schools.

First, pupils may learn that primary teaching is a career for women rather than for men. The proportion of primary teachers who are women (there are now more than three times as many women as men) continues to rise in accordance with trends observed in other western developed countries. A second message which pupils may receive is that individuals with the most authority (principals) tend to be men. While in the past ten years or so there has been an increase in the proportion of primary-school principalships held by women, from one in five to more than two in five, many pupils still may not have much opportunity to observe women in the role of school manager. Similar restrictions arise from the fact that women are substantially outnumbered in the primary-school inspectorate. A third message about gender and school structures which may be transmitted to pupils is that women teach in junior grades, where nurturance demands are greatest, while men teach pupils who are at a more advanced stage of learning. The effects of this imbalance may be most keenly felt in boys' schools and in mixed schools where men are disproportionately represented in the senior grades. A different kind of imbalance occurs in girls' schools and girls' schools with mixed infants where pupils tend to be taught by all-female staffs.

Reflecting the Department of Education's coeducation policy, the experience of the majority of pupils is that of a mixed-sex class. More than three-quarters of primary schools in Ireland are mixed, while just over two-thirds of pupils are in mixed classes. Teachers and principals who took part in the survey, while tending to support the gender composition of their own schools, are generally in favour of coeducation, particularly for boys. Concerns about male dominance in the classroom and its impact on girls' performance were not revealed in the findings which showed no adverse effects of coeducation for girls or boys. At the same time, it should be noted that, in stating their views, principals and teachers may not have been aware of the extent of sex-stereotyping in mixed schools.

The main disadvantages of single-sex provision were identified as boys' more limited access to 'female-preferred' subjects and the greater difficulty both boys and girls experience in relating to the opposite sex. Further, there is evidence that

teachers and principals of both sexes are united in their reservations about single-sex provision for boys. The same cannot be said in relation to girls who, from an academic point of view, were perceived as standing to gain from segregated education. While female principals of single-sex girls' schools are the main advocates of this position, they were supported to some extent by women teachers in mixed schools. Male principals and teachers are, by contrast, non-commital about the advantages of single-sex schools for girls.

PROVISION IN SCHOOLS

The survey provides little evidence that pupils' experiences of the formal primary curriculum are unduly affected by the gender composition of schools. Curricular provision was not found to vary between boys', girls', and mixed schools, at least as far as time allocation to individual subjects is concerned. There is only one exception to this: girls' schools (and girls' schools with mixed infants) devote more time to art and craft activities than boys' schools or mixed schools. The finding is consistent with the diminution of gender differences in official curricular time for school subjects observed in the educational systems of other western countries (Ramirez & Cha, 1990). Even so, the virtual absence of such differences does not mean that, in the transmission of the curriculum, there is not ample opportunity for subtle as well as blatant gender differentiation by subject. As evidence from the survey regarding the 'hidden' curriculum of schools also suggests, teachers may communicate to boys and girls their higher expectations for boys in some subjects (mathematics and P.E.) and for girls in others (Irish, English, music, and art and craft).

The survey revealed that gender differentiation is common in the provision of extra-curricular activities. Overall, provision in mixed schools is better than in single-sex schools. While, in mixed schools, some segregation of the sexes was found in the take-up of homecraft activities and in what are traditionally regarded as male and female sporting pursuits, the differences which boys and girls experience are much fewer than in single-sex schools. In boys' schools, there is more

opportunity to participate in team sports, but girls' schools are more likely to provide cookery, nature study, sex education, dance, drama, music, and needlework. Similar findings exist for second-level schools in Ireland with provision in the arts reported as better in girls' schools than in boys' schools (Lynch, 1989). The question may be asked if, in these experiences, the foundations are being laid at primary school of the knowledge, skills, and attitudes that will lead girls at post-primary school to choose less specialized courses and ones that have been described as 'accomplishment' subjects (e.g., art, home-economics, music) and boys to pursue a narrow but vocationally oriented curriculum.

Differential access by male and female pupils to physical and/ or technical resources may also constitute a form of gender bias in educational provision. Evidence from the survey suggests that restrictions on the range of play material that is available to pupils in primary schools in Ireland vary in accordance with the gender composition of schools. While a variety of play activities is provided for senior-infant classes in all sex categories of school, provision is better in mixed schools. Fewer girls' schools provide material for 'boy-preferred' activities (cars, lego, sticklebricks) and fewer boys' schools provide material for 'girl-preferred' activities (dolls, soft toys, teasets, a home corner). Thus, it would appear that, in boys' schools, there is less opportunity to engage in classroom play activity that does not have direct spin-offs for progress at school, while the opposite is true of girls' schools (Burn, 1989).

Computer technology is another resource in school settings which may have implications for gender equity. Availability is limited in primary schools in Ireland, as in most other European countries, (Galton, 1989). In fact, less than half the schools surveyed provide computer facilities. The survey data also show that provision varies in relation to the gender composition (and size) of school organizations. Reflecting their smaller size, mixed schools provide fewer work stations than single-sex schools. Provision is best in girls' schools with mixed infants and somewhat better in boys' schools than in girls' schools. Feedback from teachers in other countries indicates that, in addition to hardware provision, the time

162

allocated to male and female pupils for interaction with computer technology requires careful monitoring. In mixed schools, a common observation is that girls are less successful than boys in gaining their fair share of hands-on experience (Hoyles, 1988, Lewis, 1989).

CLASSROOM PRACTICE AND TEACHERS' PERCEPTIONS OF PUPILS

Several major conclusions emerge from the survey data relating to classroom practices and teachers' perceptions of pupils' learning and behavioural characteristics. The first relates to the extent of sex-stereotyping that exists in schools. There is gender bias in the allocation of tasks to pupils. Girls tend to perform nurturing tasks (e.g., to mind younger children and to water plants and flowers) while boys tend to perform tasks involving physical strength (e.g., carrying classroom furniture and emptying the bin). There is more stereotyping in perceptions of boys' than of girls' subject preferences with teachers tending towards the view that boys show little interest in subjects associated with girls. Reflecting a common finding that boys experience greater learning difficulties than girls, boys in the survey are perceived to need assistance more frequently than girls with Irish, English, music, and art and craft. Girls, on the other hand, are perceived to need assistance more frequently with mathematics and P.E. Boys are considered to be more physically active and girls more creative, communicative, and competitive. While pupils of both sexes are frequently associated with positive classroom behaviours, boys are reported to be more troublesome. Compared to girls, boys are perceived to throw objects, fight, interfere with other pupils' learning, and to be insolent, while girls are perceived to be helpful, attentive, obedient, and conscientious. Not surprisingly, disciplinary practices are used more frequently with boys. Boys have privileges withdrawn more often than girls; they are also assigned extra homework, excluded from activities, sent to the headteacher, and reported to parents more often.

With a few exceptions, the differences reflect gender stereotypes. Overall, girls fit more closely the stereotype of the 'good pupil' and boys the stereotype of the 'difficult pupil'. While teachers' reports may not accurately represent the behaviour

of boys and of girls, observation studies suggest that they do (see, for example, Hartley, 1978; Morgan & Dunn, 1988; Wheldall & Merrett, 1989) There is additional evidence, also from research conducted in other countries, that teachers' differential expectations for pupils, based on stereotypes, can serve to reinforce the differences in behaviour and scholastic performance which they observe in girls and boys (Brophy, 1985; Dweck et al, 1978).

A second major conclusion from the survey is that the range of differences perceived by teachers between boys and girls increases as pupils get older. In some cases, there is little or no gender differentiation in teachers' observations at senior-infant level. However, as pupils progress through the school, gender differentiation increases and is quite well established for many characteristics by third class. Its development in the primary cycle is clearly marked in teachers' task allocation practices and in their use of disciplinary procedures.

A third major conclusion from the survey, is that stereotyping is more common in mixed schools than in single-sex schools. With a few exceptions, teachers in mixed schools rate boys and girls differently on practically all the characteristics they were asked about. Further, they are conscious of the differentiation at an earlier stage, sometimes reporting differences at senior-infant level when teachers in single-sex schools do not. Differences between boys and girls in the tasks they are assigned and in how they are disciplined are greater than those reported for male and female pupils in single-sex schools. Teachers in mixed schools, compared to their peers in single-sex schools, are more polarized in their perceptions of boys' and girls' classroom behaviour. They consistently associate some learning approaches with girls and others with boys and also differentiate between the genders in their perceptions of pupils' need for help with school subjects.

Again, the survey data can tell us little about the extent to which boys and girls actually behave differently in mixed and in single-sex settings. Further research would be required to provide information on this issue. It does seem, however, that

the findings can be taken to indicate that teachers' consciousness of gender differences are heightened when they see boys and girls together in class. On a positive note, the survey also provides evidence that increased sex-stereotyping in classroom practice is not inevitable in mixed settings. Compared to senior-infant boys and girls in mixed schools, who are treated and perceived differently in several ways, fewer gender differences are found in girls' schools with mixed infants. This is true especially for practices relating to task allocation and discipline. Also, while, as in mixed schools, teachers perceive several differences in the classroom behaviour of girls and boys, the differences observed in girls' schools with mixed infants do not indicate as many negative views of boys.

The fourth major conclusion from the survey is that teachers' expectations are higher in single-sex schools than in mixed schools. More is expected of pupils' academic performance. Both boys and girls, when compared to pupils of their own sex in mixed schools, are more often perceived as requiring additional help with school subjects. The classroom conduct of pupils (both boys and girls) in single-sex schools is more negatively perceived than that of their same-sex peers in mixed schools. Pupils (again both girls and boys) in single-sex schools are disciplined more often than their same-sex peers in mixed schools. Teachers in higher proportions of single-sex schools than of mixed schools report that pupils are expected to wear sports gear during P.E. instruction. These standards are imposed to a greater extent in girls' schools. Higher expectations for girls in single-sex schools are also reflected in the greater frequency with which they are allocated classroom tasks compared to their same-sex peers in mixed schools. Overall, it is apparent that stricter regimens apply in single-sex settings. The finding is significant in view of the fact that pupils and ex-pupils report happier experiences in mixed schools (Dale, 1969; 1971; 1974; Feather, 1974; Hannan & Shortall, 1991; Hannan et al., 1996; Schneider & Coutts, 1982; Schneider et al., 1988; Stables, 1990).

Does Gender of Teacher Make a Difference?

Finally, there is little evidence from the survey that gender of teacher is an important factor in how teachers perceive pupils either from an academic or behavioural point of view. Consistent with the findings of classroom interaction studies, teachers of both sexes largely agree about differences in the characteristics of male and female pupils (Brophy, 1985). There are only a few exceptions to this. Perhaps reflecting their own 'strengths', higher proportions of female teachers report that pupils (girls and boys) are communicative, while higher proportions of male teachers perceive girls to be weak/ needing additional help in the area of physical education. Male teachers are also more inclined to report negative aspects of pupils' classroom behaviour, though they do not differ from their female colleagues in their use of disciplinary procedures. In fact, the only consistent differences in the approaches of male and female teachers found in the survey occur in relation to task allocation practices. Female teachers in assigning more tasks to pupils, both girls and boys, appear to adopt a more directive approach in classroom management. A tendency to 'shield' girls from tasks traditionally associated with males was apparent in male teachers.

WHAT SCHOOLS CAN DO TO PROMOTE GENDER EQUITY

The survey data underline the importance of developing equality initiatives in schools. Anomalies in the gender composition of school staffing structures which underpin all aspects of educational provision require immediate attention. While problems of gender imbalance in teaching are largely beyond the control of schools, there are some measures which schools could take to minimise their effects. First, a greater knowledge of the procedures specified by the Department of Education for appointment may encourage more women to apply for principalships. And second, principals should ensure that, where possible, there is a balance in the assignment of male and female teachers to junior and senior grades.

The findings of the survey alert us to the different forms that sex-stereotyping assumes in different types of school organization. While disparities in some aspects of provision for girls and boys are greater in single-sex schools, sex-stereotyping in classroom practices and in teachers' perceptions of pupils is more prevalent in mixed schools. Accordingly, it should be recognized that the starting point for intervention in a mixed school may not be the same as in a single-sex school.

In single-sex schools, attempts to address equality of provision will have to take account of the greater emphasis in girls' schools on artistic/ creative pursuits, nature study, and sex education, and the much higher profile of sporting activities in boys' schools. While such activities may not count for very much in children's overall experiences of primary school, nevertheless, patterns of behaviour whereby girls apply their energies to several areas of interest and boys concentrate on relatively few appear to be quite well established by the time pupils reach third class.

The structuring of educational opportunities without due regard for balance in the experiences of girls and boys at primary level is problematic in the long-term. Apart from anything else, a gender-differentiated approach in primary-school provision may contribute to a situation observed in single-sex second-level schools in which boys tend to follow more specialized academic curricula and girls tend to pursue a broad curriculum which includes several 'accomplishment' subjects (Breen & Hannan, 1987). To the extent that this is true, it is important to monitor gender differentiation at primary level even when it occurs at the periphery of school activity. In practical terms, teachers (and parents) need to ensure that gender is not the only or even the main factor determining availability of, and access to, provision.

In addition to weighing up the relative merits of the broader education which girls apparently receive (team sports excepted) compared to the narrower focus of provision for boys, single-sex schools will also need to be sensitive to how gender imbalances in their staffing structures may affect or limit pupils' experiences at primary school. In particular, the extent to which the concentration of all female teachers in girls' schools and of male teachers in the senior grades of boys' schools

may be related to the range and emphasis of provision that is typically found in both types of school merits close attention. In the final analysis, attempts to broaden provision in single-sex schools, particularly in boys' schools, may involve compensating for imbalances in the male and female representation of teachers both within and between schools. Towards this end, neighbouring schools may wish to consider sharing their resources including personnel and expertise.

In mixed schools, which the majority of pupils attend, efforts to eliminate gender inequality may need to be addressed as much at classroom level as at school level. The main issue for consideration concerns the extent to which differences in the ways boys and girls are perceived and treated by their teachers consistently reflect traditional sex-role expectations. Action programmes to eliminate these differences may involve in-service training in which the implications of gender-differentiated treatment and expectations for academic achievement and personal development can be explored by teachers. In view of concerns about negative consequences of sex-stereotyping for the educational development of girls (though girls are now outperforming boys in most subjects), special consideration of the effects of current practice on girls in mixed schools would seem to be warranted.

Finally, the increase in sex-stereotyping as pupils progress through the primary cycle that has been found in both single-sex and mixed schools should be taken into account in designing school-based gender equality initiatives. Concentrating resources on the elimination of sex-stereotyping from educational provision and practice in the senior grades of primary schooling would appear to have a number of benefits. First, this is the time when children begin to choose subjects for secondary education, a process that tends to be highly susceptible to gender influences. And secondly, the findings of recent research suggest that pre-adolescent children, given an environment in which gender cues are reduced, are less rigid than younger children both in their application and adoption of stereotypes (Serbin, Powlishta, & Gulko, 1993). Consequently, efforts to encourage flexibility towards the end of primary schooling rather than in the junior and middle grades may bring greater rewards.

Although stereotyping is common in schools, consciousness of problems that may be associated with it does not seem very strong. We know that conversations about gender occur infrequently in schools. Informal discussion among teachers in the staffroom is the only context in which gender equality was raised as an issue in the majority of schools. Conversations about gender with pupils were also reported in a sizeable minority of schools, though mainly by female teachers at sixth-class level. While discussion happened in a greater number of contexts in mixed schools than in single-sex schools, the number of schools involved is small. Further, apart from some replacement of textbooks and adaptation of lesson content in Irish and English, little or no action has been taken in schools to correct gender imbalances. This situation was reported by teachers in more than four in five schools and is true of schools in each sex category.

Even so, school principals are positive about awareness levels of gender issues among teachers, pupils, and parents. While the majority indicated their own personal support for a review of practice in their school, most were not prepared to commit other staff members to this process. However, even if teachers are not in favour of a formal school review, principals should endeavour to at least ensure that issues relating to gender are discussed from time to time at staff level, with parents, and with pupils.

In considering action programmes to deal with problems of inequality, it should be recognized that teachers' attitudes towards coeducation are positive. Further, they may not be aware of the stereotyped nature of their perceptions and reported treatment of pupils. Neither may they be conscious of the implications for pupils of differential treatment on the basis of sex. Thus, before committing themselves to action in dealing with gender inequalities, teachers and principals will need more information about their nature and how they might affect pupils.

Some of the results of the present study have already found their way into schools and have provided principals and teachers with new insights about the

treatment of girls and boys in schools with different gender compositions (Lewis & Kellaghan, 1993). Due to space constraints in the questionnaires, the picture remains unfinished, however. Homework and project assignments, school outings, and sports days are just a few of the issues which merit consideration in future attempts to increase awareness about how school experience may be contributing to the development of divisions between the sexes.

In further investigation, more observation rather than survey research is required -- a task which is best accomplished by those who work in schools and who are in a position to review practice over time. Teachers especially are well placed to identify for themselves the ways in which boys and girls are treated differently simply because they are boys and girls rather than because of their individual needs. They need support to achieve this. It is hoped that the research study presented for this thesis may be of assistance to teachers and to all who are committed to establishing and maintaining the principle of gender equality in our schools.

APPENDIX A

Principals' Questionnaire

1. Are you:

   Male ☐ 1   Female ☐ 2

2. How many years teaching experience do you have as a National School teacher? (Please include the number of years you have been Principal.)

   Years ☐

3. How many teachers in your school are male and how many are female? (For each grade level write in the number of teachers who are male and/or the number who are female.)

Grade level	Male	Female
Junior infants		
Senior infants		
First class		
Second class		
Third class		
Fourth class		
Fifth class		
Sixth class		

4. Do pupils in your school have access to computer facilities?

   Yes ☐ 1   No ☐ 2

   If you indicated 'yes', please write in the number of individual workstations available to pupils.

   ☐

5. To what extent do you agree that co-education benefits boys and girls at primary school? (*Answer first for boys and then for girls; tick one box in each column.*)

	Boys	Girls
Strongly agree	☐ 1	☐ 1
Agree	☐ 2	☐ 2
Unsure	☐ 3	☐ 3
Disagree	☐ 4	☐ 4
Strongly disagree	☐ 5	☐ 5

6. To what extent do you agree that single-sex education benefits boys and girls at primary school? (*Answer first for boys and then for girls; tick one box in each column.*)

	Boys	Girls
Strongly agree	☐ 1	☐ 1
Agree	☐ 2	☐ 2
Unsure	☐ 3	☐ 3
Disagree	☐ 4	☐ 4
Strongly disagree	☐ 5	☐ 5

7. The following are statements which sometimes have been made about boys and girls. Please read each one and indicate the extent to which you agree with it.

Statement	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly disagree 5
Boys show little interest in subject areas which are often associated with girls (e.g., cooking, sewing)	☐	☐	☐	☐	☐
Girls show little interest in subject areas which are often associated with boys (e.g., science, computers)	☐	☐	☐	☐	☐
Boys in single-sex classes are less likely than boys in mixed classes to have access to subject areas often associated with girls (e.g., cooking, sewing)	☐	☐	☐	☐	☐
Girls in single-sex classes are less likely than girls in mixed classes to have access to subject areas often associated with boys (e.g., science, computers)	☐	☐	☐	☐	☐
Boys do better academically in single-sex classes than in mixed classes	☐	☐	☐	☐	☐
Girls do better academically in single-sex classes than in mixed classes	☐	☐	☐	☐	☐
Boys in single-sex classes are more likely to participate in discussion than boys in mixed classes	☐	☐	☐	☐	☐
Girls in single-sex classes are more likely to participate in discussion than girls in mixed classes	☐	☐	☐	☐	☐
Boys in single-sex classes are less confident academically than boys in mixed classes	☐	☐	☐	☐	☐
Girls in single-sex classes are less confident academically than girls in mixed classes	☐	☐	☐	☐	☐
Boys in single-sex classes are less inhibited showing what they know than boys in mixed classes	☐	☐	☐	☐	☐
Girls in single-sex classes are less inhibited showing what they know than girls in mixed classes	☐	☐	☐	☐	☐
Boys in single-sex classes find it more difficult to relate to girls than boys in mixed classes	☐	☐	☐	☐	☐
Girls in single-sex classes find it more difficult to relate to boys than girls in mixed classes	☐	☐	☐	☐	☐
Boys in single-sex classes are easier to control than boys in mixed classes	☐	☐	☐	☐	☐
Girls in single-sex classes are easier to control than girls in mixed classes	☐	☐	☐	☐	☐

8. Has the issue of gender equality in primary school been discussed in any of the following contexts in your school? *(Tick all that apply)*.

At a formal staff meeting	☐	1
Informally in the staff room	☐	2
With parents at a parent-teacher meeting	☐	3
In a once-off review of school practices	☐	4
In an on-going review of school practices	☐	5
At pupil level	☐	6
Other (Please specify)	☐	7

_____

_____

9. To what extent do you think that awareness of gender-related issues is reflected in each of the following? *(Tick one box on each line.)*

	A lot 1	Some 2	A little 3	None 4	Unsure 5
Teacher attitudes	☐	☐	☐	☐	☐
Teacher practice	☐	☐	☐	☐	☐
Pupil attitudes	☐	☐	☐	☐	☐
Pupil behaviour	☐	☐	☐	☐	☐
Parental attitudes	☐	☐	☐	☐	☐

10. In your opinion, how many staff members would be interested in carrying out a review of gender-related practices in your school? *(Tick one box; please answer whether or not such a review has already been undertaken.)*

All 1	Most 2	Some 3	A few 4	None 5	Unsure 6
☐	☐	☐	☐	☐	☐

Would you, as Principal, support such a review?

Yes ☐ 1   No ☐ 2   Unsure ☐ 3

APPENDIX B

Questions Addressed to Teachers

All questions from the survey forms completed by teachers are listed below. The forms in which each question was included are indicated in parentheses (e.g., all; 1B, etc.).[1]

1. How many years teaching experience do you have as a National School teacher? (All)

Years ❏

2. Are you: (All)　　　　Male　❏ 1　　　　Female　❏ 2

3. When time has been deducted for roll taking, and morning and lunch breaks each day, the number of teaching hours available each week is approximately 16. In a typical week (use last week as your reference unless it was in some way unusual) estimate as accurately as you can how many hours (to the nearest half hour) pupils in your class spent at each of the following subjects: (All except*)

Subject	No. of hours
Irish	❏
Mathematics	❏
Reading	❏
Writing	❏
Social and Environmental Studies	❏
*Free Play (1B 1G 1M only)	❏
P.E.	❏
Music	❏
Art and Craft	❏
Religion	❏
*Listening to stories (1B 1G 1M only)	❏

4. To what extent do you agree that each of the following adjectives is an accurate description of the learning approaches typically adopted by senior-infant [third-class/sixth-class] pupils? *(Tick one box on each line)* (1B, 1G, 3B, 3G, 6B, 6G)

Approach to learning	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly disagree 5
Physically active (using physical space for classwork)	❏	❏	❏	❏	❏
Collaborative (working with classmates)	❏	❏	❏	❏	❏
Creative (showing imagination)	❏	❏	❏	❏	❏
Competitive (keen to do better than other pupils)	❏	❏	❏	❏	❏
Questioning (asking teacher questions)	❏	❏	❏	❏	❏
Problem-solving (applying principles to concrete situations)	❏	❏	❏	❏	❏
Independent (working alone)	❏	❏	❏	❏	❏
Communicative (talking about work with classmates)	❏	❏	❏	❏	❏

---

[1] Forms 1B 1G 1M : Senior-infant teachers: boys', girls', and mixed schools
　　　 3B 3G 3M : Third-class teachers: boys', girls', and mixed schools
　　　 6B 6G 6M : Sixth-class teachers: boys', girls', and mixed schools

176

To what extent do you agree that each of the following adjectives is an accurate description of the learning approaches typically adopted by senior-infant [third-class/sixth-class] pupils? *(Answer first for boys and then for girls; tick one box on each line).* (1M 3M 6M)

Approach to learning	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly disagree 5
BOYS:					
Physically active (using physical space for classwork)	❏	❏	❏	❏	❏
Collaborative (working with classmates)	❏	❏	❏	❏	❏
Creative (showing imagination)	❏	❏	❏	❏	❏
Competitive (keen to do better than other pupils)	❏	❏	❏	❏	❏
Questioning (asking teacher questions)	❏	❏	❏	❏	❏
Problem-solving (applying principles to concrete situations)	❏	❏	❏	❏	❏
Independent (working alone)	❏	❏	❏	❏	❏
Communicative (talking about work with classmates)	❏	❏	❏	❏	❏
GIRLS:					
Physically active (using physical space for classwork)	❏	❏	❏	❏	❏
Collaborative (working with classmates)	❏	❏	❏	❏	❏
Creative (showing imagination)	❏	❏	❏	❏	❏
Competitive (keen to do better than other pupils)	❏	❏	❏	❏	❏
Questioning (asking teacher questions)	❏	❏	❏	❏	❏
Problem-solving (applying principles to concrete situations)	❏	❏	❏	❏	❏
Independent	❏	❏	❏	❏	❏
Communicative (talking about work with classmates)	❏	❏	❏	❏	❏

5. In your opinion, do senior-infant [third-class/sixth-class] pupils tend to need extra help in the following subject areas more than in others? *(Answer first for boys and then for girls; tick all the subject areas that pupils need extra help in).* (1M 3M 6M)

BOYS:		GIRLS:	
Irish	❏	Irish	❏
Mathematics	❏	Mathematics	❏
Reading) English (3M 6M)	❏	Reading) English (3M 6M)	❏
Writing)	❏	Writing)	❏
Social and Environmental Studies	❏	Social and Environmental Studies	❏
Free Play (1M only)	❏	Free Play (1M only)	❏
P.E.	❏	P.E.	❏
Music	❏	Music	❏
Art and Craft	❏	Art and Craft	❏

In your opinion, do senior-infant [third-class/sixth-class] pupils tend to need extra help in the following subject areas more than in others? *(Tick all the subject areas that pupils need extra help in).* (1B 1G 3B 3G 6B 6G)

Irish	❏
Mathematics	❏
Reading) English (3B 3G 6B 6G)	❏
Writing)	❏
Social and Environmental Studies	❏
Free Play (1B 1G only)	❏
P.E.	❏
Music	❏
Art and Craft	❏

6. To what extent have you observed each of the following characteristics in senior-infant [third-class/sixth-class] pupils? *(Tick one box for each characteristic)* (1B 1G 3B 3G 6B 6G)

Behavioural characteristic	Frequently 1	Sometimes 2	Rarely 3	Never 4
Attentiveness	❏	❏	❏	❏
Insolence	❏	❏	❏	❏
Helpfulness	❏	❏	❏	❏
Fighting	❏	❏	❏	❏
Obedience	❏	❏	❏	❏
Excessive talk	❏	❏	❏	❏
Object throwing	❏	❏	❏	❏
'Telling tales'	❏	❏	❏	❏
Interfering with other pupils' learning	❏	❏	❏	❏
Resentment of correction	❏	❏	❏	❏
Heedlessness	❏	❏	❏	❏
Day dreaming	❏	❏	❏	❏
Conscientiousness	❏	❏	❏	❏

To what extent have you observed each of the following characteristics in senior-infant [third-class/sixth-class] pupils? *(Answer first for boys and then for girls; tick one box for each characteristic)* (1M 3M 6M)

Behavioural characteristic	Frequently 1	Sometimes 2	Rarely 3	Never 4
BOYS:				
Attentiveness	❏	❏	❏	❏
Insolence	❏	❏	❏	❏
Helpfulness	❏	❏	❏	❏
Fighting	❏	❏	❏	❏
Obedience	❏	❏	❏	❏
Excessive talk	❏	❏	❏	❏
Object throwing	❏	❏	❏	❏
'Telling tales'	❏	❏	❏	❏
Interfering with other pupils' learning	❏	❏	❏	❏
Resentment of correction	❏	❏	❏	❏
Heedlessness	❏	❏	❏	❏
Day dreaming	❏	❏	❏	❏
Conscientiousness	❏	❏	❏	❏

GIRLS:

Attentiveness	❏	❏	❏	❏
Insolence	❏	❏	❏	❏
Helpfulness	❏	❏	❏	❏
Fighting	❏	❏	❏	❏
Obedience	❏	❏	❏	❏
Excessive talk	❏	❏	❏	❏
Object throwing	❏	❏	❏	❏
'Telling tales'	❏	❏	❏	❏
Interfering with other pupils' learning	❏	❏	❏	❏
Resentment of correction	❏	❏	❏	❏
Heedlessness	❏	❏	❏	❏
Day dreaming	❏	❏	❏	❏
Conscientiousness	❏	❏	❏	❏

7. To what extent do you rely on each of the following types of action to secure co-operation from pupils?
(Tick one box for each action) (1B 1G 3B 3G 6B 6G)

Action	Frequently 1	Sometimes 2	Rarely 3	Never 4
Use verbal reproof	❏	❏	❏	❏
Assign extra homework (3B 3G 6B 6G only)	❏	❏	❏	❏
Withdraw privileges	❏	❏	❏	❏
Put standing	❏	❏	❏	❏
Exclude from activities	❏	❏	❏	❏
Send out of room	❏	❏	❏	❏
Send to headteacher	❏	❏	❏	❏
Send letter home	❏	❏	❏	❏
Send pupil home (3B 3G 6B 6G only)	❏	❏	❏	❏
Inform parents at parent-teacher meeting	❏	❏	❏	❏

To what extent do you rely on each of the following types of action to secure co-operation from pupils?
(Answer first for boys and then for girls; tick one box for each action) (1M 3M 6M)

Action	Frequently 1	Sometimes 2	Rarely 3	Never 4
BOYS:				
Use verbal reproof	❏	❏	❏	❏
Assign extra homework (3M 6M only)	❏	❏	❏	❏
Withdraw privileges	❏	❏	❏	❏
Put standing	❏	❏	❏	❏
Exclude from activities	❏	❏	❏	❏
Send out of room	❏	❏	❏	❏
Send to headteacher	❏	❏	❏	❏
Send letter home	❏	❏	❏	❏
Send pupil home (3M 6M only)	❏	❏	❏	❏
Inform parents at parent-teacher meeting	❏	❏	❏	❏
GIRLS:				
Use verbal reproof	❏	❏	❏	❏
Assign extra homework (3M 6M only)	❏	❏	❏	❏
Withdraw privileges	❏	❏	❏	❏
Put standing	❏	❏	❏	❏
Exclude from activities	❏	❏	❏	❏
Send out of room	❏	❏	❏	❏
Send to headteacher	❏	❏	❏	❏
Send letter home	❏	❏	❏	❏
Send pupil home (3M 6M only)	❏	❏	❏	❏
Inform parents at parent-teacher meeting	❏	❏	❏	❏

8. Please indicate how often each of the following tasks is carried out by pupils in your class.
   (Tick one box for each task) (1B 1G 3B 3G 6B 6G)

Task	Frequently 1	Sometimes 2	Rarely 3	Never 4	Task does not arise 5
Empty the bin	❑	❑	❑	❑	❑
Clean the blackboard	❑	❑	❑	❑	❑
Tidy up the classroom	❑	❑	❑	❑	❑
Carry chairs/tables	❑	❑	❑	❑	❑
Water plants/flowers	❑	❑	❑	❑	❑
Look after classroom pets	❑	❑	❑	❑	❑
Mind children in junior classes	❑	❑	❑	❑	❑
Take messages to other parts of the school	❑	❑	❑	❑	❑
Pick up litter in the school yard	❑	❑	❑	❑	❑

Please indicate how often each of the following tasks is carried out by pupils in your class.
(Answer first for boys and then for girls; tick one box for each task) (1M 3M 6M)

Task	Frequently 1	Sometimes 2	Rarely 3	Never 4	Task does not arise 5
BOYS:					
Empty the bin	❑	❑	❑	❑	❑
Clean the blackboard	❑	❑	❑	❑	❑
Tidy up the classroom	❑	❑	❑	❑	❑
Carry chairs/tables	❑	❑	❑	❑	❑
Water plants/flowers	❑	❑	❑	❑	❑
Look after classroom pets	❑	❑	❑	❑	❑
Mind children in junior classes	❑	❑	❑	❑	❑
Take messages to other parts of the school	❑	❑	❑	❑	❑
Pick up litter in the school yard	❑	❑	❑	❑	❑
GIRLS:					
Empty the bin	❑	❑	❑	❑	❑
Clean the blackboard	❑	❑	❑	❑	❑
Tidy up the classroom	❑	❑	❑	❑	❑
Carry chairs/tables	❑	❑	❑	❑	❑
Water plants/flowers	❑	❑	❑	❑	❑
Look after classroom pets	❑	❑	❑	❑	❑
Mind children in junior classes	❑	❑	❑	❑	❑
Take messages to other parts of the school	❑	❑	❑	❑	❑
Pick up litter in the school yard	❑	❑	❑	❑	❑

9. Please read the following activities and indicate the extent to which senior-infant pupils choose to participate in each of them. *(Tick one box beside each activity. If the activity is not available to pupils in your class, place a tick in the last column)* (1B 1G)

Activity	Frequently 1	Sometimes 2	Rarely 3	Never 4	Activity not available 5
Play with sand	❏	❏	❏	❏	❏
Play with toy cars	❏	❏	❏	❏	❏
Play with dolls	❏	❏	❏	❏	❏
Play with water	❏	❏	❏	❏	❏
Imaginative play (e.g., acting out roles	❏	❏	❏	❏	❏
Dress up	❏	❏	❏	❏	❏
Draw pictures	❏	❏	❏	❏	❏
Play with lego	❏	❏	❏	❏	❏
Play with soft toys	❏	❏	❏	❏	❏
Play with jigsaws	❏	❏	❏	❏	❏
Play with sticklebricks	❏	❏	❏	❏	❏
Play in the home corner/wendy house	❏	❏	❏	❏	❏
Colour pictures	❏	❏	❏	❏	❏
Play with a teaset	❏	❏	❏	❏	❏
Play with building blocks	❏	❏	❏	❏	❏

Please read the following activities and indicate the extent to which senior-infant pupils choose to participate in each of them. *(Answer first for boys and then for girls; tick one box beside each activity. If the activity is not available to pupils in your class, place a tick in the last column.)* (1M)

Activity	Frequently 1	Sometimes 2	Rarely 3	Never 4	Activity not available 5
BOYS:					
Play with sand	❏	❏	❏	❏	❏
Play with toy cars	❏	❏	❏	❏	❏
Play with dolls	❏	❏	❏	❏	❏
Play with water	❏	❏	❏	❏	❏
Imaginative play (e.g., acting out roles	❏	❏	❏	❏	❏
Dress up	❏	❏	❏	❏	❏
Draw pictures	❏	❏	❏	❏	❏
Play with lego	❏	❏	❏	❏	❏
Play with soft toys	❏	❏	❏	❏	❏
Play with jigsaws	❏	❏	❏	❏	❏
Play with sticklebricks	❏	❏	❏	❏	❏
Play in the home corner/wendy house	❏	❏	❏	❏	❏
Colour pictures	❏	❏	❏	❏	❏
Play with a teaset	❏	❏	❏	❏	❏
Play with building blocks	❏	❏	❏	❏	❏

GIRLS:

Play with sand	❑	❑	❑	❑	❑
Play with toy cars	❑	❑	❑	❑	❑
Play with dolls	❑	❑	❑	❑	❑
Play with water	❑	❑	❑	❑	❑
Imaginative play (e.g., acting out roles	❑	❑	❑	❑	❑
Dress up	❑	❑	❑	❑	❑
Draw pictures	❑	❑	❑	❑	❑
Play with lego	❑	❑	❑	❑	❑
Play with soft toys	❑	❑	❑	❑	❑
Play with jigsaws	❑	❑	❑	❑	❑
Play with sticklebricks	❑	❑	❑	❑	❑
Play in the home corner/wendy house	❑	❑	❑	❑	❑
Colour pictures	❑	❑	❑	❑	❑
Play with a teaset	❑	❑	❑	❑	❑
Play with building blocks	❑	❑	❑	❑	❑

10. For third-class [sixth-class] pupils, please indicate which of the following subjects and school-based extra-curricular activities are participated in by both boys and girls, by boys only or by girls only. *(Tick one box beside each subject/activity. If the subject or activity is not offered to third-class [sixth-class] pupils, place a tick in the last column.)* (3M 6M)

Subject/Activity	Boys and Girls 1	Girls only 2	Boys only 3	Not offered 4
Basketball	❑	❑	❑	❑
Camogie	❑	❑	❑	❑
Computers	❑	❑	❑	❑
Cookery	❑	❑	❑	❑
Dance	❑	❑	❑	❑
Drama	❑	❑	❑	❑
Football	❑	❑	❑	❑
Hockey	❑	❑	❑	❑
Hurling	❑	❑	❑	❑
Knitting	❑	❑	❑	❑
Model-making	❑	❑	❑	❑
Music (instrument)	❑	❑	❑	❑
Nature study	❑	❑	❑	❑
Needlework	❑	❑	❑	❑
Painting	❑	❑	❑	❑
P.E.	❑	❑	❑	❑
Rugby	❑	❑	❑	❑
Science	❑	❑	❑	❑
Sex Education	❑	❑	❑	❑
Singing	❑	❑	❑	❑
Soccer	❑	❑	❑	❑
Tennis	❑	❑	❑	❑

For third-class [sixth-class] pupils, please indicate which of the following subjects and school-based extra-curricular activities are participated in. *(Tick one box beside each subject/activity. If the subject or activity is not offered to third-class [sixth-class] pupils, place a tick in the last column.)* (3B 6B 6G)

Subject/Activity	Participated in 1	Not offered 2
Basketball	❑	❑
Camogie	❑	❑
Computers	❑	❑
Cookery	❑	❑
Dance	❑	❑
Drama	❑	❑
Football	❑	❑
Hockey	❑	❑
Hurling	❑	❑
Knitting	❑	❑
Model-making	❑	❑
Music (instrument)	❑	❑
Nature study	❑	❑
Needlework	❑	❑
Painting	❑	❑
P.E.	❑	❑
Rugby	❑	❑
Science	❑	❑
Sex Education	❑	❑
Singing	❑	❑
Soccer	❑	❑
Tennis	❑	❑

11. Do pupils in your class usually wear sports gear for P.E.? *(Tick one box for shoes and one for clothes)* (1B 1G 3B 3G 6B 6G)

	Sports shoes	Sports clothes
Yes	❑ 1	❑ 1
No	❑ 2	❑ 2
Unsure	❑ 3	❑ 3

Do pupils in your class usually wear sports gear for P.E.? *(Tick one box for shoes and one for clothes)* (1M 3M 6M)

	Sports shoes	Sports clothes
All pupils	❑ 1	❑ 1
Only boys	❑ 2	❑ 2
Only girls	❑ 3	❑ 3
No pupils	❑ 4	❑ 4
Unsure	❑ 5	❑ 5

12. How do pupils in your class *usually* line up? *(Tick one box)* (1M 3M 6M)

Boys get into one line, girls form a separate line	❑ 1
Boys and girls get into mixed lines	❑ 2
Other (Please explain)	❑ 3

13. Who decides how pupils line up? *(Tick one box)* (1M 3M 6M)

You decide	❏ 1
The pupils decide	❏ 2
The Principal decides	❏ 3
Other (Please explain)	❏ 4

_____

_____

14. How are the seating arrangements generally in your classroom? *(Tick one box)*

Boys and girls sit in separate groups	❏ 1
Boys and girls are mixed	❏ 2
Seating arrangements vary according to the subject	❏ 3
Other (Please explain)	❏ 4

_____

_____

15. Who decides where pupils sit? *(Tick one box)* (1M 3m 6M)

You decide	❏ 1
The pupils decide	❏ 2
The Principal decides	❏ 3
The pupils decide initially but you make changes as you get to know them	❏ 4
Other (Please specify)	❏ 5

_____

_____

16. To what extent do you agree with each of the following statements about the effect of the presence of boys and girls on the opposite sex in the mixed-class setting? *(Tick one box for each statement)* (1M 3M 6M)

Statement	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly disagree 5
The presence of girls tends to lower boys' achievement levels (3M 6M)	❏	❏	❏	❏	❏
Girls tend to get in the way of boys' access to learning materials	❏	❏	❏	❏	❏
The presence of girls tends to inhibit boys' participation in discussion (3M 6M)	❏	❏	❏	❏	❏
The presence of boys tends to lower girls' achievement levels (3M 6M)	❏	❏	❏	❏	❏
The presence of boys tends to inhibit girls showing what they know (3M 6M)	❏	❏	❏	❏	❏
The presence of boys tends to inhibit girls' participation in discussion (3M 6M)	❏	❏	❏	❏	❏
Boys tend to get in the way of girls' access to learning materials	❏	❏	❏	❏	❏
The presence of girls tends to inhibit boys showing what they know (3M 6M)	❏	❏	❏	❏	❏

184

17. The following are statements which sometimes have been made about boys and girls. Please read each one and indicate the extent to which you agree with it. (All)

Statement	Strongly agree 1	Agree 2	Unsure 3	Disagree 4	Strongly disagree 5
Boys show little interest in subject areas which are often associated with girls (e.g., cooking, sewing)	❑	❑	❑	❑	❑
Girls show little interest in subject areas which are often associated with boys (e.g., science, computers)	❑	❑	❑	❑	❑
Boys in single-sex classes are less likely than boys in mixed classes to have access to subject areas often associated with girls (e.g., cooking, sewing)	❑	❑	❑	❑	❑
Girls in single-sex classes are less likely than girls in mixed classes to have access to subject areas often associated with boys (e.g., science, computers)	❑	❑	❑	❑	❑
Boys do better academically in single-sex classes than in mixed classes	❑	❑	❑	❑	❑
Girls do better academically in single-sex classes than in mixed classes	❑	❑	❑	❑	❑
Boys in single-sex classes are more likely to participate in discussion than boys in mixed classes	❑	❑	❑	❑	❑
Girls in single-sex classes are more likely to participate in discussion than girls in mixed classes	❑	❑	❑	❑	❑
Boys in single-sex classes are less confident academically than boys in mixed classes	❑	❑	❑	❑	❑
Girls in single-sex classes are less confident academically than girls in mixed classes	❑	❑	❑	❑	❑
Boys in single-sex classes are less inhibited showing what they know than boys in mixed classes	❑	❑	❑	❑	❑
Girls in single-sex classes are less inhibited showing what they know than girls in mixed classes	❑	❑	❑	❑	❑
Boys in single-sex classes find it more difficult to relate to girls than boys in mixed classes	❑	❑	❑	❑	❑
Girls in single-sex classes find it more difficult to relate to boys than girls in mixed classes	❑	❑	❑	❑	❑
Boys in single-sex classes are easier to control than boys in mixed classes	❑	❑	❑	❑	❑
Girls in single-sex classes are easier to control than girls in mixed classes	❑	❑	❑	❑	❑

185

18. Has the issue of how men and women (or boys and girls) are portrayed in teaching materials (e.g., textbooks, worksheets, posters, videotapes) been discussed in any of the following contexts in your school? *(Tick all that apply)* (All)

At a formal staff meeting	❑
Informally in the staff room	❑
With parents at a parent-teacher meeting	❑
With pupils in your class	❑
Other (Please specify)	❑

_____

_____

Was any action taken as a result of discussion?

Yes   ❑ 1   No   ❑ 2

If you answered 'yes', please describe the nature of the action.

_____

_____

REFERENCES

Adams, C. (1985). Teacher attitudes towards issues of sex equality. In J. Whyte, R. Deem, L, Kant, & M. Cruikshank, (Eds.), Girl friendly schooling (pp. 119-130). London: Methuen.

Adams, R., & Biddle, B. J. (1970). Realities of teaching: Explorations with video tape. New York: Holt, Rinehart and Winston.

Arnot, M. (1983). A cloud over coeducation: An analysis of the forms of transmission of class and gender relations. In S. Walker & L. Barton, (Eds.), Gender, class and education (pp. 69-91). London: Falmer Press.

Aron, A., & Aron, E. (1994). Statistics for psychology. Englewood Cliffs, NJ: Prentice-Hall.

Asher, S., & Gottman, J. (1972). Sex of teacher and student reading achievement. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC.

Askew, S., & Ross, C. (1988). Boys don't cry: Boys and sexism in education. Milton Keynes: Open University Press.

Berger, P., & Luckmann, T. (1966). The social construction of reality. Harmondsworth, Middlesex: Penguin.

Blackwell, J. (1989). Women in the labour force. Dublin: Employment Equality Agency.

Blackwell, J. (1990). Women in the labour force. Dublin: Employment Equality Agency.

Blount, L. (1990). Ireland. In G. Weiner (Ed.), The primary school and equal opportunities: International perspectives on gender issues (pp.92-105). London: Cassell.

Bone, A. (1983). Girls and girls-only schools. Manchester: Equal Opportunities Commission.

Bould, J., & Hopson, B. (1983). Sex differentiation and careers. In M. Marland (Ed.), Sex differentiation and schooling (pp. 123-142). London: Heinemann.

Boulding, E. (1987). Changing gender roles in familial, occupational, and civic settings. In K. Benne, & S. Tezer (Eds.), Society as educator in an age of transition. (pp. 112-147). Eighty-sixth Yearbook of the National Society for the Study of Education. Chicago: National Society for the Study of Education.

Boyd, J. (1989). Equality issues in primary schools. London: Chapman.

Breathnach, E. (1980). Women and higher education in Ireland (1879-1914). The Crane Bag, 4, 560-567.

Breen, R., & Hannan, D. (1987). School and gender: The education of girls in Ireland. In C. Curtin, P. Jackson, & B. O'Connor (Eds.), Gender in Irish society (pp. 37-53). Studies in Irish Society III. Galway: Officina Typographica and Galway University Press.

Brophy, J. (1985). Interactions of male and female students with male and female teachers. In L. C. Wilkinson & C. B Marrett (Eds.), Gender influences in classroom interaction (pp. 115-142). Orlando, Florida: Academic Press.

Bryan, K. & Digby, A. (1986). Performance in maths and science at 16 plus: A case for coeducational schooling? Westminister Studies in Education, 9, 9-19.

Bryk, A., Lee, V., & Holland, P. (1993). Catholic schools and the common good. Cambridge, MA: Harvard University Press.

Burke, A., & Fontes, P. (1986). Educational beliefs and practices of sixth-class teachers in Irish primary schools. Irish Journal of Education, 20, 51-77.

Burn, E. (1989). Inside the lego house. In C. Skelton (Ed.), Whatever happens to little women? Gender and primary schooling (pp.134-148). Milton Keynes: Open University Press.

Byrne, C. (1989). Fair play for boys and girls in primary schools. Dublin: Irish National Teachers' Organization.

Byrne, A., Byrne, P., & Lyons, A. (1996). Inventing and teaching Women' Studies. Irish Journal of Feminist Studies, 1, 78-99.

Cairns, E. (1990). The relationship between adolescent perceived self-competence and attendance at single-sex secondary school. British Journal of Educational Psychology, 60, 207-211.

Callan, T. (1994). Poverty and gender inequality. In B. Nolan & T. Callan (Eds.), Poverty and policy in Ireland (pp. 178-192). Dublin: Gill and Macmillan.

Callan, T. & Wren, A. (1994). Male-female wage differentials: Analysis and policy issues (Paper No. 16). Dublin: Economic and Social Research Institute.

Carpenter, P. (1985). Single-sex schooling and girls' academic achievements. The Australian and New Zealand Journal of Sociology, 21, 456-472.

Chubb, B. (1978). The constitution and constitutional change in Ireland. Dublin: Institute of Public Administration.

Clapp, R. C. (1967). The relationship of teacher sex to fifth grade boys' achievement gains and attitudes toward school. Unpublished doctoral dissertation, CA: University of Stanford, Dissertation Abstracts, 28, 2433A-2434A (University Microfilms No. 67-17, 533).

Clarricoates, K. (1980). The importance of being Ernest....Emma....Tom....Jane: The perception and categorization of gender conformity and gender deviation in primary schools. In R. Deem (Ed.), Schooling for women's work (pp. 26-41). London: Routledge and Kegan Paul.

Clement, J. P. (1975). Sex bias in school leadership. Evanston, IL: Integrated Education Associates.

Close, J.S., Kellaghan, T., Madaus, G.F., & Airisian, P.W. (1978). Growth in mathematical attainments of pupils. Irish Journal of Education, 12, 3-12.

Cole, M. (Ed.). (1989). Education for equality: Some guidelines for good practice. London: Routledge.

Coleman, J. S. (1961). The adolescent society. New York: Free Press.

Collins, L. (1986). The Irish housewife -- A portrait. Dublin: Irish Consumer Research.

Comber, L. C., & Keeves, J. P. (1973). Science education in nineteen countries. International Studies in Evaluation 1. New York: Wiley.

Conference of Religious of Ireland. (1994). Women for leadership in education. Dublin: Author

Connelly, A. (Ed.). (1993). Gender and the law in Ireland. Dublin: Oak Tree Press.

Connolly, L. (1996). The women's movement in Ireland 1970-1995. A social movements analysis. Irish Journal of Feminist Studies, 1, 43-77.

Curtin, C. & Varley, A. (1987). Marginal men? Bachelor farmers in a west of Ireland community. In C. Curtin, P. Jackson, & B. O'Connor (Eds.), Gender in Irish society (pp. 287-308). Studies in Irish society III. Galway: Officina Typographica and Galway University Press.

Dale, R. R. (1969). Mixed or single-sex school? Vol. 1. A research study in teacher-pupil relationships. London: Routledge and Kegan Paul.

Dale, R. R. (1971). Mixed or single-sex school? Vol. 2. Some social aspects. London: Routledge and Kegan Paul.

Dale, R. R. (1974). Mixed or single-sex school? Vol. 3. Attainment, attitudes and overview. London: Routledge and Kegan Paul.

Daly, M. (1993). The relationship between women's work and poverty. In A. Smyth (Ed.), Irish women's study reader (pp.122-139). Dublin: Attic Press.

Daly, P. (1994). The effects of single-sex and coeducational secondary schooling on girls' achievement. Paper presented at the International Congress for School Effectiveness and Improvement, Melbourne.

Davies, B. (1993). Beyond dualism and towards multiple subjectivities. In L. Christian-Smith (Ed.), Texts of desire: Essays on fiction femininity and schooling (pp. 145-173). London: Falmer Press.

Davies, B. (1994). Gender theories in education. In T. Husen & T. N. Postlethwaite (Eds.), The international encyclopedia of education (2nd ed., pp. 2453-2458). Oxford: Pergamon Press.

Deem, R. (1978). Women and schooling. London: Routledge and Kegan Paul.

Deem, R. (1984). (Ed.). Coeducation reconsidered. Milton Keynes: Open University Press.

Delamont, S. (1980). Sex roles and the school.: Contemporary Sociology of the School Series. London: Methuen.

Department of Education. (1971a). Primary curriculum. Teachers' handbook. Dublin: Author.

Department of Education. (1971b). Primary curriculum. Teachers' handbook. Dublin: Author.

Department of Education. (1980). Tuairisc ar theagasc na matamatice sna Bunscoileanna. Dublin: Author.

Department of Education. (1984). Guidelines for publishers on sexism and sex-stereotyping in primary school textbooks. Dublin: Author.

Department of Education. (1985). Tuairisc ar an mhatamaitic. Dublin: Author.

Department of Education. (1990). Policy statement on gender equity. Circ. No. /90.

Department of Education. (1992). FUTURES. Exploring equal opportunities programme. Dublin: Author.

Department of Education. (1993). Unpublished raw data. Primary Administration, Athlone: Author.

Department of Education. (1994). Promoting equal opportunities for boys and girls in education. Resource pack for teachers. Dublin: Author.

Department of Education. (1996). Gender matters. Dublin: Author.

Drudy, S., & Lynch, K. (1993). Schools and society in Ireland. Dublin: Gill and Macmillan.

Dunkin, M. J. (1984). Teacher sex and instruction. In T. Husen and T. N. Postlethwaite (Eds.), The international encyclopaedia of education (1st ed., pp. 5032-5035). Oxford: Pergamon Press.

Dweck, C. S., Davidson, W., Nelson, S., & Enna, B. (1978). Sex differences in learned helplessness: II. The contingencies of evaluative feedback in the classroom, and III. An experimental analysis'. Developmental Psychology, 14, 674-685.

Etaugh, C., & Harlow, H. (1975). Behaviors of male and female teachers as related to behaviors and attitudes of elementary school children. Journal of Genetic Psychology, 127, 163-170.

European Community Commission. (1985). Action handbook:- How to implement gender equality. (DOC: 05WD85EN). Brussels: IFAPLAN.

European Community Commission. (1990). Equal opportunities for women and men: The third medium-term community action programme, 1991-1995. (COM (90) 449 Final). Luxembourg: Office for Official Publications.

Eurostat. (1993). Women in the European Community. Rapid reports: Population and social conditions, 10. Luxembourg: Author.

Evans, M. (1991). The problem of gender for women's studies. In J. Aaron & S. Walby (Eds.), <u>Out of the margins? Women's studies in the nineties</u> (pp. 67-74). London: Falmer Press.

Fagot, B., & Patterson, C. (1969). An in vivo analysis of reinforcing contingencies for sex-role behaviors in the preschool child. <u>Developmental Psychology, 1,</u> 563-568.

Feather, N. T. (1974). Coeducation, values and satisfaction with school. <u>Journal of Educational Psychology, 66,</u> 9-15.

Feingold, A. (1988). Cognitive gender differences are disapearing. <u>American Psychologist, 43,</u> 95-103.

Finn, J. D. (1980). Sex differences in educational outcomes: A cross-national study. <u>Sex Roles, 6,</u> 9-26.

Flexnor, E. (1975). <u>Century of struggle: The women's rights movement in the United States.</u> Cambridge: Harvard University Press.

Fowler, F. J. (1993). <u>Survey research methods.</u> (2nd ed). London: Sage.

Gage, N., & Berliner, D. (1988). <u>Educational psychology</u> (4th ed.). Boston: Houghton Mifflin.

Galton, M. (1989). The new basics of primary education in Europe. In M. Galton & A. Blyth (Eds.), <u>Handbook of primary education</u> (pp. 251-312). London: David Fulton.

Gardiner, F. (1993). Political interest and participation of Irish women 1922-1992: The unfinished revolution. In A. Smyth (Ed.), <u>Irish women's study reader</u> (pp. 45-78). Dublin: Attic Press.

Gill, J. (1992). Re-phrasing the question about single-sex schooling. In A. Reid & B. Johnson (Eds.), <u>Critical issues in Australian education in the 1990s.</u> Adelaide: Painters Prints.

Gipps, C., & Murphy, P. (1994). <u>A fair test? Assessment, achievement and equity.</u> Buckingham: Open University Press.

Goldstein, H., Rasbash, J., Yang, M., Woodhouse, G., Pan, H., Nuttall, D., & Thomas, S. (1993). A multilevel analysis of school examination results. <u>Oxford Review of Education, 19,</u> 425-433.

Good, T. L., Sikes, J. N., & Brophy, J. E. (1972). Effects of teacher sex and student sex and student achievement on classroom interaction. (Tech. Rep. No. 61). Columbia, MO: University of Missouri, Centre for Research in Social Behaviour.

Greaney, V., & Kellaghan, T. (1984). Equality of opportunity in Irish schools. Dublin: Educational Company of Ireland.

Great Britain. Department of Education and Science. (1977). Education in schools: A consultative document. Green paper on education. London: HMSO.

Gross, N., & Trask, A. (1976). The sex factor in the management of schools. New York: Wiley.

Hanafin, J., & Ní Chártaigh, D. (1993). Coeducation and attainment. Limerick: Plassey.

Hannan, D. F., & Breen, R. (1987). Schools and gender roles. In M. Cullen (Ed.), Girls don't do honours: Irish women in education in the 19th and 20th centuries (pp.31-54). Dublin: Women's Education Bureau.

Hannan, D. F., Breen, R., Murray, B., Watson, D., Hardiman, N., & O'Higgins, K. (1983). Schooling and sex roles: Sex differences in subject provision and student choice in Irish post-primary schools (Paper No. 113). Dublin: Economic and Social Research Institute.

Hannan, D. F., & Shortall, S. (1991). The quality of their education: School leavers' views of educational objectives and outcomes (Paper No. 153). Dublin: Economic and Social Research Institute.

Hannan, D. F., Smyth, E., McCullagh, J., O'Leary, R., & McMahon, D. (1996). Coeducation and gender equality: Exam performance, stress and personal development. Dublin: Oak Tree Press.

Hartley, D. (1978). Teachers' definitions of boys and girls: Some consequences. Research in Education, 20, 23-35.

Hays, D. G., Kantor, K. N., & Goldstein, L. (1971). Manifest characteristics of interactive sequencing in the classroom (Tech. Rep. No. 41). Columbia, MO: University of Missouri, Centre for Research in Social Behaviour.

Higher Education Authority. (1985). Accounts 1983 and student statistics 1983/84. Dublin: Author.

Higher Education Authority. (1992). <u>Report, accounts and student statistics</u> <u>1989/1990</u>. Dublin: Author.

Hilliard, B. (1992). Women and public life in Ireland. In P. Clancy, M. Kelly, J. Wiatr, & R. Zoltaniecki (Eds.), <u>Ireland and Poland: Comparative</u> <u>perspectives</u> (pp. 247-260). Dublin: University College, Department of Sociology.

Hoyles, C. (Ed.). (1988). <u>Girls and computers</u>. Bedford Way Papers 34. London: Institute of Education and University of London.

Institute of Public Administration. (1992). <u>Administration yearbook and diary, 1993.</u> Dublin: Author.

Institute of Public Administration. (1995). <u>Administration yearbook and diary, 1996.</u> Dublin: Author.

Irish National Teachers' Organisation. (1989). <u>Fair play for girls and boys in primary</u> <u>schools</u>. Dublin: Author.

Ireland. (1984). <u>Programme for action in education,1984-87.</u> Dublin: Stationery Office.

Ireland. (1992a). <u>Education for a changing world. Green paper on education</u>. Dublin: Stationery Office.

Ireland. (1992b). <u>Second report of the third joint committee on women's rights</u>: <u>Gender inequality in education in the Republic of Ireland (1984-1991)</u>. Dublin: Stationery Office.

Ireland. (1993a). <u>Second commission on the status of women. Report to</u> <u>government</u>. Dublin: Stationery Office.

Ireland. (1993b). <u>Programme for a partnership government</u>. Dublin: Stationery Office.

Ireland. (1994). <u>A government of renewal</u>. A policy agreement between Fine Gael, the Labour Party, Democratic Left. Dublin: Stationery Office.

Ireland. (1995). <u>Charting our education future. White paper on education</u>. Dublin: Stationery Office.

Ireland. Central Statistics Office. (1983). <u>Census of population of Ireland, 1981</u>. Dublin: Stationery Office.

Ireland. Central Statistics Office. (1992). <u>Labour force survey, 1991</u>. Dublin: Stationery Office.

Ireland: Department of Education. (1971). <u>Primary school curriculum</u>. Dublin: Stationery Office.

Ireland. Department of Education. (1977). <u>Statistical report, 1974/75</u>. Dublin: Stationery Office.

Ireland. Department of Education. (1988). <u>Statistical report, 1985/86</u>. Dublin: Stationery Office.

Ireland. Department of Education. (1991). <u>Statistical report, 1989/90</u>. Dublin: Stationery Office.

Ireland. Department of Education. (1995). <u>Statistical report, 1993/94</u>. Dublin: Stationery Office.

Jacklin, C. N. (1983). Boys and girls entering school. In M. Marland (Ed)., <u>Sex differentiation and schooling</u> (pp. 8-17). London: Heinemann.

Jimenez, E., & Lockheed, M. E. (1989). Enhancing girls' learning through single-sex education: Evidence and a policy conundrum. <u>Educational Evaluation and Policy Analysis, 11,</u> 117-42.

Kalton, G. (1983). <u>Introduction to survey sampling</u>. London: Sage.

Kish, L. (1967). <u>Survey sampling</u>. London: Wiley.

Kellaghan, T., & Fontes, P. (1988). Gender differences in the scholastic self-concepts of Irish pupils. <u>Irish Journal of Education, 22,</u> 42-52.

Kellaghan, T., Fontes, P., O'Toole, C., & Egan, E. (1985). <u>Gender inequalities in primary-school teaching</u>. Dublin: Educational Company.

Kelly, J. M. (1980). <u>The Irish constitution</u>. Dublin: University College Jurist Publishing.

Kennedy, F. (1989). <u>Family, economy and government in Ireland</u> (Paper No. 143). Dublin: Economic and Social Research Institute.

King, W. H. (1965). Experimental evidence on comparative attainment in mathematics in single sex and co-educational secondary schools. <u>Educational Research, 8,</u> 155-160.

Komarsky, M. (1991). Some reflections on the feminist scholarship in sociology. <u>Annual Review of Sociology, 17,</u> 1-25.

Lapointe, A. E., Askew, J. M., & Mead, N. A. (1992). <u>Learning science</u>. Princeton, NJ: Educational Testing Service.

Lapointe, A E., Mead, N. A., & Askew, J. M. (1992). <u>Learning mathematics</u>. Princeton, NJ: Educational Testing Service.

Lapointe, A. E., Mead, N. A., & Phillips, G. W. (1989). <u>A world of difference. An international assessment of mathematics and science.</u> Princeton, NJ: Educational Testing Service.

Lee, V. E., & Bryk, A. S. (1986). Effects of single-sex secondary schools on student achievement and attitudes. <u>Journal of Educational Psychology, 78,</u> 381-395.

Lee, V. E., & Lockheed, M. (1990). The effects of single-sex schooling on student achievements and attitudes in Nigeria. <u>Comparative Educational Review, 34,</u> 209-231.

Lee, P. C., & Wolinsky, A. (1973). Male teachers of young children. A preliminary empirical study. <u>Young Children, 28,</u> 342-353.

Leinhardt, G., Seewald, A., & Engel, M. (1979). Learning what's taught: Sex differences in instruction. <u>Journal of Educational Psychology, 71,</u> 432-439.

Lever, J. (1978). Sex differences in the complexity of children's play and games. <u>American Sociological Review, 43,</u> 471-483.

Lewis, M. (1989). <u>Equal opportunities for girls and boys in education.</u> Report on the Arion Programme study visit, Madrid. Dublin: Educational Research Centre.

Lewis, M. (1992). <u>A survey of provision and practices relating to gender in Irish primary schools.</u> Dublin: Educational Research Centre.

Lewis, M. (1993). <u>Active life for disabled youth. Integration in the school project.</u> Report submitted to the Department of Education on completion of phase II of the project. Dublin: Educational Research Centre.

Lewis, M., & Kellaghan, T. (1993). <u>Exploring the gender gap in primary schools.</u> Dublin: Educational Research Centre.

Lockheed, M. (1985). Women, girls, and computers: A first look at the evidence. <u>Sex Roles, 13,</u> 115-122.

Lockheed, M. E., & Lee, V. E. (1994). Coeducation versus single-sex schooling. In T. Husén & T. N. Postlethwaite (Eds.), The international encyclopedia of education. (2nd ed.). (pp. 831-834). Oxford: Pergamon.

Lynch, K. (1989). The ethos of girls' schools: An analysis of differences between male and female schools. Social Studies, 10, 1/2 Spring, 11-31.

Lynch, K., Close, S., & Oldham, E. (1994). The Republic of Ireland. In L. Burton (Ed.), Who counts? Assessing mathematics in Europe (pp. 113-152). Stoke-on-Trent: Trentham Books.

Maccoby, E. (Ed.). (1967). The development of sex differences. London: Tavistock.

Maccoby, E., & Jacklin, C. (1974). The psychology of sex differences. Stanford, CA: Stanford University Press.

Mahony, P. (1985). Schools for the boys? Coeducation reassessed. London: Hutchinson.

Marland, M. (1983). Staffing for sexism: Educational leadership and role models. In M. Marland (Ed.), Sex differentiation and schooling (pp. 42-59). London: Heinemann.

Marsh, H. (1989). The effects of attending single-sex and catholic coeducational high schools on achievement, attitudes and behaviours and on sex differences. Journal of Educational Psychology, 81, 70-85.

Martin, E. (1991). The egg and the sperm: How science has constructed a romance based on stereotypical male-female roles. Signs, 16, 485-501.

Martin, M. O., & Kellaghan, T. (1989). IAEP '88. The results from the Republic of Ireland. What we learned from our schools. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Martin, M., & Morgan, M. (1994). Reading literacy in Irish schools. Irish Journal of Education, 28, 3-101.

Maynard, M. & Purvis, J. (Eds.). (1994). Researching women's lives from a feminist perspective. London: Taylor & Francis.

McHugh, H. (1989). Action-research project on integrating equal opportunities in the curriculum of teacher education. (National Co-ordinator's Report). Unpublished manuscript, Department of Education, Dublin.

McNamara, J. (1988). Inservice education and the new information technology in primary schools in Ireland. Paper presented at the University of Ghent, Belgium.

Morgan, V., & Dunn, S. (1988). Chameleons in the classroom: Visible and invisible children in nursery and infant classrooms. Educational Review, 40, 3-12.

National Education Convention Secretariat. (1994). Report. (Ed. J. Coolahan). Dublin: Author.

National Union of Teachers. (1988). Towards equality for girls and boys: Guidelines on countering sexism in schools. London: Author.

Noddings, N. (1992). Gender and the curriculum. In P. W. Jackson (Ed.), Handbook of research on curriculum (pp. 659-684). New York: Macmillan.

Nuttall, D., Thomas, S., & Goldstein, H. (1992). Report on analysis of 1990 examination results (AMA EO Circular 92/13). London: Association of Metropolitan Authorities.

O'Connor, A. (1987). The revolution in girls' secondary education in Ireland 1860-1910. In M. Cullen (Ed.), Girls don't do honours: Irish women in education in the 19th and 20th centuries (pp. 31-54). Dublin: Women's Education Bureau.

O'Hare, A. & O'Connor, A. (1987). Gender differences in treated mental illness in the Republic of Ireland. In C. Curtin, P. Jackson, & B. O'Connor (Eds.), Gender in Irish society (pp. 309-329). Studies in Irish society III. Galway: Officina Typographica and Galway University Press.

Okin, S. M. (1979). Women in western political thought. Princeton, NJ: Princeton University Press.

O' Leary, K. D., Kaufman, O., Kass, R., & Drabman, R. (1970). The effects of loud and soft reprimands on behavior of disruptive students. Exceptional Children, 37, 145-155.

Ormerod, M. B. (1975). Subject preference and choice in coeducational and single-sex secondary schools. British Journal of Educational Psychology, 45, 257-267.

O'Sullivan, D. (1984). Social class and sexual variation in teachers' perceptions of their pupils. Oideas, 28, 15-26.

Pinkston, E. M., Reese, N. M., Leblanc, J. M., & Baer, D. M. (1973). Independent control of aggression and peer interaction by contingent teacher attention. Journal of Applied Behaviour Analysis, 6, 115-124.

Pflaum, S., Pasceralla, E., Boswick, M., & Auer, C. (1980). The influence of pupil behaviors and pupil status factors on teacher behaviors during oral reading lessons. Journal of Educational Research, 74, 99-105.

Polity Press. (1994). Polity reader in gender studies. Cambridge: Author.

Pollard, D. (1993). Gender and achievement. In S. Knopp Biklen & D. Pollard (Eds.), Gender and education (pp. 90-106). Ninety-Second Yearbook of the Society for the Study of Education. Chicago, IL: The National Society for the Study of Education.

Pratt, J. (1985). The attitudes of teachers. In J. Whyte, R. Deem, L, Kant, & M. Cruikshank, (Eds.), Girl friendly schooling (pp. 24-35). London: Methuen.

Purcell, B. (1980). 10 years of progress? Some statistics. The Crane Bag, 4, 556-559.

Ramirez, F. O., & Cha, Y-K. (1990). Western educational development in comparative perspective. In R. G. Corwin Research in Sociology of Education and Socialization (pp. 153-173). London: JAI Press.

Review Body on the Primary Curriculum. (1990). Report. Available from the National Council for Curriculum and Assessment and the Department of Education.

Riordan, C. (1985). Public and Catholic schooling: The effects of gender context policy. American Journal of Education, 93, 518-540.

Robinson, M. (1989). The junior years. In M. Cole (Ed.), Education for equality: Some guidelines for good practice (pp. 122-128). London: Routledge.

Rottman, D. (1994). Allocating money within households: Better off poorer? In B. Nolan & T. Callan (Eds.), Poverty and policy in Ireland (pp. 193-213). Dublin: Gill and Macmillan.

Rowe, K. (1988). Single sex and mixed sex classes. The effect of class type on student achievement, confidence, and participation in maths. Australian Journal of Education, 32, 180-202.

Sandell, S. H. (1980). Monitoring the labour market progress of women in Ireland: Statistics needed for employment equality. Dublin: Employment Equality Agency.

Schneider, F., & Coutts, L. M. (1982). The high-school environment: A comparison of coeducational and single-sex schools. Journal of Educational Psychology, 74, 898-906.

Schneider, F., Coutts, L. M., & Starr, M. W. (1988). In favour of coeducation: The educational attitudes from coeducational and single-sex high schools. Canadian Journal of Education, 13, 479-496.

Serbin, L. A. (1972). Sex differences in the preschool classroom: Patterns of social reinforcement. Unpublished doctoral dissertation. State University of New York at Stony Brook.

Serbin, L. A. (1973). A comparison of teacher response to the pre-academic and problem-solving behavior of boys and girls. Child Development, 48, 924-929.

Serbin, L. A. (1978). Teachers, peers, and play preferences: An environmental approach to sex typing in the preschool. In B. Sprung (Ed.), Perspectives on non-sexist early childhood education (pp. 79-93). New York: Teachers' College Press.

Serbin, L. A. (1983). The hidden curriculum: Academic consequences of teacher expectations. In M. Marland (Ed.), Sex differentiation and schooling (pp. 18-41). London: Heinemann.

Serbin, L. A., Connor, J., & Citron, C. (1977). Sex-stereotyped play behavior in the preschool classroom: Effects of teacher presence and modeling. Paper presented at the annual meeting of the Society for Research in Child Development, New Orleans.

Serbin, L. A., O'Leary, K., Kent, R., & Tonick, I. (1973). A comparison of teacher response to the pre-academic and problem behavior of boys and girls. Child Development, 44, 796-804.

Serbin, L.A., Powlishta, K., & Gulko, J. (1993). The development of sex typing in middle childhood. Monographs of the Society for Research in Child Development, 58, (2, Serial No.232).

Smith, S. (1984). Single-sex setting. In R. Deem (Ed.), Coeducation reconsidered (pp.75-88). Milton Keynes: Open University Press.

Smyth, A. (1993). The women's movement in the Republic of Ireland 1970-1990. In A. Smyth (Ed.), Irish women's study reader (pp. 245-269). Dublin: Attic Press.

Spender, D., & Sarah, E. (1980). Learning to lose: Sexism and education. London: The Women's Press.

Spss-x. (1988). User's guide. (3rd ed.). Chicago: Spss Inc.

Stables, A. (1990). Differences between pupils from mixed and single sex schools in their enjoyment of school subjects and in their attitudes to sciences and to school. Education Review, 42, 221-230.

Stake, J., & Katz, J. (1982). Teacher pupil relationships in the elementary school classroom: Teacher-gender and pupil-gender differences. American Educational Research Journal, 19, 465-471.

Steedman, J. (1983). Examination results in mixed and single-sex schools. Manchester: Equal Opportunities Commission.

Stockard, J. (1980). Sex inequities in the experiences of students. In J. Stockard, P. Schmuck, K. Kempner, P. Williams, S. Edson & M. A. Smith (Eds.), Sex equity in education (pp. 11-48). New York: Academic Press.

Streitmatter, J. (1994). Toward gender equity in the classroom: Everyday teachers' beliefs and practices. New York: State University Press.

Stromquist, N. (1989). Determinants of educational participation and achievement of women in the third world. A review of the evidence and a theoretical critique. Review of Educational Research, 59, 143-183.

Sugrue, B. (1984). Gender differences in mathematics. A study of the achievement and attitude of girls and boys in fifth class in primary schools. Unpublished M. Ed. thesis, Trinity College, Dublin.

Thomas, S., Pan, H., & Goldstein, H. (1994). Report on analysis of 1992 examination results. London: Association of Metropolitan Authorities and Institute of Education, University of London.

Thompson, P. J. (1986). Hestian hermeneutics. In L. Peterat (Ed.), The conversation and company of educated women (pp. 79-87). Urbana-Champaign: University of Illinois.

Thorne, B. (1993). Gender play: Girls and boys in school. Buckingham: Open University Press.

Tyack, D., & Hansot, E. (1990). Learning together: A history of coeducation in American public schools. New Haven, CT: Yale University Press and Russell Sage Foundation.

Wagemaker, H. (Ed.). (1996). Are girls better readers? Gender differences in reading literacy in 32 countries. Amsterdam: International Association of the Evaluation of Educational Achievement.

Wheldall, K., & Merrett, F. (1988). Which classroom behaviours do primary school teachers say they find most troublesome? Educational Review, 40, 13-27.

Whyte, J. (1983). Beyond the wendy house: Sex-role stereotyping in primary schools. York: Longman for Schools Council.

Whyte, J. (1986). Girls into science and technology. London: Routledge and Kegan Paul.

Wilkinson, L., & Marrett, C. B. (Eds.). (1985). Gender influences in classroom interaction. Orlando, Florida: Academic Press.

Wilson, M. (Ed.). (1989). Girls and young women in education: A European perspective. Comparative and International Education Series. Oxford: Pergamon Press.

Windass, A. (1989). Classroom practices and organization. In C. Skelton (Ed.), Whatever happens to little women? Gender and primary schooling (pp. 38-49). Milton Keynes: Open University Press.

Yates, J., & Firkin, J. (1986). Student participation in Mathematics. Victoria: Curriculum Assessment Board.

Yates, L. (1985). Is 'girl friendly schooling' really what girls need? In J. Whyte, R. Deem, L. Kant, & M. Cruikshank (Eds.), Girl friendly schooling (pp. 209-230). London: Methuen.